National and Kapodistrian University of Athens
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The 15th AIMS Conference

6–10 July 2026 • Athens, Greece



Organized by AIMS and the
National and Kapodistrian University of Athens

PROGRAM

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Helge Holden	Svetlana Jitomirskaya	Panayotis Kevrekidis
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Conference Coordinator

Xin Lu

Dear Distinguished Guests, Colleagues, and Friends,

It is our great pleasure to welcome you to Athens for the 15th AIMS Conference. We are delighted to meet once again with over 2,300 colleagues and friends from around the world to celebrate the beauty, diversity, and impact of the mathematical sciences. This conference continues with a tradition that has united researchers across disciplines and continents, fostering collaboration, inspiring new ideas, and advancing the frontiers of mathematical knowledge.

As a cradle of mathematics, philosophy, and scientific inquiry, Greece reminds us of the enduring power of intellectual curiosity and the universal pursuit of knowledge. This conference carries a special historical significance. Exactly thirty years ago, the Second World Congress of Nonlinear Analysts was hosted in this very building of the School of Philosophy at the University of Athens. Today, the international mathematical community returns to the same venue to continue the tradition of scientific exchange, collaboration, and discovery.

The AIMS Conference has grown into one of the largest international events in the mathematical sciences. This year's program reflects the remarkable breadth and vitality of our field, featuring plenary lectures, thematic sessions, special sessions, and numerous contributed presentations from participants at every stage of their careers.

Beyond the scientific program, the conference offers an invaluable opportunity to strengthen existing collaborations, establish new partnerships, and engage with colleagues whose perspectives enrich our own. The advancement of mathematics has always depended on open communication and the free exchange of ideas, and we hope this conference will continue to serve as a catalyst for both.

We extend our sincere gratitude to our plenary speakers, thematic session speakers, special session organizers, contributors, members of the various conference committees, and all participants whose efforts and enthusiasm make this event possible. We are especially grateful to our local hosts and organizing team for their dedication and hard work in preparing this conference.

Most importantly, we thank each of you for being part of the AIMS family. Your continued support, participation, and commitment to excellence are what make the AIMS Conference a prime international forum for mathematical research and collaboration.

Welcome to Athens, and welcome to AIMS 2026. We wish you an inspiring and productive conference, along with a memorable stay in the historic city of Athens.

Sincerely,

Shouchuan Hu
Xin Lu

HELLENIC REPUBLIC
National and Kapodistrian University of Athens

THE RECTOR

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Athens - Greece

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Dear Participants of the 15th AIMS Conference,

It gives me great pleasure to welcome you to the National and Kapodistrian University of Athens on the occasion of the **15th AIMS Conference**.

The National and Kapodistrian University of Athens is honoured to host this distinguished international conference. Bringing together leading researchers and scholars from around the world, it provides a unique forum for exchanging ideas, presenting recent advances, and strengthening scientific collaboration across the mathematical sciences. Over the years, the AIMS Conference has become one of the foremost international forums in its field, fostering interdisciplinary dialogue and promoting excellence in research.

As the oldest and largest university in Greece, with a long-standing commitment to scholarship, innovation, and international academic cooperation, we are proud to welcome a scientific community whose research continues to advance the frontiers of knowledge and tackle some of the most challenging problems in contemporary mathematics and its applications.

Beyond its rich scientific programme, I hope this conference will provide an opportunity to establish new collaborations, reconnect with colleagues and friends, and engage in fruitful discussions that will inspire future research. I also encourage you to enjoy the unique historical and cultural heritage of Athens, a city whose intellectual tradition shaped the foundations of scientific inquiry and learning for centuries.

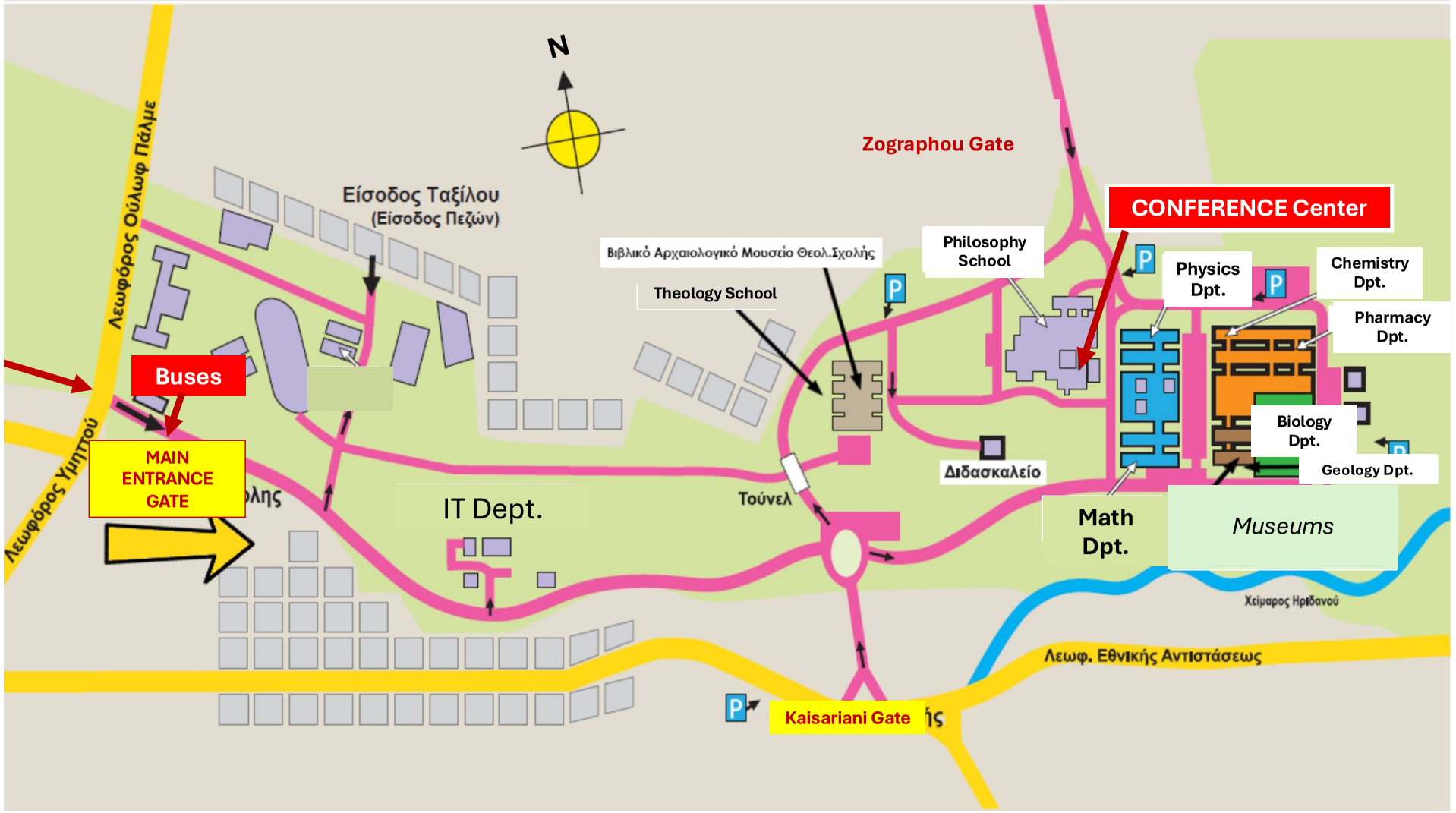
I wish you every success throughout the conference and hope that your stay at the National and Kapodistrian University of Athens and in our city will be both academically rewarding and personally enjoyable.

With my very best wishes for a successful conference,

Professor Gerasimos Siasos

Rector

National and Kapodistrian University of Athens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Zographou Gate
CONFERENCE Center
Είσοδος Ταξίλου
(Είσοδος Πεζών)
Βιβλικό Αρχαιολογικό Μουσείο Θεολ.Σχολής
Philosophy School
Physics Dpt.
Chemistry Dpt.
Pharmacy Dpt.
Theology School
Buses
MAIN ENTRANCE GATE
Λεωφόρος Ούλωφ Πάλμε
Λεωφόρος Υμηττού
IT Dept.
Τούνελ
Διδασκαλείο
Biology Dpt.
Geology Dpt.
Math Dpt.
Museums
Χείμαρος Ηριδανού
Λεωφ. Εθνικής Αντιστάσεως
Kaisariani Gate

Invited Plenary Speakers

Artur Avila (Switzerland)

Mihalis Dafermos (USA)

Qiang Du (USA)

Adam Kanigowski (USA)

Carlos Kenig (USA)

Kening Lu (China)

Panagiotis E. Souganidis (USA)

Hong Wang (USA)

Invited Plenary Speaker

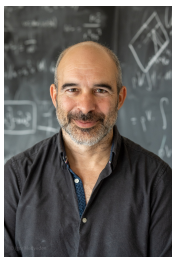
Dr. Artur Avila
University of Zurich
Switzerland

Artur Avila is one of the winners of the 2014 Fields Medal, being the first Latin American and lusophone to win such award. He has been a researcher at both the IMPA and the CNRS. He has been a professor at the University of Zurich since September 2018. At the age of 16, Avila won a gold medal at the 1995 International Mathematical Olympiad. At the age of 19, Avila began writing his doctoral thesis on the theory of dynamical systems. In 2001 he finished it and received his PhD from IMPA.

Artur Avila received in 2006 a CNRS Bronze Medal as well as the Salem Prize and was a Clay Research Fellow. He became the youngest professorial fellow (directeur de recherches) at the CNRS in 2008. The same year, he was awarded one of the ten prestigious European Mathematical Society prizes, and in 2009 he won the Grand Prix Jacques Herbrand from the French Academy of Sciences.

He was a plenary speaker at the International Congress of Mathematicians in 2010. In 2011, he was awarded the Michael Brin Prize in Dynamical Systems. He received the Early Career Award from the International Association of Mathematical Physics in 2012, TWAS Prize in 2013 and the Fields Medal in 2014. He was elected a foreign associate of the US National Academy of Sciences in 2019.

Invited Plenary Speaker

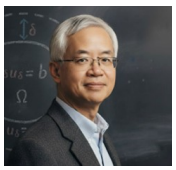


Dr. Mihalis Dafermos
Princeton University
USA

Mihalis Dafermos was born in 1976. He obtained his B.A. from Harvard University in 1997 and his Ph.D. from Princeton in 2001, under the supervision of Demetrios Christodoulou. After spending three years at MIT as a C.L.E. Moore Instructor, he moved to the University of Cambridge in 2004, first as University Lecturer, then from 2006 as Reader, and from 2011 as Professor of Mathematical Physics.

Since 2013, he has been Professor of Mathematics at Princeton, and in 2015 he was elected to the Lowndean Chair of Astronomy and Geometry at Cambridge. He is also a distinguished member of the Institute for Applied and Computational Mathematics, FORTH, in Heraklion, Crete. He has received several awards, including the Adams Prize, the Bocher Prize and the Bodossaki Prize for young Greek scientists. He is a Fellow of the AMS and of the ISGRG. His research focusses on general relativity.

Invited Plenary Speaker



Dr. Qiang Du
Columbia University
USA

Qiang Du is the Fu Foundation Professor of Applied Mathematics at Columbia University and a cochair of the Center of Computing Systems for Data-Driven Science. He also serves as the Editor-inChief (EIC) of the SIAM Journal on Applied Mathematics and the founding co-EIC of Communications of the American Mathematical Society. Prof.Du received his B.S. from the University of Science and Technology of China and his Ph.D. from Carnegie Mellon University.

Some recent recognition for his work includes a SIAM Outstanding Paper Prize (2016), being a Gordon Bell Prize finalist (2016), the USACM T.J.R. Hughes Medal (2021), and the ICBS Frontier of Science Award (2024). He was also an invited speaker at the ICM 2018 and has been selected to give an invited lecture at the ICIAM 2027.

Invited Plenary Speaker

Dr. Adam Kanigowski
University of Maryland
USA

Adam Kanigowski is a Professor at the University of Maryland (USA). He specializes in ergodic theory and dynamical systems. Kanigowski was born in Włocławek (Poland) in 1989. He earned his master's degree in mathematics from the Nicolaus Copernicus University in Toruń in 2012 and his Ph.D. in 2015 from the Institute of Mathematics of the Polish Academy of Sciences, under the supervision of Mariusz Lemańczyk and Joanna Kułaga-Przymus. After graduating, Kanigowski joined Penn State University as an S. Chowla Research Assistant Professor in 2015 and then joined University of Maryland as an assistant professor in 2018, where he was promoted to full professor in 2024. Since December 2022, Kanigowski has led a flagship project at Jagiellonian University that partly supports a research collaboration with UMD.

Kanigowski's research interests include dynamical systems and ergodic theory as well as their interaction with number theory, geometry and probability theory. In particular, he is interested in randomness and chaos in smooth dynamical systems, classification problems in abstract ergodic theory, and non-standard ergodic theorems that find application in number theory.

In 2015, the Polish Mathematical Society gave Kanigowski their Prize for Young Mathematicians (he was awarded for a series of six papers in the field of ergodic theory and operator theory). He was the 2016 winner of the International Stefan Banach Prize for a doctoral dissertation in the mathematical sciences. In 2017 he received the Kazimierz Kuratowski Award from the Institute of Mathematics of the Polish Academy of Sciences and the Polish Mathematical Society. In March 2024, the Simons Foundation named Kanigowski a 2024 Simons Fellow in Mathematics. In April he received the Institute of Mathematics of the Polish Academy of Sciences Prize for outstanding scientific achievements in mathematics for his "fundamental results in the field of dynamical systems and ergodic theory" and in July he was awarded the EMS Prize for "his outstanding contributions to the spectral classification and the mixing properties of slowly chaotic dynamical systems."

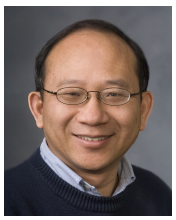
Invited Plenary Speaker

Dr. Carlos E. Kenig
University of Chicago
USA

Carlos E. Kenig is the Louis Block Distinguished Service Professor at the University of Chicago. Kenig is recognized for his applications of harmonic analysis to partial differential equations. Kenig was born in Buenos Aires, Argentina in 1953. He obtained his PhD at the University of Chicago in 1978. After being an instructor at Princeton University and a professor at the University of Minnesota, Kenig returned to the University of Chicago in 1985. Kenig was awarded the Salem Prize in 1984 and the Bocher Prize of the American Mathematical Society in 2008.

Kenig received the Solomon Lefschetz medal of the Mathematics Council of the Americas in 2021, and the ICMAM Latinamerica Prize 2024. He was an invited speaker at the International Congress of Mathematicians in 1986 and 2002 and a plenary speaker in 2010. In 2017 Kenig delivered the American Mathematical Society's Colloquium lectures. Kenig is a Fellow of the American Academy of Arts and Sciences and of the American Mathematical Society. He is a member of the National Academy of Sciences of the US, a Foreign Member of the Istituto Lombardo, a Foreign Academician of the Royal Academy of Sciences of Spain and a Corresponding Member of the Academia Nacional de Ciencias Exactas, Fisicas y Naturales of Argentina. Kenig was a vicepresident of the American Mathematical Society and he served as the President of the International Mathematical Union for the period 2019-2022.

Invited Plenary Speaker



Dr. Kening Lu
Sichuan University
China

Kening Lu is a professor at the School of Mathematics, Sichuan University, where he currently serves as the Academic Dean. He is also the Vice President of the 14th Council of the Chinese Mathematical Society. In 2017, he was awarded the inaugural "Zhang Zhifen Mathematics Award" for his significant contributions to ordinary differential equations, bifurcation theory, and dynamical systems. In 2021, he was elected as a Fellow of the American Mathematical Society.

Kening Lu is currently the Co-Editor-in-Chief of the Journal of Differential Equations and serves on the editorial boards of five mathematical journals, including Science China: Mathematics (English Edition). He earned his bachelor's degree in mathematics from Sichuan University in 1982, followed by a master's degree in 1985. He then obtained his Ph.D. in mathematics from Michigan State University in 1988. Subsequently, he conducted postdoctoral research at the Georgia Institute of Technology and the Institute for Mathematics and its Applications at the University of Minnesota. He had held faculty positions as a professor of mathematics at Brigham Young University and Michigan State University.

His research focuses on infinite-dimensional and stochastic dynamical systems, including invariant manifolds and foliations, ergodicity, Lyapunov exponents, SRB measures, entropy, chaos, statistical dynamics, as well as smooth linearization and normal form theory for stochastic dynamical systems.

Invited Plenary Speaker

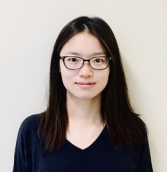
Dr. Panagiotis E. Souganidis
University of Chicago
USA

Panagiotis Souganidis is currently the Charles H. Swift Distinguished Service Professor in Mathematics at the University of Chicago, a position that he has held since 2008. Prior to moving to Chicago, Professor Souganidis held, in chronological order, the Ashbel Smith Professorship, the Penzoil Regents Professorship, and the R.L. Moore Chair at the University of Texas at Austin.

Previously, Professor Souganidis held full professorships at the University of Wisconsin, and Brown University. He has also held more than a dozen visiting positions at institutes and universities around the world, including The Institute for Advanced Studies at Princeton, The Isaac Newton Institute, The College de France, and The Mittag-Lefler Institute, among others.

Professor Souganidis has had many honors starting right after he obtained his PhD with a Presidential Young Investigator award and Sloan Fellowship. In 1994 Professor Souganidis was an invited speaker at the ICM and in1996 he received the Bodossaki Foundation Academic Prize.

Invited Plenary Speaker



Dr. Hong Wang
New York University
USA

Professor Hong Wang receives her Bachelor degree in mathematics from Peking University in 2011, diplome d'ingenieur from Ecole Polytechnique, master degree from Paris-Sud University in 2014, and earned her doctorate in 2019 under the supervision of Larry Guth at Massachusetts Institute of Technology. From 2019 to 2021, she was a postdoc member at the Institute for Advanced Study. From 2021 to 2023, she was an assistant professor at University of California, Los Angeles. Since 2023, she has been an associate professor of mathematics at New York University, Courant institute of Mathematical Sciences.

Thematic Session Speakers

Some Recent Advances in Elliptic and Parabolic PDEs

Cristiana De Filippis (Italy)
Junping Shi (USA)
Jungcheng Wei (China)

Curvature Flows and Geometric Inequalities

Haizhong Li (China)
Yong Wei (China)
Glen Wheeler (Australia)

Reaction-Diffusion Equations, New Theoretical and Applied Trends

King-Yeung (Adrian) Lam (USA)
Xing Liang (China)
Yuan Lou (China)
Luca Rossi (Italy)
Angela Stevens (Germany)

Hyperbolic and Mixed-Type Problems in Fluid Dynamics

Gui-Qiang G. Chen (UK)
Xianpeng Hu (China)
Athanasios Tzavaras (USA)

Mathematical Modelling and Numerical Simulations

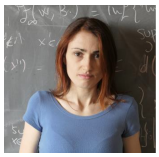
Wei Jiang (China)
Kui Ren (USA)
Jiang Yang (China)

Mathematical Developments in General Relativity

Yannis Angelopoulos (China)
Ryan Unger (USA)
András Vasy (USA)

Thematic Session Speakers

Some Recent Advances in Elliptic and Parabolic PDEs



Dr. Cristiana De Filippis
University of Parma
Italy

Cristiana De Filippis (b. 1992) is a Professor of Mathematics at the University of Parma, Italy. Her research focuses on the regularity theory of elliptic and parabolic partial differential equations, with particular emphasis on problems arising from the Calculus of Variations. In 2023, she was elected to the inaugural cohort of the European Mathematical Society Young Academy (EMYA). She was awarded the 2020 Iapichino Prize from the Italian National Academy, the 2023 Bartolozzi Prize from the Italian Mathematical Society, the EMS Prize in 2024, the 2025 SIAM Early Career Prize in Analysis & PDE, and a 2025 ERC Starting Grant.

Dr. Junping Shi
College of William & Mary
USA

Junping Shi is a Professor of Mathematics at the College of William & Mary in Williamsburg, Virginia, USA. He studied mathematics at Nankai University, China, from 1990 to 1993, and earned his Ph.D. in Mathematics from Brigham Young University in 1998. His research interests include nonlinear elliptic and parabolic equations, bifurcation theory, and mathematical biology. His research has been supported by the U.S. National Science Foundation (NSF) since 2003. He served as Chair of the Department of Mathematics at William & Mary from 2018 to 2022 and again in 2025, and was Director of the NSF EXTREEMS-QED program at William & Mary from 2013 to 2019. He has published more than 190 research papers, which have received over 11,000 citations according to Google Scholar.

Thematic Session Speakers

Some Recent Advances in Elliptic and Parabolic PDEs

Dr. Juncheng Wei
Chinese University of Hong Kong
China

Juncheng Wei is a Chinese mathematician working in the area of nonlinear partial differential equations, nonlinear analysis and mathematical biology. After graduating from University of Minnesota in 1994, he has held positions at Chinese University of Hong Kong and the University of British Columbia. He is now the ChohMing Li Professor of Mathematics and Global Stem Scholar at the Chinese University of Hong Kong. Before that he was a Canada Research Chair (Tier I) at the University of British Columbia. Since 1994, he has over 500 published articles in top journals, including Annals of Mathematics, Inventiones Mathematicae, Communications on Pure and Applied Mathematics, Duke Mathematical Journal, and SIAM Review. He received a Silver Morningside Medal in 2010, and was an invited speaker at the 2014 International Congress of Mathematicians. In 2019, Juncheng Wei was elected a Fellow of the Royal Society of Canada. In 2020, he was awarded the CMS Jeffery-Williams Prize and Simons Fellow in Mathematics. In 2025 he received the Distinguished Paper Award from ICCM.

Thematic Session Speakers

Curvature Flows and Geometric Inequalities

Dr. Haizhong Li
Tsinghua University
China

Haizhong Li is Professor at Tsinghua University, Beijing. He received his doctoral degree from the University of Novi Sad in former Yugoslavia in 1993 . He did his postdoctoral work in Chinese Academy of Sciences from 1993 to 1995. Then he has worked in Tsinghua University since 1995. He was Alexander von Humboldt Fellow from 2001-2002. His main area of research is in the field of Differential Geometry and Geometric Analysis. Together with Ben Andrews, Haizhong Li has completely solved the famous Pinkall-Sterling Conjecture: all embedded CMC tori in a three sphere are rotational surfaces. Haizhong Li received the second Award of the State Natural Science Award of China (2019), and the first Prize of Natural Sciences Award by the Ministry of Education of China (2018).

Dr. Yong Wei
University of Science and Technology of China
China

Yong Wei is currently a professor at the University of Science and Technology of China. He obtained his PhD in 2014 from Tsinghua University under the supervision of Professor Haizhong Li. He then did postdoctoral research at University College London from 2014 to 2016, and subsequently at the Australian National University from 2016 to 2018. From 2019 to 2020, he held an ARC DECRA Fellowship at the Australian National University. In 2020, he joined the University of Science and Technology of China as a professor. His research primarily focuses on differential geometry and geometric analysis, especially on geometric flows and their applications.

Thematic Session Speakers

Reaction-Diffusion Equations, New Theoretical and Applied Trends

Dr. King-Yeung Lam
Ohio State University
USA

King-Yeung Lam (Adrian) is a Professor of Mathematics at The Ohio State University (OSU) where he also serves as the Director of the Mathematics Research Institute. His research focuses on the analysis of mathematical models in spatial ecology and biological dynamics, where he uses partial differential equations and interface methods to understand how populations invade, compete, and adapt in changing environments. He obtained his PhD from University of Minnesota in 2011 under the direction of Wei-Ming Ni. In 2011 to 2014, he was Zassenhaus visiting assistant professor at OSU and then a postdoc fellow at the Mathematical Biosciences Institute supported by the Croucher Foundation. He joined the faculty at OSU since 2014. In 2022, he was visiting professor at Institut Henri Poincare and Sorbonne Universite. He has published over 60 papers and a research monograph. He also actively serves on the editorial boards of professional journals, including Communications in Partial Differential Equations, Journal of Mathematical Biology, SIAM Journal on Applied Mathematics, SIAM Journal on the Life Sciences, and is the managing editor of Discrete and Continuous Dynamical Systems - Series B.

Dr. Xing Liang
University of Science and Technology of China
China

Xing Liang is a professor at the School of Mathematical Sciences, University of Science and Technology of China. He obtained his doctoral degree in 2003 in University of Science and Technology of China. From 2006 to 2008, he served as a JSPS postdoctoral fellow at the University of Tokyo. Liang Xing's research areas include the dynamics and propagation phenomena of parabolic equations and their applications, specifically covering the propagation theory of diffusion systems and the principal eigenvalue problems of operators. He has established the dynamic system research theory for the propagation problems of monostable diffusion systems and developed the principal eigenvalue theory of operators.

Thematic Session Speakers

Reaction-Diffusion Equations, New Theoretical and Applied Trends

Dr. Yuan Lou
Shanghai Jiao Tong University
China

Yuan Lou is currently Chair Professor and Dean of the School of Mathematical Sciences at Shanghai Jiao Tong University. He received his Ph.D. in 1995 from University of Minnesota and was a postdoctoral researcher at MSRI and University of Chicago from 1995 to 1998. From 1998 to 2021, he was a faculty member in the Department of Mathematics at The Ohio State University, where he also served as Associate Director of Mathematical Biosciences Institute from 2009 to 2013. His research focuses on reaction-diffusion equations and their applications in biology, with over 150 publications. Currently, he serves on the editorial boards of Journal of Differential Equations, Journal of Mathematical Biology, and SIAM Journal on Applied Mathematics, etc. He is also a co-editor-in-chief of Discrete and Continuous Dynamical Systems - Series B and the managing editor of the newly launched CSIAM Transactions on Life Sciences, an official journal of the Chinese Society for Industrial and Applied Mathematics.

Dr. Luca Rossi
Sapienza University of Rome
Italy

Luca Rossi is an Associate Professor of Mathematics at Sapienza University of Rome. His research lies at the intersection of analysis, partial differential equations, and mathematical modeling in population dynamics, epidemiology and social sciences. He is particularly interested in reaction-diffusion equations, nonlinear elliptic and parabolic problems, and in understanding how geometry, heterogeneity, and nonlocal effects shape the behavior of solutions and propagation phenomena. Rossi graduated in mathematics at Sapienza University, and completed a joint PhD between Sapienza and Paris 6. After a Postdoc at the CAMS-EHESS in Paris, he moved to the University of Padova as a researcher and later joined the CNRS, returning to the CAMS laboratory from 2016 to 2020. He has been a member of the Sapienza faculty since 2020.

Thematic Session Speakers

Reaction-Diffusion Equations, New Theoretical and Applied Trends

Dr. Angela Stevens
University of Muenster
Germany

Angela Stevens is Full Professor of Mathematics at the University of Muenster, Germany (since 2011), and Honorary Professor at the University of Leipzig (since 2006). Her main research interests are nonlinear partial differential equations, applications in the life sciences and stochastic interacting many particles systems. She finished her studies of mathematics at the University of Cologne with a Master thesis in analytical number theory. She received her Ph.D. in 1992 from the University of Heidelberg where she also was Postdoctoral Research Associate. She held positions as Visiting Scholar at Standford University (1997-1998), Project Leader and Associate Professor at the Max-Planck-Institute for Mathematics in the Sciences (1999-2007), and Full Professor at the University of Heidelberg (20072011). She was Visiting Professor at RIMS, Kyoto (2001), at the University of CergyPontoise (2003), at Hokkaido University (2004), and at the University of Minnesota (2023).

She received offers for Professorships from the Georgia Institute of Technology in Atlanta and the University of Cologne. Among others, she served as a member of the Expert Panel for ERC Starting Grants in mathematics (2018, 2020, 2022, 2024), she is Co-Founder and Co-Editor of the Springer Lecture Note Series on Mathematical Modelling in the Life Sciences. She has been PI of the Cluster of Excellence: Cells in Motion (2012-2019) and the Cluster of Excellence: Mathematics Muenster; Dynamics - Geometry - Structure (2019-2025) and is member of the Cluster's Executive Board. She is also PI of this Cluster's second funding period (2026-2033).

Thematic Session Speakers

Hyperbolic and Mixed-Type Problems in Fluid Dynamics

Dr. Gui-Qiang George Chen
University of Oxford
UK

Gui-Qiang George Chen is the Statutory Professor of Analysis of Partial Differential Equations, Director of the Oxford Centre for Nonlinear Partial Differential Equations (OxPDE) at the Mathematical Institute, and a Professorial Fellow of Keble College, University of Oxford.

Chen received his Ph.D. from the Chinese Academy of Sciences in 1987. He subsequently joined the Courant Institute of Mathematical Sciences at New York University as a Postdoctoral Research Fellow (1987-1989) under the direction of Peter D. Lax. Prior to joining Oxford in 2009, he held academic positions and visiting appointments at many leading institutions worldwide, including Northwestern University, University of Chicago, Institute for Advanced Study (Princeton), MSRI (Berkeley), UCLA, University of Cambridge, Norwegian Academy of Science and Letters, Royal Swedish Academy of Sciences, University of Heidelberg, and University of Nice, among others.

Chen has served as Editor-in-Chief, Editorial Advisory Board member, or Editorial Board member for more than 15 leading international scientific journals. His many honors and distinctions include the 2024 Polya Prize of the London Mathematical Society, Member of Academia Europaea, Fellow of the Academy for the Mathematical Sciences (UK), Fellow of the American Mathematical Society, Fellow of the Society for Industrial and Applied Mathematics, the 2011 SIAG/Analysis of Partial Differential Equations Prize (SIAM), the Royal Society Wolfson Research Merit Award, Alexander von Humboldt Foundation Fellowship, Alfred P. Sloan Foundation Fellowship, and the Chinese National Natural Science Prize. Professor Chen's research focuses on nonlinear partial differential equations, nonlinear analysis, and their applications across mathematics and the sciences. His recent research interests include nonlinear hyperbolic systems of conservation laws, nonlinear mixed-type equations, nonlinear waves, free-boundary problems, geometric analysis, and stochastic partial differential equations. His broader interests also encompass measure-theoretic analysis, weak convergence methods, entropy analysis, statistical physics, and numerical analysis. He has published over 200 original research papers and more than 10 research books.

Thematic Session Speakers

Hyperbolic and Mixed-Type Problems in Fluid Dynamics

Dr. Xianpeng Hu
The Hong Kong Polytechnic University
China

Xianpeng Hu is Full Professor in the Department of Applied Mathematics at The Hong Kong Polytechnic University, and Research Fellow of The Hong Kong Research Grants Council. He obtained his Ph.D from University of Pittsburgh in 2010. His research expertise is in nonlinear partial differential equations in continuum mechanics.

Dr. Athanasios Tzavaras
King Abdullah University of Science and Technology
Saudi Arabia

Athanasios Tzavaras is a professor at the King Abdullah University of Science and Technology (KAUST), Saudi Arabia. He obtained a Diploma in Naval Architecture and Marine Engineeratg in 1981 from the National Technical University of Athens, Greece, and received a Ph.D. in Applied Mathematics in 1985 from Brown University. He held academic positions at the University of Wisconsin-Madison from 1987 to 2005, the University of Maryland from 2005 to 2009, and the University of Crete, Greece, from 2002 to 2004 and from 2010 to 2014. He is a fellow of the European Academy of Sciences. He is a member of the American Mathematical Society (AMS), the Society of Industrial and Applied Mathematics (SIAM), and the International Society for the Interaction of Mechanics and Mathematics. He is an Associate Editor of various journals and a Corresponding Editor for the SIAM Journal on Mathematical Analysis.

Thematic Session Speakers

Mathematical Modelling and Numerical Simulations

Dr. Wei Jiang
Wuhan University
China

Professor Wei Jiang receives his Bachelor degree in mathematics from Beijing Normal University in 2005, and his Ph.D in computational mathematics from Peking University in 2010. From 2010 to 2013, he conducted postdoctoral research at the National University of Singapore and Beijing Computational Science Research Center. Then, he joined Wuhan University in 2013 as an assistant professor, and was promoted to associate professor in 2016 and full professor in 2023. His research interests lie broadly in the areas of computational and applied mathematics, materials science, applied optics, data science and scientific computing. In particular, he is interested in modeling and simulations for solid-state dewetting of thin films, numerical algorithms for simulating geometric flows (e.g., mean curvature flow, surface diffusion), wrinkling phenomena in thin film/substrate systems, applications about Onsager's variational principle, and the design of progressive-addition lens.

Dr. Kui Ren
Columbia University
USA

Kui Ren is a professor of applied mathematics at Columbia University. His research involves theoretical and numerical aspects of inverse problems related to partial differential equations (PDEs), as well as their applications in various areas of imaging science. Ren received his PhD from the Applied Mathematics Program at Columbia. He spent a year at the University of Chicago as a L. E.Dickson instructor before joining the University of Texas at Austin as an assistant professor in the Department of Mathematics and the Oden Institute in Fall 2008.

Thematic Session Speakers

Mathematical Modelling and Numerical Simulations

Dr. Jiang Yang
Southern University of Science and Technology
China

Jiang Yang is currently full Professor in the Department of Mathematics at Southern University of Science and Technology (SUSTech). He received his Bachelor's degree from Zhejiang University in 2010 and his PhD from Hong Kong Baptist University in 2014. Prior to joining SUSTech in 2017, he conducted postdoctoral research at Pennsylvania State University and Columbia University. His research focuses on computational mathematics, with primary interests including the modeling, numerical methods and applications of phase-field models and nonlocal models, as well as the design and theory of deep learning algorithms. His work has been honored with EASIAM Student Paper 2nd Prize at the East Asian SIAM Conference (EASIAM 2014) and the "Frontier Science Award" at the International Congress of Basic Sciences (ICBS 2025).

Thematic Session Speakers

Mathematical Developments in General Relativity

Dr. Yannis Angelopoulos
Beijing Institute of Mathematical Sciences and Applications
China

Yannis Angelopoulos works on Partial Differential Equations, Mathematical Physics, Fluid Dynamics , and General Relativity. He is an associate professor at Beijing Institute of Mathematical Sciences and Applications, while previously has held postdoctoral positions at Princeton, UCLA and Caltech. He received his B.Sc. from University of Athens on Informatics and Telecommunications (Supervisor: Elias Koutsoupias), M.Sc. from New York University on Mathematics (Supervisor: Bruce Kleiner), and Ph.D from University of Toronto on Mathematics(Supervisor: Stefanos Aretakis and James Colliander).

Dr. Ryan Unger
University of California, Berkeley
USA

Ryan Unger was born in Germany in 1997. He received his undergraduate degree from the University of Tennessee, Knoxville, in 2019 and his PhD from Princeton University in 2024 under the supervision of Mihalis Dafermos. His research interests lie in general relativity and geometric analysis. For his thesis work on extremal black holes, he was awarded a Jacobus Fellowship from Princeton University and the Juergen Ehlers Thesis Prize from the International Society on General Relativity and Gravitation. After spending a year at Stanford University under a National Science Foundation fellowship, he is currently a Miller Postdoctoral Fellow at the University of California, Berkeley.

Thematic Session Speakers

Mathematical Developments in General Relativity

Dr. Andras Vasy
Stanford University
USA

Andras Vasy works on partial differential equations, microlocal analysis and inverse problems. He completed his PhD degree in mathematics in 1997 at the Massachusetts Institute of Technology with Richard Melrose as his PhD advisor. Subsequently he was Morrey Assistant Professor at UC Berkeley; assistant, then associate, professor of mathematics at MIT; and had a visiting associate professor appointment at Northwestern University. Since 2005 he has been at Stanford University as associate and then full professor of mathematics. Andras Vasy has been the recipient of a Sloan Research Fellowship, a Clay Research Fellowship, Simons Fellowships, and was Springer Visiting Professor at Utrecht University. He was an invited sectional speaker at the 2014 International Congress of Mathematicians, received the Bocher Memorial Prize of the American Mathematical Society, Frontier of Science Awards, and has been elected to the American Academy of Arts and Sciences.

Main Schedule

Monday 07/06	Tuesday 07/07	Wednesday 07/08	Thursday 07/09	Friday 07/10
7:00-10:00 **Registration** 9:00-10:00 **Coffee**	8:00-10:00 **PS03**	8:00-10:00 **PS06**	8:00-10:00 **PS09**	8:00-10:00 **PS12**
10:00-10:30 **Opening**	10:00-10:30 **Coffee**	10:00-10:30 **Coffee**	10:00-10:30 **Coffee**	10:00-10:30 **Coffee**
10:30-11:30 Plenary: **Carlos Kenig** (Chair: Juncheng Wei) 11:30-12:30 Plenary: **Artur Avila** (Chair: Jerry Bona)	10:30-11:30 Plenary: **Kening Lu** (Chair: Peter Bates) 11:30-12:30 Plenary: **Adam Kanigowski** (Chair: Gary Froyland)	10:30-11:30 Plenary: **Takis Souganidis** (Chair: Georgia Karali) 11:30-12:30 Plenary: **Qiang Du** (Chair: Alain Miranville)	10:30-11:30 Plenary: **Hong Wang** (Chair: Gui-Qiang Chen) 11:30-12:30 Plenary: **Mihalis Dafermos** (Chair: Panayotis Kevrekidis)	10:30-12:30 **PS13**
12:30-13:30 **Lunch**	12:30-13:30 **Lunch**	12:30-13:30 **Lunch**	12:30-13:30 **Lunch**	12:30-13:30 **Lunch**
13:30-16:00 **PS01**	13:30-16:00 **PS04**	13:30-16:00 **PS07**	13:30-16:00 **PS10**	13:30-16:00 **PS14**
16:00-16:30 **Coffee**	16:00-16: 30 **Coffee**	16:00-16:30 **Coffee**	16:00-16:30 **Coffee**	16:00-16:30 **Coffee**
16:30-19:00 **PS02**	16:30-19:00 **PS05**	16:30-18:00 **PS08** **Banquet** 19:30-23:00	16:30-19:00 **PS11**	16:30-19:00 **PS15**

PS XX - Parallel Session XX

Master Schedule

Room	6-Jul		7-Jul			8-Jul			9-Jul			10-Jul			
	PS01	**PS02**	**PS03**	**PS04**	**PS05**	**PS06**	**PS07**	**PS08**	**PS09**	**PS10**	**PS11**	**PS12**	**PS13**	**PS14**	**PS15**
Room AULA	TS-3	TS-3		TS-4			TS-1								
Room 204	TS-2	TS-6		TS-5	SS109				SS109	SS109	SS109				
Room 428	SS03	SS03	SS03	SS03	SS96	SS96	SS96	SS96	SS80	SS80	SS80	SS86	SS86	SS86	
Room 315	SS04	SS04	SS04	SS04	SS04	SS74	SS74	SS74	SS137	SS137	SS137	SS02	SS02	SS02	SS02
Room 313	SS05	SS05	SS05	SS05	SS05	SS168	SS168	SS168	SS168	SS168	SS168	SS168			
Room 639	SS31	SS150	SS149	SS149	SS150	SS150	SS149	SS150	SS172	SS172	SS172	SS172			
Room 442	STU	STU	SS32	SS32	SS32	SS32	SS32	SS32	SS32	SS32	SS177	SS177			
Room 440	SS63	SS63	SS45	SS45	SS45	SS45	SS45	SS45	SS08	SS08	SS08	SS08	SS08		
Room 316	SS46	SS46	SS15	SS15	SS15	SS15	SS15	SS143	SS143	SS143	SS143	SS71	SS71	SS71	SS71
Room 421	SS22	SS22	SS22	SS22	SS70	SS133	SS133	SS133	SS70	SS70	SS194				
Room 434	SS35	SS35	SS35	SS35	SS35	SS157	SS157	SS157	SS124	SS124	SS124	SS81	SS81	SS81	SS81
Room 436	SS37	SS37	SS37	SS37	SS37	SS160	SS160	SS160	SS125	SS125	SS125	SS125	SS125		
Room 426	SS117	SS117	SS117	SS117	SS17	SS17	SS17	SS17	SS135	SS135	SS135	SS135	SS135		
Room 445	SS102	SS102	SS126	SS126	SS126	SS126	SS126	SS126	SS140	SS140	SS140	SS140	SS140		
Room 820	SS182	SS182	SS30	SS182	SS182	SS161	SS161	SS161	SS10	SS10	SS10	SS09	SS09	SS09	SS09
Room 538	SS18	SS18	SS18	SS18	SS122	SS122	SS122	SS122	SS122	SS122	SS122				
Room 437	SS43	SS43	SS43	SS43	SS43	SS85	SS85	SS85	SS85	SS136	SS136	SS136			
Room 430	SS54	SS54	SS173	SS173	SS173	SS173	SS173	SS84	SS84	SS84	SS108	SS108	SS108	SS108	
Room 432	SS111	SS111	SS77	SS77	SS77	SS77	SS152	SS152	SS152	SS152	SS24	SS24	SS24	SS24	
Room 427	SS82	SS82	SS130	SS82	SS82	SS106	SS106	SS106	SS146	SS146	SS146	SS146	SS146	SS146	SS146
Room 425	SS99	SS99	SS99	SS99	SS99	SS116	SS116	SS116	SS127	SS127	SS49	SS49	SS49		
Room 433	SS40	SS40	SS40	SS40	SS180	SS180	SS180	SS180	SS153	SS153	SS153	SS153	SS153		
Room 619	SS123	SS123	SS123	SS123	SS123	SS176	SS176	SS176	SS134	SS134	SS134	SS48	SS48	SS48	SS48
Room 628	SS42	SS42	SS06	SS06	SS06	SS190	SS190	SS190	SS129	SS129	SS129	SS144	SS144	SS144	SS144
Room 637	SS12	SS12	SS12	SS12	SS13	SS13	SS13	SS64	SS64	SS64	SS196	SS187	SS187	SS187	SS187
Room 312	SS23	SS23	SS23	SS94	SS94	SS33	SS33	SS33	SS156	SS156	SS156	SS156	SS183	SS183	

PS XX - Parallel Session XX
TS-X - Thematic Session X

Master Schedule

Room	6-Jul		7-Jul			8-Jul			9-Jul			10-Jul			
	PS01	**PS02**	**PS03**	**PS04**	**PS05**	**PS06**	**PS07**	**PS08**	**PS09**	**PS10**	**PS11**	**PS12**	**PS13**	**PS14**	**PS15**
Room 638	SS29	SS29	SS29	SS103	SS103	SS34	SS34	SS34	SS141	SS141	SS141	SS141	SS186	SS186	
Room 301	SS65	SS65	SS66	SS66	SS66	SS39	SS39	SS39	SS50	SS50	SS50				
Room 640	SS142	SS142	SS178	SS178	SS178	SS51	SS51	SS51	SS56	SS56	SS56				
Room 641	SS169	SS169	SS169	SS169	SS154	SS154	SS154	SS20	SS20	SS20	SS19	SS19			
Room 642	SS105	SS105	SS105	SS139	SS139	SS88	SS88	SS88	SS72	SS72	SS72	SS67	SS67	SS67	
Room 738	SS107	SS107	SS110	SS110	SS110	SS138	SS138	SS138	SS155	SS155	SS155				
Room 739	SS112	SS112	SS112	SS175	SS93	SS93	SS93	SS93	SS175	SS175	SS175				
Room 740	SS87	SS87	SS87	SS87	SS115	SS145	SS145	SS145	SS164	SS164	SS164	SS164			
Room 812	SS83	SS83	SS83	SS83	SS83	SS158	SS158	SS158	SS158	SS25	SS25	SS52	SS52	SS52	SS52
Room 821	SS92	SS92	SS92	SS92	SS181	SS181	SS181	SS181	SS195	SS195	SS195				
Room 822	SS16	SS16	SS91	SS91	SS91	SS91	SS197	SS197	SS197	SS197	SS41				
Room 823	SS95	SS95	SS95	SS188	SS188	SS114	SS114	SS114	SS159	SS159	SS159				
Room 824	SS120	SS120	SS120	SS120	SS14	SS14	SS14	SS14	SS191	SS191	SS191				
Room 825	SS119	SS119	SS119	SS26	SS26	SS184	SS184	SS184	SS184	SS118	SS118				
Room 826	SS128	SS128	SS128	SS128	SS189	SS151	SS151	SS151	SS192	SS192	SS151				
Room 827	SS147	SS147	SS147	SS147	SS58	SS58	SS58	SS167	SS167	SS167	SS167	SS113	SS113	SS113	SS113
Room 311	SS55	SS55	SS55	SS68	SS68	SS01	SS01	SS185	SS185	SS185	SS185	SS185	SS185	SS185	
Room 314	SS89	SS89	SS89	SS98	SS98	SS98	SS98	SS98	SS163	SS163	SS163				
Room 438	SS101	SS101	SS90	SS90	SS90	SS11	SS11	SS11	SS11	SS11	SS11				
Room 618	SS07	SS07	SS162	SS162	SS162	SS166	SS166	SS166	SS69	SS69	SS69				
Room 634	SS78		CS03	CS03	CS01	CS01	CS03	CS03	CS03	CS01	CS03				
Room 635	CS02	CS02	CS02	CS02	CS02	CS02	CS02	CS02	CS02	CS02	CS02				

PS XX - Parallel Session XX
CS XX - Contributed Session XX

Schedule Index

Index based first on Parallel Sessions (PS), followed by Thematic Sessions, Special Sessions, and Contributed Sessions. Page numbers refer to the original page numbers printed in the schedule.

Parallel Session Index (PS)

Session Index

Thematic Sessions

Special Sessions

Contributed Sessions

Schedule Listed By Parallel Sessions
(Generated on 07/02/2026)
Parallel Session 1 :: Monday, 07/06, 13:30 – 16:00

TS 2	**Curvature Flows and Geometric Inequalities** Organizer(s): Ben Andrews , Haizhong Li	**Room 204**
JULY 6 **13:30-14:20**	**Haizhong Li** (Tsinghua University, Peoples Rep of China) Inverse mean curvature flow and Steklov eigenvalue in hyperbolic space	
JULY 6 **14:20-15:10**	**Yong Wei** (University of Science and Technology of China, Peoples Rep of China) Inverse curvature type flows and geometric inequalities	

TS 3	**Reaction-diffusion equations, new theoretical and applied trends** Organizer(s): Francois Hamel , Lionel Roques	**Room AULA**
JULY 6 **13:30-14:20**	**Xing Liang** (University of Science and Technology of China, Peoples Rep of China) PROPAGATION PHENOMENA OF FISHER-KPP EQUATIONS IN HETEROGENEOUS MEDIA VIA GENERALIZED PRINCIPAL EIGENVALUE	
JULY 6 **14:20-15:10**	**King-Yeung Lam** (Ohio State University, USA) When Distant Regions Drive Invasion: Nonlocal Pulling in Heterogeneous Media	
JULY 6 **15:10-16:00**	**Angela Stevens** (University of Munster, Germany) Cross-diffusion systems	

SS 3	**Analysis of diffuse and sharp interface models** Organizer(s): Alain Miranville , Andrea Giorgini , Maurizio Grasselli	**Room 428**
JULY 6 **13:30-14:00**	**Harald Garcke** (Department for Mathematics, Germany) Diffuse interface models on evolving surfaces: Modeling and analysis	
JULY 6 **14:00-14:30**	**Yong Yu** (The Chinese University of Hong Kong, Hong Kong) Global solutions of nematic liquid crystal flow	

JULY 6 **14:30-15:00**	**Charles Elbar** (Universite Claude Bernard Lyon 1, France) Deterministic particle approximation of a fourth-order PDE
JULY 6 **15:00-15:30**	**Pietro Galimberti** (University of Ferrara, Italy) A Generalized Cahn-Hilliard equation with non-degenerate mobility: Well Posedness and Convergence to the Classical Cahn-Hilliard
JULY 6 **15:30-16:00**	**Takeshi Fukao** (Ryukoku University, Japan) Asymptotic analysis of Robin type transmission problems for gap junctions

SS 4	**Mathematical methods in electromagnetism and related topics** Organizer(s): Ioannis Stratis , Pier Domenico Lamberti	**Room 315**
JULY 6 **13:30-14:00**	**Rainer Picard** (TU Dresden, Institute for Analysis, Germany) Maxwell`s Equations and its Real Relatives	
JULY 6 **14:00-14:30**	**Massimo Lanza de Cristoforis** (Dipartimento di Matematica `Tullio Levi-Civita`, Italy) Nonvariational solutions of boundary value problems for the Helmholtz equation in multiply connected domains	
JULY 6 **14:30-15:00**	**Dimitrios Frantzeskakis** (Department of Physics, National and Kapodistrian University of Athens, Greece) Integrable Reductions and Solitons of Nonlocal NLS Systems	
JULY 6 **15:00-15:30**	**NIKOLAOS GIALELIS** (National and Kapodistrian University of Athens, Greece) Towards a universal approach for the boundary problems	

SS 5	**New trends in pattern formations and dynamics for dissipative systems and related topics** Organizer(s): Junping Shi , Danielle Hilhorst , Yoshihisa Morita	**Room 313**
JULY 6 **13:30-14:00**	**Peter Bates** (Michigan State University, USA) Sturm Oscillation Theory for Nonlocal Diffusion Equations	
JULY 6 **14:00-14:30**	**Yi Li** (John Jay College of Criminal Justice, CUNY, USA) ON HOT SPOTS CONJECTURE FOR DOMAIN WITH N-AXES OF SYMMETRY	

JULY 6 **14:30-15:00**	**Yasuhito Miyamoto** (The University of Tokyo, Japan) Exact solutions describing very slow layer oscillations in a shadow reaction-diffusion system
JULY 6 **15:00-15:30**	**Elaine Crooks** (Swansea University, Wales) Self-similar fast-reaction limits of reaction-diffusion systems with nonlinear diffusion
JULY 6 **15:30-16:00**	**Min-Yoo Kim** (KAIST, Korea) Diffusive Limit of a Discrete Persistent Kinetic Model with Heterogeneity and Anisotropy

SS 7	**Recent developments on nonlinear geometric PDEs** Organizer(s): Angela Pistoia , Pierpaolo Esposito , Giusi Vaira , Isabella Ianni	**Room 618**
JULY 6 **13:30-14:00**	**Daniele Cassani** (University of Insubria & RISM, Italy) Maximum principle for higher order operators and applications to nonlinear PDEs	
JULY 6 **14:00-14:30**	**Bruno Premoselli** (Universite Libre de Bruxelles, Belgium) Extremising eigenvalues of the GJMS operators in a fixed conformal class	
JULY 6 **14:30-15:00**	**Gianmaria Verzini** (Politecnico di Milano, Italy) Miminization of the first eigenvalue of the Dirichlet Laplacian with a small volume obstacle	
JULY 6 **15:00-15:30**	**Junwei Yu** (Politecnico di Milano, Italy) Normalized solutions for the Sobolev critical Schr\{o}dinger equation with trapping potential	

SS 12	**Propagation Phenomena in Reaction-Diffusion Systems** Organizer(s): Hirokazu Ninomiya , Masaharu Taniguchi	**Room 637**
JULY 6 **13:30-14:00**	**Yihong Du** (University of New England (Australia), Australia) Regularity and long-time dynamics of some free boundary models: Successes and challenges	
JULY 6 **14:00-14:30**	**Kousuke Kuto** (Waseda University, Japan) Classification and bifurcation structures of cross-diffusion limits in the SKT model	

JULY 6 **14:30-15:00**	**Ming Mei** (Jiangxi Normal University, Peoples Rep of China) Traveling Waves for Burgers-Fisher-KPP Equations with Singularity
JULY 6 **15:00-15:30**	**Yoshitaro Tanaka** (Future University Hakodate, Japan) Reaction-diffusion approximation for nonlocal interactions
JULY 6 **15:30-16:00**	**Bao Q Tang** (University of Graz, Department of Mathematics and Scientific Computing, Austria) Global existence for mass controlled reaction-diffusion systems

SS 16	**The recent progress on qualitative theory of dynamical systems** Organizer(s): Yulin Zhao , Hebai Chen	**Room 822**
JULY 6 **13:30-14:00**	**Jaume Gine** (Universitat de Lleida, Spain) Stability of some monodromic singularities with two edges in the Newton diagram	
JULY 6 **14:00-14:30**	**Zhaosheng Feng** (University of Texas Rio Grande Valley, USA) Global Dynamics of the Rosenzweig-MacArthur System with Allee Effect	
JULY 6 **14:30-15:00**	**Jordi Villadelprat** (Universitat Autonoma de Barcelona, Spain) Derivatives of the separation function of generalized saddle connections	
JULY 6 **15:00-15:30**	**Shugui Kang** (Shanxi Datong University, Peoples Rep of China) Positive Solutions for a Class of Integral Boundary Value Problem of Fractional q-Difference Equations	
JULY 6 **15:30-16:00**	**Wenmeng Zhang** (Chongqing Normal University, Peoples Rep of China) Progress in Differentiable Linearization of Dynamical Systems	

SS 18	**Progress on delay and fractional differential equations with real-world application** Organizer(s): Kunquan Lan , Elena Braverman	**Room 538**
JULY 6 **13:30-14:00**	**Yun Kang** (Arizona State University, USA) Communication Dynamics in Human-Automation Teaming: Discrete-Time versus Delay Differential Equation Approaches	

JULY 6 **14:00-14:30**	**Teresa Faria** (University of Lisbon, Portugal) Persistence for differential equations with unbounded delays
JULY 6 **14:30-15:00**	**Elena Braverman** (University of Calgary, Canada) On delay differential equations and systems with a non-delay or weakly delayed term
JULY 6 **15:00-15:30**	**Rajarshi Dey** (Ariel University, Israel) Subordination in sign-constancy of Green`s function for fractional differential boundary value problems: from focal to multipoint and non-local problems
JULY 6 **15:30-16:00**	**Pavel Dubovski** (Stevens Institute of Technology, USA) Series approach to quasi-Bessel, Cauchy-Euler and constant-coefficient fractional ODEs

SS 22	**Models of emergence and collective dynamics** Organizer(s): Roman Shvydkoy , Ewelina Zatorska	**Room 421**
JULY 6 **13:30-14:00**	**Changhui Tan** (University of South Carolina, USA) Collective dynamics with nonlinear velocity alignment	
JULY 6 **14:00-14:30**	**Keith Promislow** (Michigan State University, USA) Evolution of Correlation in Simple Models	
JULY 6 **14:30-15:00**	**Jan Peszek** (University of Warsaw, Poland) Self-Attention as a Multi-Agent System: a Dynamical Perspective on Transformers	
JULY 6 **15:00-15:30**	**Sondre Galtung** (SINTEF, Norway) Stick with me, naturally: from Cucker--Smale to Euler-alignment through gradient flows	
JULY 6 **15:30-16:00**	**Athanasios Tzavaras** (KAUST/Applied Mathematics and Computational Science, Saudi Arabia) On integrability properties of Euler-Riesz systems	

SS 23	**Evolution Equations and Integrable Systems** Organizer(s): Alex Himonas , Curtis Holliman , Fangchi Yan	**Room 312**
JULY 6 **13:30-14:00**	**Beatrice Pelloni** (Heriot-Watt University, Scotland) Regularity of solution of periodic evolution equations	

JULY 6 **14:00-14:30**	**Alex Himonas** (University of Notre Dame, USA) The nonlinear Schr\odinger equation on the half-space
JULY 6 **14:30-15:00**	**Konstantinos Kalimeris** (Academy of Athens, Greece) Integral solutions of evolution equations
JULY 6 **15:00-15:30**	**Christian Hong** (University of California Santa Barbara, USA) On Special Properties of Solutions to the Benjamin-Bona-Mahony Equation
JULY 6 **15:30-16:00**	**Fangchi Yan** (Virginia Tech, USA) A higher order cubic NLS equation on the half-line

SS 29	**Stochastic Dynamical Systems** Organizer(s): Lin Shi , Jun Shen	**Room 638**
JULY 6 **13:30-14:00**	**Alexandra Blessing** (University of Konstanz, Germany) A mild rough Gronwall Lemma with applications to non-autonomous evolution equations	
JULY 6 **14:00-14:30**	**Ying Chao** (Xi`an Jiaotong University, Peoples Rep of China) Most Probable Paths for McKean--Vlasov Systems: Deriving the Onsager--Machlup Functional via Euler-Type Classical SDEs	
JULY 6 **14:30-15:00**	**Mengyu Cheng** (Dalian University of Technology, Peoples Rep of China) Random Attractors for McKean-Vlasov SDEs	
JULY 6 **15:00-15:30**	**Hongjun Gao** (Southeast University, Peoples Rep of China) Amplitude Equations for SPDEs	
JULY 6 **15:30-16:00**	**Gao Jingyue** (Southeast University, Peoples Rep of China) Large Deviations for for Multiscale McKean-Vlasov Systems Driven by Fractional Brownian Motion	

SS 31	**Data-Driven Modeling and Control of Complex Systems** Organizer(s): Qunxi Zhu , Siyang Leng , Peijie Zhou	**Room 639**
JULY 6 **13:30-14:00**	**Liu Jiazhen** (Fudan University, Peoples Rep of China) Dynamical Phase Transitions in Nonequilibrium Networks	

JULY 6 **14:00-14:30**	**Lirong Qu** (School of Mathematical Sciences, Beijing Normal University, Peoples Rep of China) High-dimensional Density Estimation
JULY 6 **14:30-15:00**	**Rui Wang** (School of Mathematical Sciences, Beijing Normal University, Peoples Rep of China) Modeling environmental feedback in opinion dynamics: Pattern formation and phase transitions
JULY 6 **15:00-15:30**	**Zhonghua Zhang** (Northwestern polytechnical university, Peoples Rep of China) Predicting first-order phase transitions in coupled oscillator systems with machine learning

SS 32	**Inverse Problems and Image Processing** Organizer(s): Qiyu Jin , Shengzhu Shi , Taofeng Xie	**Room 636**
JULY 6 **13:30-14:00**	**Xiaoping Yang** (Nanjing University, Peoples Rep of China) Topological Fingerprints of Tabular Surfaces in images Based on Persistent Homology	
JULY 6 **14:00-14:30**	**Ting Wei** (Lanzhou University, Peoples Rep of China) Identifying the order and a space source term in a time fractional diffusion-wave equation	
JULY 6 **14:30-15:00**	**Xiaoqun Zhang** (Shanghai Jiao Tong University, Peoples Rep of China) Hierarchical Exact Solver for Large-scale Optimal Transport and its applciations	
JULY 6 **15:00-15:30**	**Luying Gui** (Nanjing University of Science and Technology, Peoples Rep of China) NCHG-Seg: Nerve-Prioritized Multi-Scale Tissue Segmentation and Nerve-Centric Heterogeneous Graph Learning for Perineural Invasion Modeling and Survival Prediction in Pancreatic Cancer	
JULY 6 **15:30-16:00**	**Meng Huang** (Beihang University, Peoples Rep of China) Quadratic convergence of the Gauss-Newton method for complex phase retrieval	

SS 35	**Elliptic PDEs: singularities, discontinuities, and nonlinear phenomena** Organizer(s): Umberto Guarnotta , Salvatore Angelo Marano	**Room 434**
JULY 6 **13:30-14:00**	**simone ciani** (University of Bologna Alma Mater, Italy) On the weak Harnack inequality for a generalized Orlicz De Giorgi class	

JULY 6 **14:00-14:30**	**Irene Benedetti** (Department of Mathematics and Computer Science, University of Perugia, Italy) Quasi-variational inequalities with non compact constraints
JULY 6 **14:30-15:00**	**Divya Goel** (Indian institute of Technology BHU, India) Normalized solutions for Elliptic PDEs
JULY 6 **15:00-15:30**	**Laura Gambera** (University of Catania, Italy) On Bobkov-Tanaka type spectrum for the double-phase operator
JULY 6 **15:30-16:00**	**Giuseppina Autuori** (Polytechnic University of Marche, Italy) Critical double phase Kirchhoff problems in $\\mathbb{R}^N$

SS 37	**Recent development of stochastic optimal control, applications and deep learning methods** Organizer(s): Omar KEBIRI	**Room 436**
JULY 6 **13:30-14:00**	**Jing Zhang** (Fudan University, Peoples Rep of China) Stochastic Differential Games with Random Coefficients and Stochastic Hamilton-Jacobi-Bellman-Isaacs Equations	
JULY 6 **14:00-14:30**	**Qingmeng Wei** (Northeast Normal University, Peoples Rep of China) Time-Inconsistent Stochastic Optimal Control Problems in Infinite Time Horizon	
JULY 6 **14:30-15:00**	**Mariusz Michta** (Institute of Mathematics, University of Zielona Gora, Poland) Filippov`s Theorem for stochastic differential inclusions driven by semimartingales	
JULY 6 **15:00-15:30**	**Xin Zhang** (NYU, USA) Second-order PDEs on Wasserstein Space	
JULY 6 **15:30-16:00**	**Alex Tse** (University College London, England) Optimal Market-Making with Hawkes Process: A Markovian Approximation Approach via Mercer`s Expansion	

SS 40	**Applications of dynamical systems in medicine and biology** Organizer(s): Beata Jackowska-Zduniak , Urszula Foryś	**Room 433**

JULY 6 **13:30-14:00**	**Juan Belmonte Beitia** (UCLM, Spain) A Mathematical Model of CAR T Cell Therapy: How B Cell Influx Shapes Leukemia Outcomes
JULY 6 **14:00-14:30**	**Marek Bodnar** (Institute of Applied Mathematics, University of Warsaw, Poland) An impact of B-cells dynamics on CAR-T cell therapy for glioblastoma
JULY 6 **14:30-15:00**	**Urszula Forys** (University of Warsaw, Faculty of Mathematics, Informatics and Mechanics, Poland) Mathematical modelling of epithelial-mesenchymal transitions
JULY 6 **15:00-15:30**	**Magdalena Szafranska-Leczycka** (Doctoral School of Exact and Natural Sciences, University of Warsaw, Warsaw, Poland, Poland) Time Delay in a Mathematical Model of Epithelial--Mesenchymal Transitions and Implications for Cancer Treatment

SS 42	**Hamiltonian Dynamics and Celestial Mechanics** Organizer(s): Zhifu Xie , Ernesto Perez-Chavela	**Room 628**
JULY 6 **13:30-14:00**	**Kuochang Chen** (National Tsing Hua University, Taiwan) Mass constraints of some planar central configurations	
JULY 6 **14:00-14:30**	**Vivina Barutello** (University of Turin, Italy) On the Birkhoff conjecture for Kepler billiards	
JULY 6 **14:30-15:00**	**Jianlu ZHANG** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) Comparison principle of general Hamilton-Jacobi equations and applications	
JULY 6 **14:30-15:00**	**Liang Ding** (Guizhou Minzu University, Peoples Rep of China) A new class of pyramidal central configurations for spatial Newtonian 6-body problems	
JULY 6 **15:00-15:30**	**Abimael Bengochea** (Instituto Tecnologico Autonomo de Mexico, Mexico) Reversing Symmetries and Periodic Motions in the Three-Body Problem on the Sphere	
JULY 6 **15:30-16:00**	**Antonio J Urena** (Universidad de Granada, Spain) C1 perturbations of a continuum of critical points	

SS 43	**Recent Advances in Inverse Problems, Imaging, and Their Applications** Organizer(s): Peijun Li , Gang Bao	Room 437
JULY 6 **14:00-14:30**	**Josselin Garnier** (Ecole polytechnique, France) Effective sound speed estimation in ultrasound imaging	
JULY 6 **14:30-15:00**	**Xiaodong Liu** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) Inverse scattering problems from the multi-frequency backscattering data	
JULY 6 **15:00-15:30**	**Faouzi Triki** (Universite de Grenoble, France) Local reconstruction of coefficients in quantitative photoacoustic tomography	
JULY 6 **15:30-16:00**	**Ye Zhang** (Shenzhen MSU-BIT University, Peoples Rep of China) Neural network yields regularization for ill-posed inverse problems	

SS 46	**Advances in Optimization and Equilibrium Problems: methods and applications** Organizer(s): Patrizia Daniele , Laura Palagi	Room 316
JULY 6 **14:00-14:30**	**Akhtar Khan** (Rochester Institute of Technology, USA) An Augmented Lagrangian Framework for Stochastic Optimization: Applications to Optimal Control and Parameter Estimation	
JULY 6 **14:30-15:00**	**Laura Rosa Maria Scrimali** (University of Catania, Italy) Competitive Dynamics and Trust Mechanisms in Crowdsourced Delivery Networks: An Uncertain Variational Equilibrium Approach	
JULY 6 **15:00-15:30**	**Francisco Facchinei** (University of Rome La Sapienza, Italy) Ghost penalties and stochastic programming	
JULY 6 **15:30-16:00**	**Sofia Giuffre`** (University of Reggio Calabria, Italy) Advances on Strong Duality Theory: Necessary and Sufficient Conditions and Applications	

SS 54	**Trends in Nonlinear Analysis** Organizer(s): Olimpio Miyagaki , GUSTAVO MADEIRA , ALANNIO NOBREGA	Room 430

JULY 6 **13:30-14:00**	**Mousomi Bhakta** (Indian Institute of Science Education and Research Pune (IISER Pune), India) Liouville properties for differential inequalities with (p,q) Laplacian operator
JULY 6 **14:00-14:30**	**Bartosz Bieganowski** (University of Warsaw, Poland) Multiplicity of critical orbits to nonlinear, strongly indefinite functionals with sign-changing nonlinear part
JULY 6 **14:30-15:00**	**Nsoki Mavinga** (Swarthmore College, USA) Nonresonance for problems involving (p,q)-Laplacian equations with nonlinear perturbations
JULY 6 **15:00-15:30**	**Yuanze Wu** (School of Mathematics, Yunnan Normal University, Peoples Rep of China) Existence and multiplicity of solutions to the mean-field games model with mixed interactions

SS 55	**Nonlocal effects in diffusion equations** Organizer(s): Xueli Bai , Fang Li , Xuefeng Wang	**Room 311**
JULY 6 **13:30-14:00**	**Xueli Bai** (Northwestern Polytechnical University, Peoples Rep of China) Some Progress on Single Species Models with Nonlocal Dispersal Strategies in Heterogeneous Environments	
JULY 6 **14:00-14:30**	**Yang Cao** (Dalian University of Technology, Peoples Rep of China) Nonlocal Effects in Deterministic and Stochastic Pseudo-Parabolic Equations	
JULY 6 **14:30-15:00**	**Mengyao Ding** (Harbin institute of Technology, Peoples Rep of China) A study on the regularity of mixed local-nonlocal problems with measure data	
JULY 6 **15:00-15:30**	**Chunhua Jin** (South China Normal University, Peoples Rep of China) Self-similar Singular Solutions for the Critical Keller-Segel Model with p-Laplacian Diffusion	
JULY 6 **15:30-16:00**	**Fang Li** (Sun Yat-sen University, Peoples Rep of China) Existence and nonexistence of stable patterns in semilinear nonlocal diffusion equations	

SS 63	**Interdisciplinary Applications of Traditional Numerical Methods, Deep Learning Methods, and Statistical Approaches** Organizer(s): Qiaolin He , Xiaoling Peng	**Room 440**
JULY 6 **13:30-14:00**	**Xianmin XU** (Chinese Academy of Sciences, Peoples Rep of China) Deep learning methods for singular variational problems with Lavrentiev phenomena	
JULY 6 **14:00-14:30**	**Fei Wang** (Xi`an Jiaotong University, Peoples Rep of China) Randomized Neural Networks for PDEs	
JULY 6 **14:30-15:00**	**Jie Du** (East China Normal University, Peoples Rep of China) Well-balanced positivity-preserving high-order discontinuous Galerkin methods for Euler equations with gravitation	
JULY 6 **15:00-15:30**	**Yan Jiang** (University of Science and Technology of China, Peoples Rep of China) Well-balanced and entropy-stable nodal DG method for the Euler equations with gravity	
JULY 6 **15:30-16:00**	**Meng Zhao** (Huazhong University of Science and Technology, Peoples Rep of China) Electrically controlled self-similar evolution of viscous fingering patterns	

SS 65	**Geometry of PDEs on Manifolds and Nilpotent Lie Groups** Organizer(s): Jyotshana Prajapat , Pieralberto Sicbaldi	**Room 301**
JULY 6 **13:30-14:00**	**Wenxiong Chen** (Yeshiva University, USA) Qualitative properties of solutions to fractional elliptic and parabolic equations	
JULY 6 **14:00-14:30**	**Giulio Ciraolo** (University of Milan, Italy) Symmetry and rigidity results for Serrin`s overdetermined type problems in weighted Riemannian manifolds	
JULY 6 **14:30-15:00**	**Antonio Greco** (University of Cagliari, Italy) Rigidity results for spherical, as well as annular domains, in manifolds with pole	
JULY 6 **15:00-15:30**	**Pieralberto Sicbaldi** (Universidad de Granada, Spain) Some results about the capillary overdetermined problem	

JULY 6 **15:30-16:00**	**Michiaki Onodera** (Institute of Science Tokyo, Japan) Concentration phenomena for Bernoulli`s free boundary problem

SS 78	**Learning Approaches for PDE Forward and Inverse Problems** Organizer(s): Kui Ren	**Room 301**
JULY 6 **13:30-14:00**	**Tianhao Hu** (The Chinese University of Hong Kong, Hong Kong) Point Source Identification Using Singularity Enriched Neural Networks	
JULY 6 **14:00-14:30**	**Thomas Wasik** (CNRS/ Ecole polytechnique, France) Leveraging Multiple Scattering for Inverse Problems in Reflection Microscopy	

SS 82	**Dissipative Systems and Applications** Organizer(s): Lourdes Tello , Wenxian Shen	**Room 427**
JULY 6 **13:30-14:00**	**Jerome Goddard II** (Auburn University Montgomery, USA) Modeling Density-Dependent Emigration Between Two Competing Species of Tribolium: Part II -- Results	
JULY 6 **14:00-14:30**	**Yu Jin** (University of Nebraska-Lincoln, USA) Dynamics of an SIS epidemic model with population outflow on the boundary	
JULY 6 **14:30-15:00**	**Zhisheng Shuai** (University of Central Florida, USA) Modeling Post-Infection Mortality: A Tale of Two Incidence Functions	
JULY 6 **15:00-15:30**	**Javier L\`opez-de-la-Cruz** (Universidad Polit\`ecnica de Madrid, Spain) A differential equation approach to the study of random SIR models with vital dynamics and time-varying vaccination rate	
JULY 6 **15:30-16:00**	**Johannes Lankeit** (Leibniz University Hannover, Germany) The energy (and its dissipation) in the chemotaxis-consumption system	

SS 83	**New Aspects of Mathematical Modeling and Analysis in Materials Science** Organizer(s): Toyohiko Aiki , Adrian Muntean	**Room 812**

JULY 6 **13:30-14:00**	**Michael Vynnycky** (University of Limerick, Ireland) On the modelling of the dissolution of a solid particle
JULY 6 **14:00-14:30**	**Kota Kumazaki** (Kyoto University of Education, Japan) Construction of a strong solution to a one-dimensional free boundary problem via the finite volume method
JULY 6 **14:30-15:00**	**Yusuke Murase** (Meijo University, Japan) Numerical simulations and analysis of mathematical modeling for moisture transport in porous media
JULY 6 **15:00-15:30**	**CHRISTOS NIKOLOPOULOS** (University of the Aegean, Greece) Derivation and Analysis of Macroscopic Models Describing Reaction and Diffusion in Porous Media
JULY 6 **15:30-16:00**	**Hana Kakiuchi** (Japan Women`s University, Japan) Behavior of the free boundary to two-phase Stefan problems for the bread baking process

SS 87	**Mathematical Insights into Phase-Field Models** Organizer(s): Andrea Signori , Pierluigi Colli , Takeshi Fukao	**Room 740**
JULY 6 **13:30-14:00**	**Monica Conti** (Politecnico di Milano, Italy) A perturbation of the Cahn-Hilliard equation with logarithmic nonlinearity	
JULY 6 **14:00-14:30**	**Abramo Agosti** (University of Pavia, Italy) New results on a variant of the Cahn-Hilliard equation with non-variational structure	
JULY 6 **14:30-15:00**	**Kei Fong Lam** (Hong Kong Baptist University, Hong Kong) Complex pattern formation by Ginzburg-Landau and Swift-Hohenberg dynamics: Analysis and Numerical Simulations	
JULY 6 **15:00-15:30**	**Helmut Abels** (University of Regensburg, Germany) Uniform higher order estimates for the sharp interface limit of a Navier-Stokes/Allen-Cahn system	

SS 89	**Partial Differential Equations: Diverse Applications and Connections** Organizer(s): Patrizia Di Gironimo , Marta Macrì , Sara Monsurrò	**Room 314**

JULY 6 **13:30-14:00**	**Giulio Pascale** (Universit\\'{a} degli Studi di Napoli Federico II, Italy) Isoperimetric Inequalities for a Capillarity Problem
JULY 6 **14:00-14:30**	**Giuseppa Rita Cirmi** (University of Catania, Italy) Finite energy solutions for a class of Dirichlet problem with very singular data
JULY 6 **14:30-15:00**	**Salvatore D`Asero** (University of Catania, Italy) On the existence of $W^{1,1}_0$ distributional solutions to nonlinear elliptic equations with lower-order terms.
JULY 6 **15:00-15:30**	**Maria Stella Fanciullo** (Universit\`a degli Studi di Catania, Italy) Boundedness of Weak Solutions for a Degenerate Elliptic Equation Modelling Spider Orb Webs
JULY 6 **15:30-16:00**	**Alberico Angela** (Italian National Research Council - Institute for Applied Calculus (Napoli), Italy) Global boundedness of solutions to fully anisotropic variational problems

SS 92	**Numerical Methods for SPDEs: Bridging Theory and Applications** Organizer(s): Hakima Bessaih , Erika Hausenblas , Annie Millet	**Room 821**
JULY 6 **13:30-14:00**	**Dirk Bl\"omker** (Universit\"at Augsburg, Germany) Numerical Study of a Surface Growth Model with Singular Noise	
JULY 6 **14:00-14:30**	**Llu\`is Quer Sardanyons** (Universitat Autonoma de Barcelona, Spain) Convergence in law for SPDEs with additive noise	
JULY 6 **14:30-15:00**	**Katharina Klioba** (TU Delft, Netherlands) Temporal approximation of semilinear hyperbolic SPDEs with polynomial nonlinearities	
JULY 6 **15:00-15:30**	**Antoine Moneyron** (Inria Rennes, France) A stochastic interpretation of the Water Waves model	

SS 95	**The Euler Water Wave Problem** Organizer(s): Bernard Deconinck , Dmitry Pelinovsky , Anastassiya Semenova	**Room 823**

JULY 6 **13:30-14:00**	**Luis Miguel Rodrigues** (Univ Rennes, France) Transverse Instability of Small-Amplitude Finite-Depth Stokes Waves
JULY 6 **14:00-14:30**	**Erik Wahl\`en** (Lund University, Sweden) Stability and instability of gravity-capillary waves
JULY 6 **14:30-15:00**	**Eleanor D Byrnes** (University of Washington, USA) Spectral Stability of High Amplitude Waves
JULY 6 **15:00-15:30**	**Sergey Dyachenko** (State University of New York at Buffalo, USA) The Stokes waves on ideal fluid: modulational instability and wave breaking

SS 99	**Emerging Trends in Analysis and Control of PDEs** Organizer(s): Diego A. Souza , Anna Doubova , Kévin Le Balc`h	**Room 425**
JULY 6 **13:30-14:00**	**Marius Tucsnak** (University of Bordeaux, France) Recent advances on approximate trajectory controllability. Application to the enhanced dissipation of a passive scalar.	
JULY 6 **14:00-14:30**	**Fabricio Macia** (Universidad Politecnica de Madrid, Spain) Sharp geometric conditions for the contollability of magnetic Schr\odinger equations	
JULY 6 **14:30-15:00**	**Jone Apraiz** (University of the Basque Country, Spain) Inverse problems for Kelvin--Voigt viscoelastic and Moore--Gibson--Thompson equations	
JULY 6 **15:00-15:30**	**GENNI FRAGNELLI** (University of Siena, Italy) Null controllability for a degenerate Fokker-Plank equation with a drift term	
JULY 6 **15:30-16:00**	**Arnab Roy** (Basque Center for Applied Mathematics (BCAM), Spain) Steady Self-Propelled Motion of a Rigid Body in a Viscous Fluid with Navier-Slip Boundary Conditions	

SS 101	**Applied Dynamical Systems in Action** Organizer(s): Thomas Hagen , Florian Rupp	**Room 438**
JULY 6 **14:00-14:30**	**Johannes Zimmer** (TU Munich, Germany) Deriving a thermodynamic system from a Hamiltonian one	

JULY 6 **14:30-15:00**	**Peter Imkeller** (Humboldt University at Berlin, Germany) Geometric properties of rough curves via dynamical systems: SBR measure and local time
JULY 6 **15:00-15:30**	**Ioannis Giannoulis** (University of Ioannina, Greece) Higher order approximations to the (dual) semi-geostrophic equation
JULY 6 **15:30-16:00**	**Florian Rupp** (Kutaisi International University, Germany) Mathematical Analysis of the Dynamics in the Tobacco Plant v.s. Moth Interaction Cycle

SS 102	**Mathematics of Cancer and Cardiovascular Dynamics: From High-Fidelity Simulation to Data-Driven Methods** Organizer(s): Nikolaos Sfakianakis , Zuzanna Szymańska , Niklas Kolbe	**Room 445**
JULY 6 **13:30-14:00**	**Anna Marciniak-Czochra** (Institute for Mathematics, Heidelberg University, Germany) Integrating mechanistic mathematical modelling and single-cell data to study cellular hierarchies in neural stem cells and glioblastoma	
JULY 6 **14:00-14:30**	**Zuzanna Szymanska** (ICM, University of Warsaw, Poland) Mathematical modelling of cancer invasion: Phenotypic transitioning provides insight into multifocal foci formation	
JULY 6 **14:30-15:00**	**Niklas Kolbe** (RWTH Aachen University, Germany) A Reduced Model of Aspiration Thrombectomy	
JULY 6 **15:00-15:30**	**Sandesh Athni Hiremath** (Rhinelandpfalz Technical University, Germany) Data Driven Modeling of Pseudopalisade Pattern Formation	
JULY 6 **15:30-16:00**	**Raluca EFTIMIE** (University Marie and Louis Pasteur, France) Computational investigation of the interactions between oncolytic viruses and tumour-associated macrophages	

SS 105	**Dynamics of Many-Particle Systems and Mean-field Equations** Organizer(s): Hui Huang , Hicham Kouhkouh	**Room 642**
JULY 6 **13:30-14:00**	**Grigorios Pavliotis** (Imperial College London, England) On the Diffusive-Mean Field limit of Kinetic Interacting Particle Systems	

JULY 6 **14:00-14:30**	**Shuchen Guo** (University of Oxford, England) Propagation of chaos for multi-species moderately interacting particle systems up to Newtonian singularity
JULY 6 **14:30-15:00**	**Jinchao Feng** (Great Bay University, Peoples Rep of China) Data-driven Learning of Interaction Laws in Multispecies Particle Systems
JULY 6 **15:00-15:30**	**Konstantinos Spiliopoulos** (Boston University, USA) Particle-Based Stochastic Reaction-Diffusion Models: Mean field limits and fluctuation corrections.
JULY 6 **15:30-16:00**	**Paul Nikolaev** (TU Berlin, Germany) Convergence Rates of Mean-Field Fluctuations in the 2D Viscous Vortex and Coulomb Models

SS 107	**Recent advances in regularity theory for local and nonlocal elliptic and parabolic equations** Organizer(s): Sun-Sig Byun , Jehan Oh , Yeonghun Youn	**Room 738**
JULY 6 **13:30-14:00**	**Dian Palagachev** (Politecnico di Bari, Italy) Conormal Derivative Problems for Quasilinear Elliptic Equations with Morrey Data	
JULY 6 **14:00-14:30**	**Lyoubomira Softova** (Salerno University, Italy) Approximation of the Solutions to Quasilinear Parabolic Problems with Perturbed Coefficients	
JULY 6 **14:30-15:00**	**Abhrojyoti Sen** (Goethe University Frankfurt, Germany) Regularity theory for parabolic double phase problems	
JULY 6 **15:00-15:30**	**Pilsoo Shin** (Kyonggi University, Korea) Generalized Structural Conditions and Gradient Regularity for Double Phase Problems	

SS 111	**Evolution Equations and Operator Semigroups: Theory and Applications** Organizer(s): Christian Budde	**Room 432**
JULY 6 **13:30-14:00**	**Gabriela Planas** (Universidade Estadual de Campinas, Brazil) Two-Dimensional Keller-Segel-Navier-Stokes System of Potential Type	

JULY 6 **14:00-14:30**	**Adam Gregosiewicz** (Lublin University of Technology, Poland) Generation theorems via affine resolvent decomposition
JULY 6 **14:30-15:00**	**Elzbieta Ratajczyk** (Lublin University of Technology, Poland) Two Approximation Schemes for Walsh`s Spider Process
JULY 6 **15:00-15:30**	**Christian Budde** (University of the Free State, So Africa) Perturbations of non-autonomous second-order abstract Cauchy problems

SS 112	**Nonlinear Dynamics: Methods, Models, and Applications** Organizer(s): Grzegorz Graff , Alfonso Ruiz-Herrera , José María Amigó	**Room 739**
JULY 6 **13:30-14:00**	**Dimitris Kugiumtzis** (Aristotle University of Thessaloniki, Greece) Sparse modeling of high dimensional time series and the role of lag causality	
JULY 6 **14:00-14:30**	**Justyna Signerska** (Gdansk University of Technology, Poland) Investigating Dynamical Similarity of Unknown Systems through Time Series and Samples of Data	
JULY 6 **14:30-15:00**	\`**{A}bel Garab** (University of Szeged, Hungary) Discrete Lyapunov functional for cyclic systems of differential equations with time-variable or state-dependent delay	
JULY 6 **15:00-15:30**	**Grzegorz Graff** (Gdansk University of Technology, Poland) Topological and Dynamical Approaches to Cardiorespiratory Data Analysis	
JULY 6 **15:30-16:00**	**Jose M Amigo** (Universidad Miguel Hernandez, Spain) Generalized synchronization and its detection via recurrent neural networks	

SS 117	**Patterns and Attractors in Nonlinear Dynamics** Organizer(s): Jia-Yuan Dai , Phillipo Lappicy , Junsik Bae	**Room 426**
JULY 6 **13:30-14:00**	**Phillipo Lappicy** (Universidad Complutense de Madrid, Spain) The dynamics of global attractors for fully nonlinear parabolic equations in 1d	

JULY 6 **14:00-14:30**	**Maximilian Engel** (University of Amsterdam, Netherlands) Detecting and quantifying random bifurcations in collapsing attractors
JULY 6 **14:30-15:00**	**Iacopo P. Longo** (University of Exeter, England) Nonautonomous differential equations in the presence of bounded noise
JULY 6 **15:00-15:30**	**Tommaso Lamma** (Leiden University, Netherlands) Sharp interfaces in singular reaction diffusion systems
JULY 6 **15:30-16:00**	**Jia-Yuan Dai** (National Tsing Hua University, Taiwan) Transition Routes to Synchronization in the Classical Kuramoto Model

SS 119	**PDEs and Variational Problems in Physical and Biological Sciences** Organizer(s): Changfeng Gui , Wen Yang , Yeyao Hu	**Room 825**
JULY 6 **13:30-14:00**	**Juncheng Wei** (Chinese University of Hong Kong, Hong Kong) Global convergence of Gursky-Malchiodi flow	
JULY 6 **14:00-14:30**	**Bo Li** (University of California San Diego, USA) Maximizing Reaction via Spatial Localization	
JULY 6 **14:30-15:00**	**Weiwei Ao** (Wuhan University, Peoples Rep of China) Stable spikes for some reaction diffusion systems modeling color pattern formation and consumer chain	
JULY 6 **15:00-15:30**	**Cle Graham** (University of Wisconsin-Madison, USA) Uniqueness and multiplicity for bistable equations in unbounded domains	
JULY 6 **15:30-16:00**	**Shuangquan Xie** (Hunan University, Peoples Rep of China) Spatial Pattern Formation and Spike Dynamics in a Three-Component Ecosystem Model	

SS 120	**Mixtures: Modeling, analysis and computing** Organizer(s): Miroslav Bul\'{i}\v{c}ek , V\'{\i}t Pr\r{u}\v{s}a , Karel T\r{u}ma	**Room 824**
JULY 6 **13:30-14:00**	**Miroslav Bul\\'{\\i}\\v{c}ek** (Charles University, Czech Rep) Stability of the rest state for some models of viscous chemically reacting fluids	

JULY 6 **14:00-14:30**	**Ewelina Zatorska** (University of Warwick, England) On the low Mach number limit for compressible two-fluid system
JULY 6 **14:30-15:00**	**Tobi\`a \v s Krupa** (Charles University, Czech Rep) Chemically reacting mixtures: asymptotic stability of steady solutions
JULY 6 **15:00-15:30**	**Milan Pokorny** (Charles University, Czech Rep) Existence analysis of an evolutionary compressible fluid model for heat-conducting and chemically reacting mixtures
JULY 6 **15:30-16:00**	**Nicola Zamponi** (University of Augsburg, Germany) Richards flow in porous media with cross diffusion

SS 123	**Nonlinear phenomena in elliptic and parabolic equations** Organizer(s): Futoshi Takahashi , Bernhard Ruf , Daisuke Naimen	**Room 619**
JULY 6 **13:30-14:00**	**Vitaly Moroz** (Swansea University, Wales) Ground states of a nonlocal variational problem and Thomas-Fermi limit for the Choquard equation	
JULY 6 **14:00-14:30**	**Yoshitsugu Kabeya** (Osaka Metropolitan University, Japan) Bifurcating solutions of a Hatree-type elliptic equation	
JULY 6 **14:30-15:00**	**Daniele Cassani** (University of Insubria & RISM, Italy) Existence of multi-bubbling solutions for a critical Hartree type equation	
JULY 6 **15:00-15:30**	**Tatsuki Kawakami** (Ryukoku University, Japan) Fundamental solution and diffusion limits for the heat equation in a half-space with a diffusive dynamical boundary condition	
JULY 6 **15:30-16:00**	**Qi Guo** (Renmin University of China, Peoples Rep of China) Recent progress on the study of solutions to nonlinear Dirac equations	

SS 128	**New Trends in Mathematical Fluid Dynamics and Related Problems** Organizer(s): Elena Salguero , Martina Magliocca , Francisco Mengual	**Room 826**

JULY 6 **13:30-14:00**	**Claudia Garcia** (Universidad de Granada, Spain) Leapfrogging motion for the Euler equations. Part 1.
JULY 6 **14:00-14:30**	**Zineb Hassainia** (University of Granada, Spain) Leapfrogging motion for the Euler equations. Part 2
JULY 6 **14:30-15:00**	**DAniel Faraco** (Universidad Autonoma de Madrid, Spain) Turbulent Dynamos in Bounded Domains
JULY 6 **15:00-15:30**	**Jaemin Park** (Yonsei University, Korea) Global weak solutions and Hamiltonian conservation for the SQG equation
JULY 6 **15:30-16:00**	**Alexey Cheskidov** (Westlake University, Peoples Rep of China) Non-uniqueness of solutions to the Navier-Stokes and related equations

SS 142	**Recent developments for PDE constrained shape and topological optimization and their applications** Organizer(s): Chiu-Yen Kao , Braxton Osting	**Room 640**
JULY 6 **13:30-14:00**	**Idriss Mazari-Fouquer** (CEREMADE, Paris Dauphine University PSL, France) Convergence of thresholding schemes	
JULY 6 **14:00-14:30**	**Seyyed Abbas Mohammadi** (University of Dundee; Wits University, Scotland) Accelerated Rearrangement Methods for Two-Phase PDE-Constrained Optimisation	
JULY 6 **14:30-15:00**	**Dong Wang** (The Chinese University of Hong Kong, Shenzhen & Shenzhen International Center for Industrial and Applied Mathematics, Peoples Rep of China) Efficient iterative-convolution thresholding methods for interface related optimization problems	
JULY 6 **15:00-15:30**	**Chee Han Tan** (National Sun Yat-Sen University, Taiwan) Steklov-Wentzell Eigenvalues of Nearly Spherical Domains	
JULY 6 **15:30-16:00**	**Robert Viator** (Denison University, USA) Extremal Steklov-Neumann Eigenvalues	

SS 147	**From optimal control to large population games: Learning and Applications** Organizer(s): Gokce Dayanikli , Mathieu Lauriere	**Room 827**
JULY 6 **13:30-14:00**	**Nizar Touzi** (New York University, USA) Some new developments on continuous time Principal-Agent	
JULY 6 **14:00-14:30**	**Antonis Papapantoleon** (TU Delft, Netherlands) Stability for BSDEs and backward propagation of chaos	
JULY 6 **14:30-15:00**	**Fabio Camilli** (Univ. di Chieti Pescara, Italy) A Mean Field Games Perspective on Evolutionary Clustering	
JULY 6 **15:00-15:30**	**Igor Cialenco** (Illinois Institute of Technology, USA) Vector-valued robust stochastic control with applications to finance	
JULY 6 **15:30-16:00**	**Dena Firoozi** (University of Toronto, Canada) Ranking Quantilized Mean-Field Games with an Application to Early-Stage Venture Investments	

SS 169	**Inverse problems arising in partial differential equations and mathematical physics** Organizer(s): Mengni Li	**Room 641**
JULY 6 **13:30-14:00**	**Elena Beretta** (New York University Abu Dhabi, United Arab Emirates) On the Determination of an Anisotropic Conductivity from the Neumann-to-Dirichlet Map in a Semilinear Elliptic Equation	
JULY 6 **14:00-14:30**	**Florian Bossmann** (Harbin Institute of Technology, Peoples Rep of China) Context aware iterative graph Laplacian for industrial imaging	
JULY 6 **14:30-15:00**	**DMITRII CHAIKOVSKII** (Shenzhen MSU-BIT University, Peoples Rep of China) Optimization-free coefficient identification via matched asymptotics in periodic advection-diffusion-reaction problems	
JULY 6 **15:00-15:30**	**Luca Rondi** (Universit\`a degli Studi di Pavia, Italy) Regularization and discretization in the reconstruction for elliptic inverse problems	

JULY 6 **15:30-16:00**	**Eva Sincich** (University of Trieste, Italy) Lipschitz Stability for Polyhedral Elastic Inclusions from Partial Data

SS 182	**Recent developments on mathematical finance, stochastic control and related topics** Organizer(s): Zhenhua Wang , Zhou Zhou , Jingjie Zhang	**Room 620**
JULY 6 **13:30-14:00**	**Xuedong He** (Chinese University of Hong Kong, Hong Kong) Dynamic Portfolio Selection under Monotone Additive Statistics in the Heston Model	
JULY 6 **14:00-14:30**	**Shuoqing Deng** (The Hong Kong University of Science and Science and Technology, Hong Kong) Distribution constrained optimal stopping: beyond the Root-type solution	
JULY 6 **14:30-15:00**	**Yining Ding** (The University of Sydney, Australia) Pricing and Hedging of SOFR Derivatives	
JULY 6 **15:00-15:30**	**Jingjie Zhang** (University of International Business and Economics, Peoples Rep of China) Goal-based Portfolio Selection with Fixed Transaction Costs	
JULY 6 **15:30-16:00**	**Zhenhua Wang** (Shandong University, Peoples Rep of China) Well-posedness of the equilibrium HJB system for time-inconsistent controls	

CS 2	**PDEs and Applications**	**Room 635**
JULY 6 **13:30-13:50**	**Tarek Acila** (University of Warwick, England) Analysis of a Coupled Cahn-Hilliard Cross-Diffusion System for Lipid Raft-Receptor Dynamics on Cell Membranes	
JULY 6 **13:50-14:10**	**N N Dattatreya** (Indian Institute of Technology Kanpur, India) Large Solutions for Linear and Semi-linear Equations Involving Fractional Laplacian on Infinite Cylinder	
JULY 6 **14:10-14:30**	**Salim B Ivars** (ICFO, Spain) Orbiting solitons in Kerr cavities with anomalous GVD	

JULY 6 **14:30-14:50**	**Haesung Lee** (Department of Mathematics and Big Data Science, Kumoh National Institute of Technology, Korea) Pointwise well-posedness results for degenerate It\^{o}-SDEs with locally bounded drifts
JULY 6 **14:50-15:10**	**Gaukhar Shaikhova** (LN Gumilyov Eurasian National University, Kazakhstan) Nonlocal reductions and solutions of the (2+1)-dimensional Hirota equations
JULY 6 **15:10-15:30**	**Jiangwen Wang** (School of Mathematics, Southeast University, Peoples Rep of China) Regularity of solutions to degenerate normalized p-Laplacian equation with general variable exponents
JULY 6 **15:30-15:50**	**Xiangjian Zeng** (Institute of Mathematics of Polish Academy of Science, Poland) Normalized solutions for the planar Schr\{o}dinger-Poisson system

Parallel Session 2 :: Monday, 07/06, 16:30-19:00

TS 3	**Reaction-diffusion equations, new theoretical and applied trends** Organizer(s): Francois Hamel , Lionel Roques	**Room AULA**
JULY 6 **16:30-17:20**	**Yuan Lou** (Shanghai Jiao Tong University, Peoples Rep of China) Structural Models, Eigenvalues, and Biological Evolution	
JULY 6 **17:20-18:10**	**Luca Rossi** (Sapienza University of Rome, Italy) Stationary solutions for the heterogeneous Fisher$\diamond$KPP equation	

TS 6	**Mathematical developments in general relativity** Organizer(s): Mihalis Dafermos , Giorgos Moschidis	**Room AULA**
JULY 6 **16:30-17:20**	**Yannis Angelopoulos** (Beijing Institute of Mathematical Sciences and Applications, China) The threshold conjecture for extremal black holes in spherical symmetry	
JULY 6 **17:20-18:10**	**Andras Vasy** (Stanford University, USA) Kerr-de Sitter spacetimes: Stability of the black hole exterior and of the expanding region of Kerr-de Sitter spacetimes	

JULY 6 **18:10-19:00**	**Ryan Unger** (University of California, Berkeley, USA) The third law of black hole thermodynamics and extremal critical collapse

SS 3	**Analysis of diffuse and sharp interface models** Organizer(s): Alain Miranville , Andrea Giorgini , Maurizio Grasselli	**Room 428**
JULY 6 **16:30-17:00**	**Monica Conti** (Politecnico di Milano, Italy) On the Cahn-Hilliard equation with nonlinear diffusion: the non-convex case	
JULY 6 **17:00-17:30**	**Dalibor Prazak** (Charles University, Faculty of Mathematics and Physics, Czech Rep) Finite-dimensional attractors to 2D NSE-Allen-Cahn equations with irregular potentials	
JULY 6 **17:30-18:00**	**Giulia Cavalleri** (WIAS, Germany) On a nonisothermal tumor growth model of Caginalp type	

SS 4	**Mathematical methods in electromagnetism and related topics** Organizer(s): Ioannis Stratis , Pier Domenico Lamberti	**Room 315**
JULY 6 **16:30-17:00**	**Otar Chkadua** (Andrea Razmadze Mathematical Institute of I. Javakhishvili Tbilisi State University, Sokhumi State University, Rep of Georgia) Nonclassical dynamics transmission problems of generalized thermo-electro-magneto-elasticity	
JULY 6 **17:00-17:30**	**Matteo Dalla Riva** (University of Padova, Italy) The Neumann-Poincar\`e spectrum, shape analyticity and shape derivatives	
JULY 6 **17:30-18:00**	**Frank Hettlich** (Karlsruhe Institute of Technology / Institute for Applied and Numerical Mathematics, Germany) The domain derivative for the reconstruction of the shape of obstacles in nonlinear scattering problems	
JULY 6 **18:00-18:30**	**Rebecca Sempio** (Universit`a di Padova, Italy) Extremal problems for symmetric functions of the first three Maxwell eigenvalues	

SS 5	**New trends in pattern formations and dynamics for dissipative systems and related topics** Organizer(s): Junping Shi , Danielle Hilhorst , Yoshihisa Morita	**Room 313**
JULY 6 **16:30-17:00**	**Pierluigi Colli** (University of Pavia, Italy) Pattern formation and dynamics in spatially structured epidemic models	
JULY 6 **17:00-17:30**	**Hirofumi Izuhara** (University of Miyazaki, Japan) Pattern formation in Lotka-Volterra competition systems on two-dimensional domains	
JULY 6 **17:30-18:00**	**Jia-Yuan Dai** (National Tsing Hua University, Taiwan) Hybrid bifurcations: Periodicity from Eliminating a Line of Equilibria	
JULY 6 **18:00-18:30**	**Ken-Ichi Nakamura** (Meiji University, Japan) Propagation speed of bistable traveling waves in a 3-component Lotka-Volterra competition-diffusion system	
JULY 6 **18:30-19:00**	**Yurij Salmaniw** (University of Sheffield, England) Bifurcations in Nonlocal Aggregation-Diffusion Systems	

SS 7	**Recent developments on nonlinear geometric PDEs** Organizer(s): Angela Pistoia , Pierpaolo Esposito , Giusi Vaira , Isabella Ianni	**Room 618**
JULY 6 **16:30-17:00**	**Yuanze Wu** (School of Mathematics, Yunnan Normal University, Peoples Rep of China) Classification of the Struwe decomposition of the Brezis-Nirenberg problem and its application: The one-bubble case	
JULY 6 **17:00-17:30**	**Seunghyeok Kim** (Hanyang University, Korea) New ancient solutions to the Yamabe flow on the sphere	
JULY 6 **17:30-18:00**	**Francesca Colasuonno** (Universita degli Studi di Torino, Italy) Ground States and Nodal Solutions for the Mean Curvature Operator in Minkowski Space	
JULY 6 **18:00-18:30**	**Ying Li** (Central China Normal University&Sapienza University of Rome, Peoples Rep of China) Eigenfunctions in domains with small balls removed	

SS 12	**Propagation Phenomena in Reaction-Diffusion Systems** Organizer(s): Hirokazu Ninomiya , Masaharu Taniguchi	**Room 637**
JULY 6 **16:30-17:00**	**Kota Ikeda** (Meiji University, Japan) Rigorous Construction of Stop-and-Go Waves in the Optimal Velocity Model via a differential-difference equation	
JULY 6 **17:00-17:30**	**Iuliia Petrova** (University of Sao Paulo (USP), Brazil) Traveling waves and propagating terraces in gravitational fingering phenomena	
JULY 6 **17:30-18:00**	**Hiroshi Ishii** (Hokkaido University, Japan) Spot solutions to a neural field equation on the sphere and spheroid	
JULY 6 **18:00-18:30**	**Ryunosuke Mori** (Meiji University, Japan) Propagation and blocking of driven curvature flow in a strip domain with periodic obstacles	

SS 16	**The recent progress on qualitative theory of dynamical systems** Organizer(s): Yulin Zhao , Hebai Chen	**Room 822**
JULY 6 **16:30-17:00**	**Changjian Liu** (Sun Yat-sen university, Peoples Rep of China) The number of zeros of Abelian integrals from Nilpotent Codimension 3 birfucation (Saddle and Elliptic cases)	
JULY 6 **17:00-17:30**	**Shuang Chen** (Central China Normal University, Peoples Rep of China) Smooth conjugacy of center manifold dynamics	
JULY 6 **17:30-18:00**	**Kunlun Huang** (Beihang University, Peoples Rep of China) Bifurcation and Chaotic Dynamics in Predator-Prey Ecological Models	
JULY 6 **18:00-18:30**	**Yulin Zhao** (Sun Yat-sen University, Peoples Rep of China) Hyperbolicity of Algebraic Limit Cycles via Abelian Integrals	

SS 18	**Progress on delay and fractional differential equations with real-world application** Organizer(s): Kunquan Lan , Elena Braverman	**Room 538**

JULY 6 **16:30-17:00**	**Chenkuan Li** (Brandon University, Canada) On the Uniqueness of Solutions to a Nonlinear Fractional Pantograph-Type Equation with a Functional Initial Condition
JULY 6 **17:00-17:30**	**Kunquan Lan** (Toronto Metropolitan University, Canada) Are nonlinear first order Caputo fractional differential equations solvable?
JULY 6 **17:30-18:00**	**Min-Jie Luo** (Donghua University, Peoples Rep of China) Babenko`s method for fractional integral and differential equations and their q-analogues
JULY 6 **18:30-19:00**	**Jacques B\`elair** (Universit\\\\\\\\\\\\\\\\\\'{e} de Montr\\\\\\\\\\\\\\\\\\'{e}al, Canada) Coupled Delayed Negative Feedback Loops in Biological Systems:\\ Oscillations and Stability

SS 22	**Models of emergence and collective dynamics** Organizer(s): Roman Shvydkoy , Ewelina Zatorska	**Room 421**
JULY 6 **16:30-17:00**	**Tomasz Debiec** (University of Warsaw, Poland) On the incompressible limit for a viscoelastic tumour growth model.	
JULY 6 **17:00-17:30**	**Szymon Cygan** (University of Heidelberg, Poland) Finite speed of propagation in the one-dimensional pressureless Euler alignment system	
JULY 6 **17:30-18:00**	**Nicolas Garcia Trillos** (University of Wisconsin Madison, USA) A collective dynamics perspective on transformer dynamics beyond gradient flows	
JULY 6 **18:00-18:30**	**Trevor Teolis** (Rice University, USA) From Nanbu Particle Systems to Transformer Approximations of Boltzmann Solutions	
JULY 6 **18:30-19:00**	**David Poyato** (University of Granada, Spain) Mean field limit of non exchangeable interacting diffusions on co-evolutionary networks	

SS 23	**Evolution Equations and Integrable Systems** Organizer(s): Alex Himonas , Curtis Holliman , Fangchi Yan	**Room 312**
JULY 6 **17:00-17:30**	**Dionyssis Mantzavinos** (University of Kansas, USA) The complex Ginzburg-Landau equation on a finite interval and chaos suppression via a finite-dimensional boundary feedback stabilizer. Part I: Well-posedness	

JULY 6 **17:30-18:00**	**Turker Ozsari** (Bilkent University, Turkey) The complex Ginzburg--Landau equation on a finite interval and chaos suppression via a finite-dimensional boundary feedback stabilizer. Part II: Control
JULY 6 **18:00-18:30**	**Guher Camliyurt** (Virginia Tech, USA) Scattering for radial solutions of focusing supercritical wave equations
JULY 6 **18:30-19:00**	**Adilbek Kairzhan** (Nazarbayev University, Kazakhstan) Hamiltonian Transformation Theory and Dispersive PDEs

SS 29	**Stochastic Dynamical Systems** Organizer(s): Lin Shi , Jun Shen	**Room 638**
JULY 6 **16:30-17:00**	**Shanshan Hu** (TU Berlin, Germany) Random dynamical systems for McKean--Vlasov SDEs via rough path theory	
JULY 6 **17:00-17:30**	**Kaiyin Huang** (Sichuan Univeristy, Peoples Rep of China) Local First Integrals and Poincar\`{e}-Type Nonintegrability for SDEs	
JULY 6 **17:30-18:00**	**Qiao Huang** (Southeast University, Peoples Rep of China) A new branching diffusion solver for reaction-diffusion equations	
JULY 6 **18:00-18:30**	**Xinhua Li** (School of Mathematics and Statistics, Lanzhou University, Peoples Rep of China) Inertial Manifolds Without Spectral Gap Conditions: Modified Navier-Stokes Equations	
JULY 6 **18:30-19:00**	**Xiaofang Lin** (University of science and technology of China, Peoples Rep of China) Dynamical order in noisy oscillators under unidirectional coupling on a line	

SS 32	**Inverse Problems and Image Processing** Organizer(s): Qiyu Jin , Shengzhu Shi , Taofeng Xie	**Room 638**
JULY 6 **16:30-17:00**	**Jiebao Sun** (Harbin Institute of Technology, Peoples Rep of China) An Effective Level Set Method With Molecular Beam Epitaxy Regularization for Color-Texture Image Segmentation	

JULY 6 **17:00-17:30**	**LI CUI** (School of Mathematical Science, Beijing Normal University, Peoples Rep of China) Segmenting Objects with Imbalanced Sizes via Smooth and Sparse Dual Optimal Transport
JULY 6 **17:30-18:00**	**Zhichang Guo** (Harbin Institute of Technology, Peoples Rep of China) Mixed geometry information regularization for image deblurring with multiplicative noise
JULY 6 **18:00-18:30**	**Chong Chen** (Chinese Academy of Sciences, Peoples Rep of China) AFIRE: Accurate and Fast Image Reconstruction Algorithm for Geometric-Inconsistent Multispectral CT
JULY 6 **18:30-19:00**	**Wenjuan Yao** (Harbin Institute of Technology, Peoples Rep of China) A time-fractional equation with the gray level indicator for image multiplicative noise removal

SS 35	**Elliptic PDEs: singularities, discontinuities, and nonlinear phenomena** Organizer(s): Umberto Guarnotta , Salvatore Angelo Marano	**Room 434**
JULY 6 **16:30-17:00**	**Kanishka Perera** (Florida Institute of Technology, USA) Scaling-based existence and multiplicity results for double phase problems in R^N	
JULY 6 **17:00-17:30**	**Carlo Alberto Antonini** (University of Milan (UniMi), Italy) Gradient regularity for quasilinear elliptic problems	
JULY 6 **17:30-18:00**	**Francesco Leonetti** (University of L`Aquila, Italy) Remarks on maximum principle	
JULY 6 **18:00-18:30**	**Salvatore Leonardi** (University of Catania, Italy) Recent advances in the regularity of some classes of elliptic systems of PDEs	
JULY 6 **18:30-19:00**	**Piero Montecchiari** (Universita` Politecnica delle Marche, Italy) Multiplicity of mountain-pass type transition solutions for Lagrangian systems with double-well potentials	

SS 37	**Recent development of stochastic optimal control, applications and deep learning methods** Organizer(s): Omar KEBIRI	Room 436
JULY 6 **16:30-17:00**	**Xiang Yu** (The Hong Kong Polytechnic University, Hong Kong) Continuous-time reinforcement learning for optimal switching over multiple regimes	
JULY 6 **17:00-17:30**	**ES-SAKY El Hassan** (Cadi Ayyad University, Polydisciplinary Faculty of Safi, Morocco) Quadratic BSDEs Subject to Irregular Obstacle Constraints	
JULY 6 **17:30-18:00**	**Hanane Ben-Gherbal** (University of Mohamed Khider, Biskra, Algeria) Pontryagin Maximum Principle for Reflected BSDEs under State Constraints	
JULY 6 **18:00-18:30**	**Wilfried Kenmoe Nzali** (Weierstrass Institute for Applied Analysis and Stochastics(WIAS-Berlin), Germany) Stochastic optimal control of battery storage with SEI driven degradation in volatile electricity markets.	

SS 40	**Applications of dynamical systems in medicine and biology** Organizer(s): Beata Jackowska-Zduniak , Urszula Foryś	Room 433
JULY 6 **16:30-17:00**	**Monika Piotrowska** (University of Warsaw, Poland) Targeted Control of Multidrug-Resistant Bacteria in Healthcare Networks	
JULY 6 **17:00-17:30**	**Marcin Choinski** (Institute of Information Technology, Warsaw University of Life Sciences - SGGW, Poland) A two-strain dengue model with a constant recruitment rate	
JULY 6 **17:30-18:00**	**Joanna Renc{\l}awowicz** (Institute of Mathematics and Cryptology, Cybernetics Faculty, Military University of Technology, Poland) Co-infection model of airborne disease with two-strain dengue.	
JULY 6 **18:00-18:30**	**Magdalena Nowak** (Jan Kochanowski University of Kielce, Poland) Distances on DNA sequences	

SS 42	**Hamiltonian Dynamics and Celestial Mechanics** Organizer(s): Zhifu Xie , Ernesto Perez-Chavela	Room 628

JULY 6 **16:30-17:00**	**Daniel Offin** (Queen`s University, Canada) Dynamics and Symmetry: Minimizing brake orbits
JULY 6 **17:00-17:30**	**Lei Zhao** (Dalian University of Technology, Peoples Rep of China) Integrable Kepler billiards and the Poncelet Porism
JULY 6 **17:30-18:00**	**Ernesto Perez Chavela** (ITAM Mexico, Mexico) Relative equilibria on spaces of constant curvature
JULY 6 **18:00-18:30**	**Marcelo D Marchesin** (FEDERAL UNIVERSITY OF MINAS GERAIS, Brazil) A FAMILY OF LINEAR STABLE EQUILIBRIA IN THE SUN-EARTH-SAIL PROBLEM

SS 43	**Recent Advances in Inverse Problems, Imaging, and Their Applications** Organizer(s): Peijun Li , Gang Bao	**Room 437**
JULY 6 **16:30-17:00**	**Huibin Chang** (Tianjin Normal University, Peoples Rep of China) Reconstruction Algorithms for Multi-Slice Ptychography Based on Chain-Structured Modeling	
JULY 6 **17:00-17:30**	**Rongfang Gong** (Nanjing University of Aeronautics and Astronautics, Peoples Rep of China) Shape optimization driven regularization methods for bioluminescence tomography	
JULY 6 **17:30-18:00**	**Xiaoqun Zhang** (Shanghai Jiao Tong University, Peoples Rep of China) Generative models for solving linear and nonlinear inverse problems	

SS 46	**Advances in Optimization and Equilibrium Problems: methods and applications** Organizer(s): Patrizia Daniele , Laura Palagi	**Room 316**
JULY 6 **16:30-17:00**	**Basca Jadamba** (Rochester Institute of Technology, USA) Toward an Integrated Reduced Order Modeling Framework for Inverse Problems in Linear Elasticity: A Preliminary Study	
JULY 6 **17:00-17:30**	**Valerio Dose** (Sapienza University of Rome, Italy) Monotonicity of equilibria in nonatomic congestion games	

JULY 6 **17:30-18:00**	**Attilio Marciano`** (University Mediterranea of Reggio Calabria, Italy) Trust and reputation systems in cloud data centers: a variational approach

SS 48	**Recent Advances in Nonlinear PDEs and Inverse Problems** Organizer(s): Yi-Hsuan Lin , Yavar Kian , Mikko Salo	**Room 634**
JULY 6 **16:30-17:00**	**Andrea Aspri** (Universit\`a degli Studi di Milano Statale, Italy) An Inverse Problem for a Nonlinear Monodomain System	
JULY 6 **17:00-17:30**	**Elisa Francini** (Universit\`a di Firenze, Italy) Inverse Problems for Anisotropic Conductivities in Semilinear Models	
JULY 6 **17:30-18:00**	**Hui Yu** (National University of Singapore, Singapore) Generic regularity of the free boundary in the Alt-Caffarelli-Phillips problem	
JULY 6 **17:30-18:00**	**Matteo Santacesaria** (University of Genoa, Italy) Inverse problems for quasi-linear elliptic systems modeling electrolysers	
JULY 6 **18:00-18:30**	**Janne Nurminen** (University of Jyv{\"a}skyl{\"a}, Finland) An inverse problem for the prescribed mean curvature equation	

SS 54	**Trends in Nonlinear Analysis** Organizer(s): Olimpio Miyagaki , GUSTAVO MADEIRA , ALANNIO NOBREGA	**Room 430**
JULY 6 **16:30-17:00**	**Mieko Tanaka** (Tokyo University of Science, Japan) The non-local eigenvalue problems for the p-Laplacian	
JULY 6 **17:00-17:30**	**Jacopo Schino** (University of Warsaw, Poland) Travelling waves for Maxwell`s equations in nonlinear symmetric media	
JULY 6 **17:30-18:00**	**M N Nkashama** (University of Alabama at Birmingham, USA) Quasilinear elliptic problems with nonlinear perturbations involving critical Sobolev exponents	
JULY 6 **18:00-18:30**	**Olimpio Miyagaki** (UFSCAR, Brazil) ON COMPACT EMBEDDINGS INTO L p AND FRACTIONAL SPACES	

SS 55	**Nonlocal effects in diffusion equations** Organizer(s): Xueli Bai , Fang Li , Xuefeng Wang	Room 311
JULY 6 **16:30-17:00**	**Jing Li** (Minzu University of China, Peoples Rep of China) Cauchy problem of the parabolic-elliptic density suppressed motility model with logistic source	
JULY 6 **17:30-18:00**	**Shuang Liu** (Beijing Institute of Technology, Peoples Rep of China) On principal eigenvalues for elliptic operators with divergence-free flow	
JULY 6 **18:00-18:30**	**wenjie ni** (University of New England, Australia) Precise propagation dynamics of the nonlocal KPP free boundary problem with non-symmetric kernels	

SS 63	**Interdisciplinary Applications of Traditional Numerical Methods, Deep Learning Methods, and Statistical Approaches** Organizer(s): Qiaolin He , Xiaoling Peng	Room 440
JULY 6 **16:30-17:00**	**Zhenlin Guo** (Beijing Computational Science Research Center, Peoples Rep of China) A GPU-Accelerated Matrix-Free FAS Multigrid Solver with Memory-Efficient Implementations	
JULY 6 **17:00-17:30**	**Chaoyu Quan** (The Chinese University of Hong Kong (Shenzhen), Peoples Rep of China) Energy Dissipation Preservation of Implicit-Explicit Linear Multistep Methods for Gradient Flows	
JULY 6 **17:30-18:00**	**Shihua Gong** (The Chinese University of Hong Kong, Shenzhen, SICIAM and SLAI, Peoples Rep of China) Fast solvers for numerical simulations with applications in microfluidics and antenna design	
JULY 6 **18:00-18:30**	**Xinyu WANG** (Beijing Normal-Hong Kong Baptist University, Peoples Rep of China) Mechanics-Informed Inverse Design and Optimization for Wrinkle Control in Fiber-Reinforced Bilayers	

SS 65	**Geometry of PDEs on Manifolds and Nilpotent Lie Groups** Organizer(s): Jyotshana Prajapat , Pieralberto Sicbaldi	**Room 301**
JULY 6 **16:30-17:00**	**Diego Berti** (Univeristy of Turin, Italy) Varadhan-type asymptotics for boundary data with localized support	
JULY 6 **17:00-17:30**	**Futoshi Takahashi** (Osaka Metropolitan University, Japan) Asymptotic behavior of least energy solutions to the Finsler Lane-Emden problem with large exponents	
JULY 6 **17:30-18:00**	**Paul Laurain** (University Gustave Eiffel, France) Huber`s Theorems in Dimensions 2 and 4	
JULY 6 **18:00-18:30**	**Jyotshana Prajapat** (University of Mumbai, India) Symmetry results in Heisenberg group, Carnot group and Grushin spaces	

SS 82	**Dissipative Systems and Applications** Organizer(s): Lourdes Tello , Wenxian Shen	**Room 427**
JULY 6 **16:30-17:00**	**Yihong Du** (University of New England (Australia), Australia) Precise propagation dynamics of the nonlocal KPP free boundary problem with nonsymmetric kernels	
JULY 6 **17:00-17:30**	**wenjie ni** (University of New England, Australia) A competition model with nonlocal diffusion and free boundaries	
JULY 6 **17:30-18:00**	**Yijun Lou** (The Hong Kong Polytechnic University, Hong Kong) Can disease invasion match population expansion in a time-periodic SI free boundary model?	
JULY 6 **18:00-18:30**	**Jian Fang** (Harbin Institute of Technology, Peoples Rep of China) Propagation dynamics on hexagonal lattice	
JULY 6 **18:30-19:00**	**Weiwei Ding** (South China Normal University, Peoples Rep of China) Effects of temporal variations on wave speeds of bistable traveling waves for Lotka-Volterra competition systems	

SS 83	**New Aspects of Mathematical Modeling and Analysis in Materials Science** Organizer(s): Toyohiko Aiki , Adrian Muntean	Room 812
JULY 6 **16:30-17:00**	**Michael Eden** (University of Regensburg, Germany) Homogenization of a Stokes-Reaction System with Evolving Microstructure	
JULY 6 **17:00-17:30**	**Apratim Bhattacharya** (NISER, India) Homogenization of multi-species Poisson-Nernst-Planck equations in a porous medium	
JULY 6 **17:30-18:00**	**Toyohiko Aiki** (Japan Women's University, Japan) Analysis of nonlinear parabolic equations via the finite volume method	
JULY 6 **18:00-18:30**	**Yutaka Tsuzuki** (Department of Economic Informatics, Hiroshima Shudo University, Japan) Global existence of weak solutions to an N-dimensional moisture transport model for porous materials	
JULY 6 **18:30-19:00**	**Mizuki Kojima** (Kanagawa University, Japan) On solvability of a time-fractional semilinear heat equation	

SS 87	**Mathematical Insights into Phase-Field Models** Organizer(s): Andrea Signori , Pierluigi Colli , Takeshi Fukao	Room 740
JULY 6 **16:30-17:00**	**Shun Uchida** (Oita University, Japan) Cahn-Hilliard equation associated with hypergraph Laplacian	
JULY 6 **17:00-17:30**	**Cecilia Cavaterra** (University of Milan, Italy) Optimal Control of the Fidelity Coefficient in Cahn--Hilliard Inpainting Models	
JULY 6 **17:30-18:00**	**Ken Shirakawa** (Faculty of Education, Japan) Optimal Control of 1D Nonlinear Parabolic System Involving Regularized 1-Harmonic Type Flow	
JULY 6 **18:00-18:30**	**HAO WU** (Fudan University, Peoples Rep of China) Optimal Control of a Navier-Stokes-Cahn-Hilliard System for Membrane-fluid Interaction	

SS 89	**Partial Differential Equations: Diverse Applications and Connections** Organizer(s): Patrizia Di Gironimo , Marta Macrì , Sara Monsurrò	**Room 314**
JULY 6 **16:30-17:00**	**Luigi Greco** (Universit\\`a di Napoli, Italy) Noncoercive Parabolic Systems	
JULY 6 **17:00-17:30**	**Roberta Schiattarella** (Dipartimento di Matematica e applicazioni, Universita` degli Studi di Napoli Federico II, Italy) Sobolev embeddings and divergence operator	
JULY 6 **17:30-18:00**	**Fernando Farroni** (Universit\\\\grave{a} degli Studi di Napoli Federico II, Dipartimento di Matematica e Applicazioni R. Caccioppoli, Italy) Asymptotic Behavior and Blow-up Analysis for Parabolic Obstacle Problems with Drifts	
JULY 6 **18:00-18:30**	**Teresa Radice** (University of Naples Federico II, Italy) Higher differentiability for solutions to a class of elliptic systems with lower order terms	

SS 92	**Numerical Methods for SPDEs: Bridging Theory and Applications** Organizer(s): Hakima Bessaih , Erika Hausenblas , Annie Millet	**Room 821**
JULY 6 **16:30-17:00**	**Fernanda Cipriano** (NOVA University Lisbon, Portugal) Optimal Control of Fluid Flows	
JULY 6 **17:00-17:30**	**Foivos F Evangelopoulos-Ntemiris** (TU DELFT, Netherlands) Discrete Stochastic Maximal Regularity	
JULY 6 **17:30-18:00**	**Chengcheng Ling** (University of Augsburg, Germany) Regularization by regular noise: a numerical result	
JULY 6 **18:00-18:30**	**Paul Razafimandimby** (Dublin City University, Ireland) Uniform A Priori Estimates and Compatcness for a Stochastic Ferrohydrodynamic system: A Foundation for Numerical Analysis	

SS 95	**The Euler Water Wave Problem** Organizer(s): Bernard Deconinck , Dmitry Pelinovsky , Anastassiya Semenova	**Room 823**

JULY 6 **16:30-17:00**	**Paul Milewski** (Penn State, USA) Wave resonances in a water world
JULY 6 **17:00-17:30**	**Onno Bokhove** (University of Leeds, England) Amplification of interacting solitons in Kadomtsev-Petviashvili and bi-directional water-wave equations
JULY 6 **17:30-18:00**	**Levent Batakci** (University of Washington, USA) Recovery of finite-genus KP solutions from data
JULY 6 **18:00-18:30**	**John Carter** (Seattle University, USA) Stability of Near-Extreme Solutions of the Whitham Equation

SS 99	**Emerging Trends in Analysis and Control of PDEs** Organizer(s): Diego A. Souza , Anna Doubova , Kévin Le Balc`h	**Room 425**
JULY 6 **16:30-17:00**	**Cristina Pignotti** (University of L`Aquila, Italy) Time-delayed opinion dynamics with leader-follower interactions	
JULY 6 **17:00-17:30**	**Guillaume Olive** (Jagiellonian University, Poland) A method to determine the minimal null control time of one-dimensional linear hyperbolic systems	
JULY 6 **17:30-18:00**	**Sarah Strikwerda** (University of Wisconsin - Madison, USA) Controlling Klein-Gordon Chains and Lattices	
JULY 6 **18:00-18:30**	**Nicola De Nitti** (University of Pisa, Italy) Controllability of a one-dimensional debonding model	
JULY 6 **18:30-19:00**	**Ibtissam Issa** (University of L`Aquila, Italy) Stability and Well-Posedness of Korteweg-de Vries-Burgers Equations with Delayed Feedback	

SS 101	**Applied Dynamical Systems in Action** Organizer(s): Thomas Hagen , Florian Rupp	**Room 438**
JULY 6 **16:30-17:00**	**Stefanie Sonner** (Radboud University, Netherlands) Degenerate reaction diffusion systems arising in models for biofilm growth	

JULY 6 **17:00-17:30**	**Peter Hinow** (University of Wisconsin - Milwaukee, USA) Brain Imaging and Mathematical Modeling of Alzheimer`s Disease
JULY 6 **17:30-18:00**	**Matthias Rakotomalala** (Technical University of Munich, Germany) Analysis of a PDE model for ant trail formation
JULY 6 **18:00-18:30**	**Thomas Hagen** (The University of Memphis, USA) Semiflow Structure in Viscous Fiber Dynamics

SS 102	**Mathematics of Cancer and Cardiovascular Dynamics: From High-Fidelity Simulation to Data-Driven Methods** Organizer(s): Nikolaos Sfakianakis , Zuzanna Szymańska , Niklas Kolbe	**Room 445**
JULY 6 **16:30-17:00**	**Emmanouil Georgoulis** (National Technical University of Athens / Heriot-Watt University, Greece) Discontinuous Galerkin methods on essentially arbitrarily shaped element meshes	
JULY 6 **17:00-17:30**	**Suleyman Cengizci** (Antalya Bilim University, Turkey) Hybrid PINN-FEM framework for tumor growth models with stabilization	
JULY 6 **17:30-18:00**	**Dimitrios Katsaounis** (RWTH Aachen University, Germany) Cancer invasion and metastasis across phenotypic scales	
JULY 6 **18:00-18:30**	**Urszula Forys** (University of Warsaw, Faculty of Mathematics, Informatics and Mechanics, Poland) Simple Mathematical Model of CAR-T Cells Therapy for Glioblastoma	
JULY 6 **18:30-19:00**	**Magdalena Szafranska-Leczycka** (Doctoral School of Exact and Natural Sciences, University of Warsaw, Warsaw, Poland, Poland) CAR-T cell therapy for glioblastoma	

SS 105	**Dynamics of Many-Particle Systems and Mean-field Equations** Organizer(s): Hui Huang , Hicham Kouhkouh	**Room 642**
JULY 6 **16:30-17:00**	**Filippo Santambrogio** (Institut Camille Jordan, France) New results on the critical Keller-Segel system	

JULY 6 **17:00-17:30**	**Mohamed Ghattassi** (NYU Abu Dhabi, United Arab Emirates) Large-Corridor Pedestrian Flow and Non-Separable Mean-Field Games: A Stability Analysis
JULY 6 **17:30-18:00**	**Yucheng Wang** (Shanghai University, Peoples Rep of China) MEAN-FIELD CONTROL FOR DIFFUSION AGGREGATION EQUATION WITH COULOMB INTERACTION
JULY 6 **18:00-18:30**	**Valeriia Zhidkova** (University of Mannheim, Germany) Optimal Control for Kuramoto Model: from Many-Particle Liouville Equation to Diffusive Mean-Field Problem
JULY 6 **18:30-19:00**	**Dohyun Kim** (Sungkyunkwan University, Korea) Optimal control of diffusive mean-field models for swarming particles on the sphere

SS 107	**Recent advances in regularity theory for local and nonlocal elliptic and parabolic equations** Organizer(s): Sun-Sig Byun , Jehan Oh , Yeonghun Youn	**Room 738**
JULY 6 **16:30-17:00**	**Ki-Ahm Lee** (Seoul National University, Korea) Degenerate Nonlinear Partial Differential Equations in Curvature Flows	
JULY 6 **17:00-17:30**	**Taehun Lee** (Konkuk University, Korea) Liouville-type theorems for nonlocal Lane--Emden inequalities via test function methods	
JULY 6 **17:30-18:00**	**Masashi Misawa** (Kumamoto university, Japan) Sobolev flow and doubly nonlinear parabolic type equations	
JULY 6 **18:00-18:30**	**Sukjung Hwang** (Chungbuk National University, Korea) Existence results for nonlinear diffusion equations with drifts in divergence form	
JULY 6 **18:30-19:00**	**Filomena De Filippis** (University of Salzburg, Austria) μ-ellipticity and nonautonomous integrals	
JULY 6	**Jeongmin Han** (Soongsil University, Korea) Game-theoretic approaches to partial differential equations and related problems	

SS 111	**Evolution Equations and Operator Semigroups: Theory and Applications** Organizer(s): Christian Budde	Room 432
JULY 6 **16:30-17:00**	**Martin Grothaus** (RPTU University Kaiserslautern-Landau, Germany) Weak hypocoercivity for operator semigroups	
JULY 6 **17:00-17:30**	**Jaqueline Mesquita** (Universidade Estadual de Campinas, Brazil) General concept of allmost periodicity and applications to functional differential equations	
JULY 6 **17:30-18:00**	**Delio Mugnolo** (FernUniversität in Hagen, Germany) Heat Kernels and Geometry on Metric Graphs	

SS 112	**Nonlinear Dynamics: Methods, Models, and Applications** Organizer(s): Grzegorz Graff , Alfonso Ruiz-Herrera , José María Amigó	Room 739
JULY 6 **16:30-17:00**	**Roberto Barrio** (University of Zaragoza, Spain) Deep learning for dynamical systems analyses	
JULY 6 **17:00-17:30**	**Giorgio Micali** (University of Twente, Netherlands) A Unified Ordinal-Pattern Framework for Testing Temporal Symmetries in Time Series	
JULY 6 **17:30-18:00**	**Omer Eryilmaz** (University of Birmingham, England) Flow-Aware Ellipsoidal Filtration for Persistent Homology of Recurrent Signals	
JULY 6 **18:00-18:30**	**Jack L Coleman** (Missouri University of Science and Technology, USA) A Second-Order Unconditionally Stable Scheme for Long-Time Dynamics of Nonlinear Models	
JULY 6 **18:30-19:00**	**Michael Small** (University of Western Australia, Australia) Disease transmission on networks - when is a hypergraph not a hypergraph	

SS 117	**Patterns and Attractors in Nonlinear Dynamics** Organizer(s): Jia-Yuan Dai , Phillipo Lappicy , Junsik Bae	Room 426

JULY 6 **16:30-17:00**	**Sergey Tikhomirov** (Pontificia Universidade Catolica do Rio de Janeiro - PUC-Rio, Brazil) Patterns in miscible displacement in porous media
JULY 6 **17:00-17:30**	**Masahiro Suzuki** (Nagoya Institute of Technology, Japan) High-Voltage Ionized Gas with Spherical Cathode Emission
JULY 6 **17:30-18:00**	**Bongsuk Kwon** (Ulsan National Institute of Science and Technology, Korea) Stable Blow-up Profiles in Transport-Type Equations
JULY 6 **18:00-18:30**	**Wanyong Shim** (Korea Advanced Institute of Science and Technology, Korea) Stability of shock profiles for the Navier-Stokes-Poisson system
JULY 6 **18:30-19:00**	**Young-Jin Sim** (KIAS, Korea) Vortex atmospheres of traveling vortices: rigorous definition, existence, and topological classification

SS 119	**PDEs and Variational Problems in Physical and Biological Sciences** Organizer(s): Changfeng Gui , Wen Yang , Yeyao Hu	**Room 825**
JULY 6 **16:30-17:00**	**Jun Wang** (Jiangsu University, Peoples Rep of China) Analysis of a parabolic type system with singular initial data: existence, multiplicity and stability	
JULY 6 **17:00-17:30**	**Aleks Jevnikar** (University of Udine, Italy) On the bifurcation diagram for free boundary problems arising in plasma physics	
JULY 6 **17:30-18:00**	**Guohuan Qiu** (Academy of Mathematics and Systems Science, Peoples Rep of China) A Priori Estimates for Fully Nonlinear Equations	
JULY 6 **18:00-18:30**	**Yibin Feng** (Lanzhou University, Peoples Rep of China) Diameter estimate of solutions to the even L_p Aleksandrov problem for -1	
JULY 6 **18:30-19:00**	**Qiuping Geng** (Jiangsu University, Peoples Rep of China) Existence of normalized solutions for nonlinear Choquard equations	

SS 120	**Mixtures: Modeling, analysis and computing** Organizer(s): Miroslav Bul\'{i}\v{c}ek , V\'{\i}t Pr\r{u}\v{s}a , Karel T\r{u}ma	**Room 824**
JULY 6 **16:30-17:00**	**Margherita Zanella** (Politecnico di Milano, Italy) Existence, uniqueness and asymptotic stability of invariant measures for the stochastic Allen-Cahn-Navier-Stokes system with singular potential.	
JULY 6 **17:00-17:30**	**Christian Rohde** (University of Stuttgart, Germany) Homogenization Limits for Compressible Liquid-Vapour Flow with Phase Transition	
JULY 6 **17:30-18:00**	**Dennis Trautwein** (University of Regensburg, Germany) Convergent numerical methods for viscoelastic fluid models	
JULY 6 **18:00-18:30**	**Lucie Wintrova** (Mathematical Institute of Charles University, Czech Rep) Bulk-Surface Coupling in Brain Tissue: A Multiscale Mixture Model for Amyloid-beta	
JULY 6 **18:30-19:00**	**Karel Tuma** (Faculty Of Mathematics And Physics, Charles University, Czech Rep) A multiwell phase-field model for arbitrarily strong total-spreading case	

SS 123	**Nonlinear phenomena in elliptic and parabolic equations** Organizer(s): Futoshi Takahashi , Bernhard Ruf , Daisuke Naimen	**Room 619**
JULY 6 **16:30-17:00**	**Yasuhito Miyamoto** (The University of Tokyo, Japan) Non-uniqueness of positive solutions for supercritical semilinear heat equations without scale invariance	
JULY 6 **17:00-17:30**	**Marta Calanchi** (Universit\`a degli Studi di Milano, Italy) LOW REGULARITY RESULTS FOR DEGENERATE POISSON PROBLEMS	
JULY 6 **17:30-18:00**	**Yohei Fujishima** (Shizuoka University, Japan) Uniform boundedness of solutions for superlinear heat equations	
JULY 6 **18:00-18:30**	**Yanyan Guo** (Central China Normal University, Peoples Rep of China) A system of superlinear elliptic equations in a cylinder	

JULY 6 **18:30-19:00**	**Hosono Tatsuya** (Osaka Metropolitan University, Japan) Global existence at the critical mass for the two-dimensional fully parabolic Keller--Segel system

SS 128	**New Trends in Mathematical Fluid Dynamics and Related Problems** Organizer(s): Elena Salguero , Martina Magliocca , Francisco Mengual	**Room 826**
JULY 6 **16:30-17:00**	**Marcos Solera Diana** (University of Valencia, Spain) Unstable vortices and sharp nonuniqueness for the forced SQG equation	
JULY 6 **17:00-17:30**	**Eduardo Garcia-Juarez** (Universidad de Sevilla, Spain) Nonlinear stability of the three-dimensional Peskin problem	
JULY 6 **17:30-18:00**	**Tobias Barker** (University of Bath, England) Quantitative classification of potential Navier-Stokes singularities beyond the blow-up time	
JULY 6 **18:00-18:30**	**Edoardo Bocchi** (Politecnico di Milano, Italy) Dynamics of oscillating water columns in the shallow water regime	
JULY 6 **18:30-19:00**	**Angel Castro** (ICMAT, Spain) Rotating soluitons near monotone vortices	

SS 142	**Recent developments for PDE constrained shape and topological optimization and their applications** Organizer(s): Chiu-Yen Kao , Braxton Osting	**Room 640**
JULY 6 **16:30-17:00**	**Pedro Antunes** (University of Lisbon, Portugal) Numerical optimization of Stokes eigenvalues	
JULY 6 **17:00-17:30**	**Eloi Martinet** (Insutite for Mathematics, JMU Wuerzburg, Germany) Numerical Exploration of Blaschke--Santal\`o Diagrams Using Neural Networks	
JULY 6 **17:30-18:00**	**Jeremy Marzuola** (University of North Carolina, USA) Graph and domain partitioning based upon escape time optimization	

SS 147	**From optimal control to large population games: Learning and Applications** Organizer(s): Gokce Dayanikli , Mathieu Lauriere	Room 827
JULY 6 **16:30-17:00**	**Diogo Gomes** (KAUST, Saudi Arabia) A Preconditioned Monotone Method for Price Formation Mean Field Games	
JULY 6 **17:00-17:30**	**Matias Gomez-Aedo** (Imperial College London, England) A data-driven approach to time-dependent Hamilton--Jacobi--Bellman PDEs with high-order information	
JULY 6 **17:30-18:00**	**Ruimeng Hu** (University of California, Santa Barbara, USA) Finite Player Dynamic Games for Battery Energy Storage Intra-day Dispatch	
JULY 6 **18:00-18:30**	**Tomoyuki Ichiba** (University of California Santa Barbara, USA) Relative Arbitrage in an Extended Mean Field System	

SS 150	**Water Waves and Beyond** Organizer(s): Jörg Weber , Dag Nilsson	Room 639
JULY 6 **16:30-17:00**	**Mark Blyth** (University of East Anglia, England) Stability of Hydroelastic Waves in Deep Water	
JULY 6 **17:00-17:30**	**Emilian Parau** (University of East Anglia, England) Hydroelastic Waves Under Ice Covers: From Moving Loads to Variable Bathymetry	
JULY 6 **17:30-18:00**	**Diego Alonso Oran** (Universidad de La Laguna, Spain) A fluid-solid interaction problem in porous media	
JULY 6 **18:00-18:30**	**Wei Lian** (NTNU, Norway) The convergence of time delayed discrete model of traffic flow	
JULY 6 **18:30-19:00**	**Jorge Esquivel - Avila** (Universidad Autonoma Metropolitana, Mexico) A differential inequality, an invariant set and the blow-up of high-energy solutions of a quasilinear riser equation	

SS 169	**Inverse problems arising in partial differential equations and mathematical physics** Organizer(s): Mengni Li	Room 641

JULY 6 **16:30-17:00**	**Kathrin Hellmuth** (California Institute of Technology, USA) Qualitative Experimental Design: an application in math biology
JULY 6 **17:00-17:30**	**Boya Liu** (North Dakota State University, USA) Inverse problems for a nonlinear dynamical Sch\odinger operator with magnetic potential
JULY 6 **17:30-18:00**	**Hadrian Quan** (University of California Santa Cruz, USA) Stability of inverse problems arising from wave equations of Magnetic Schrodinger operators
JULY 6 **18:00-18:30**	**Yiran Wang** (Emory University, USA) Inverse scattering of the relativistic Schr\odinger operator at a fixed energy
JULY 6 **18:30-19:00**	**Hanming Zhou** (University of California Santa Barbara, USA) Forward and inverse problems for the BGK model with in-flow boundary condition

SS 182	**Recent developments on mathematical finance, stochastic control and related topics** Organizer(s): Zhenhua Wang , Zhou Zhou , Jingjie Zhang	**Room 620**
JULY 6 **16:30-17:00**	**Zhou Zhou** (University of Sydney, Australia) EXISTENCE OF EQUILIBRIA FOR TIME-INCONSISTENT GAMES IN DISCRETE TIME	
JULY 6 **17:00-17:30**	**Yanwei Jia** (The Chinese University of Hong Kong, Hong Kong) Merton`s Problem with Recursive Perturbed Utility	
JULY 6 **17:30-18:00**	**Ruyi Liu** (University of New South Wales, Australia) Vulnerable European and American Options in a Market Model with Optional Hazard Process	
JULY 6 **18:00-18:30**	**Xiaofei Shi** (University of Toronto, Canada) Inverse Learning the Altruism and Labor Cost Level in Mixed-Individual Mean Field Games	

CS 2	**PDEs and Applications**	**Room 635**

JULY 6 **16:30-16:50**	**Ayush Agarwal** (Indian Institute of Technology Roorkee, India) A Posteriori Error Analysis of the Nitsche Method for the Stokes-Poisson-Boltzmann System with Navier Slip Boundary Conditions
JULY 6 **16:50-17:10**	**Francisco de la Hoz** (University of the Basque Country, Spain) Numerical Solution of Caputo-Type Advection--Diffusion Equations via Shifted Chebyshev Pseudospectral Methods and Sylvester Equations
JULY 6 **17:10-17:30**	**Jelena Jankov Pavlovic** (School of Applied Mathematics and Informatics, Croatia) H-convergence theory for anisotropic bending rods
JULY 6 **17:30-17:50**	**Shammi Malhotra** (Indian Institute of Technology Delhi, India) Asymptotic behaviour and existence of positive solutions for mixed local nonlocal elliptic equations with Hardy potential
JULY 6 **17:50-18:10**	**Nidhi Shukla** (University of Southampton, UK; Indian Institute of Technology Roorkee, India, England) Data-Driven Predictive Control for 2D Systems
JULY 6 **18:10-18:30**	**Zhiqiang Wang** (Anhui University, Peoples Rep of China) Reducibility of quantum harmonic oscillators

Parallel Session 3 :: Tuesday, 07/07, 8:00-10:00

SS 3	**Analysis of diffuse and sharp interface models** Organizer(s): Alain Miranville , Andrea Giorgini , Maurizio Grasselli	**Room 428**
JULY 7 **8:30-9:00**	**Andrea Signori** (Politecnico di Milano, Italy) Velocity control in Navier-Stokes-Cahn-Hilliard models with curvature effects	
JULY 7 **9:00-9:30**	**Patrik Knopf** (University of Regensburg, Germany) Two-phase flows with bulk-surface interaction in an evolving domain	
JULY 7 **9:30-10:00**	**Stefania Gatti** (Universita' degli Studi di Modena e Reggio Emilia, Italy) Recent advances on the 2D Cahn-Hilliard equation with nondegenerate mobility	

SS 4	**Mathematical methods in electromagnetism and related topics** Organizer(s): Ioannis Stratis , Pier Domenico Lamberti	**Room 315**
JULY 7 **8:30-9:00**	**Elena Cherkaev** (University of Utah, USA) Homogenization of partial differential equations with quasiperiodic coefficients	
JULY 7 **9:00-9:30**	**Elvira Zappale** (Department of Basic and Applied Sciences for Engineering, Sapienza - University of Rome, Italy) Homogenization and 3D-2D dimension reduction of a functional on manifold valued functional spaces.	
JULY 7 **9:30-10:00**	**Ruming Zhang** (Technical University of Berlin, Germany) Dismantling Dimensional Barriers: The Sliced Spectral Framework for Periodic Elliptic Operators	

SS 6	**Propagation dynamics of PDEs: recent progress and trends** Organizer(s): Yihong Du , Jian Fang , Wenjie Ni	**Room 628**
JULY 7 **8:00-8:30**	**Francois Hamel** (Aix-Marseille University, France) Reaction-diffusion equations in R^N: convergence to fronts	
JULY 7 **8:30-9:00**	**Wenxian Shen** (Auburn University, USA) Front propagation dynamics in Fisher-KPP equations on unbounded metric graphs	
JULY 7 **9:00-9:30**	**Andrea Tellini** (Universidad Politécnica de Madrid, Spain) Propagation for heterogeneous reaction-diffusion equations on adjacent domains	
JULY 7 **9:30-10:00**	**Zhucheng Jin** (University of Science and Technology of China, Peoples Rep of China) Propagation dynamics of a nonautonomous epidemic system with nonlocal diffusion	

SS 12	**Propagation Phenomena in Reaction-Diffusion Systems** Organizer(s): Hirokazu Ninomiya , Masaharu Taniguchi	**Room 637**
JULY 7 **8:30-9:00**	**Harunori Monobe** (Osaka Metropolitan University, Japan) Existence and stability of nontrivial solutions for bistable reaction-diffusion equations on graphs of finite length	

JULY 7 **9:00-9:30**	**Lionel Roques** (INRAE, France) Threshold phenomena in local and nonlocal bistable reaction-diffusion equations
JULY 7 **9:30-10:00**	**King Yeung Lam** (The Ohio State University, USA) On the Shape of Expansion of a Population in the Presence of a Fast Road

SS 15	**Qualitative properties for solutions to nonlinear elliptic and parabolic equations** Organizer(s): Wenxiong Chen , Yahong Guo , Congming Li	**Room 316**
JULY 7 **8:00-8:30**	**Nicola Garofalo** (Arizona State University, USA) Strichartz estimates and well-posedness for a Schr\odinger equation with a nonlinear Neumann condition	
JULY 7 **8:30-9:00**	**Hongjie Dong** (Brown University, USA) Global wellposedness for the Muskat problem	
JULY 7 **9:00-9:30**	**Yuhua Sun** (Nankai University, Peoples Rep of China) Volume growth and Liouville theorems	
JULY 7 **9:30-10:00**	**Wei Dai** (Beihang University (BUAA), Peoples Rep of China) Non-radial solutions for the critical quasi-linear Henon equation	

SS 18	**Progress on delay and fractional differential equations with real-world application** Organizer(s): Kunquan Lan , Elena Braverman	**Room 538**
JULY 7 **8:00-8:30**	**Santosh Ruhil** (Ariel University, Israel) Inverse Problem for Abstract Degenerate Delay Differential Equation	
JULY 7 **8:30-9:00**	**Sougata Dhar** (Fairfield University, USA) Lyapunov-type inequalities for fractional boundary value problems and applications	
JULY 7 **9:00-9:30**	**Rui Ferreira** (Universidade do Porto, Portugal) Geometry of Mittag-Leffler type functions and Fractional differential/difference equations	

JULY 7 **9:30-10:00**	**Jeffrey Lyons** (The Citadel, USA) An application of the Leray-Schauder nonlinear alternative to a Riemann-Liouville fractional boundary value problem with Lidstone-inspired fractional conditions

SS 22	**Models of emergence and collective dynamics** Organizer(s): Roman Shvydkoy , Ewelina Zatorska	**Room 421**
JULY 7 **8:30-9:00**	**Cleopatra Christoforou** (University of Cyprus, Cyprus) On weak solutions to self-organized systems of Euler-type with non-constant interaction kernel	
JULY 7 **9:00-9:30**	**Piotr Gwiazda** (Institute of Mathematics Polish Academy of Sciences, Poland) A new formula for the Wasserstein distance between solutions to (nonlinear) continuity equations	
JULY 7 **9:30-10:00**	**Alpar R. Meszaros** (Durham University, England) On a Cross-Diffusion System with Independent Drifts and no Self-Diffusion: Mixing Dynamics	

SS 23	**Evolution Equations and Integrable Systems** Organizer(s): Alex Himonas , Curtis Holliman , Fangchi Yan	**Room 312**
JULY 7 **8:00-8:30**	**Karen Yagdjian** (University of Texas Rio Grande Valley, USA) Waves in cosmological background with static Schwarzschild radius in the expanding universe	
JULY 7 **8:30-9:00**	**Ilya Kossovskiy** (Southern University of Science and Technology, Peoples Rep of China) Stokes Phenomenon in CR geometry	
JULY 7 **9:00-9:30**	**Curtis A Holliman** (The Catholic University of America, USA) A Predictive Framework for Glioblastoma Progression	
JULY 7 **9:30-10:00**	**Andreas Chatziafratis** (National and Kapodistrian University of Athens, Greece) Linear Evolution Equations Revisited via the Fokas Unified Transform Method	

SS 29	**Stochastic Dynamical Systems** Organizer(s): Lin Shi , Jun Shen	**Room 638**

JULY 7 **8:00-8:30**	**Rongchang Liu** (Sichuan University, Peoples Rep of China) Limit Theorems for Inhomogeneous Markov Processes with Applications to SPDEs
JULY 7 **8:30-9:00**	**Xue Liu** (Southeast University, Peoples Rep of China) Local stable and unstable sets for random dynamical systems
JULY 7 **9:00-9:30**	**Xiang Lv** (Shanghai Normal University, Peoples Rep of China) An abstract criterion on the existence and global stability of stationary solutions for random dynamical systems and its applications
JULY 7 **9:30-10:00**	**Pingyuan Wei** (Southeast University, Peoples Rep of China) A Parameterization Method for Quasi-Periodic Systems with Noise: Computation of Random Invariant Tori

SS 30	**Evolution Equations, their Control and Applications** Organizer(s): Shengda Zeng , Stanislaw Migorski	**Room 620**
JULY 7 **8:00-8:30**	**Krzysztof Bartosz** (Jagiellonian University, Poland) Mathematical analysis of a nonlinear contact problem for a viscoelastic rod	
JULY 7 **8:30-9:00**	**Anna Ochal** (Jagiellonian University in Krakow, Poland) Nonlinear impulsive evolution inclusions with history-dependent operators	
JULY 7 **9:00-9:30**	**Shashank Pandey** (IIT Roorkee, India) Hemivariational inequality with state-dependent delay	

SS 32	**Inverse Problems and Image Processing** Organizer(s): Qiyu Jin , Shengzhu Shi , Taofeng Xie	**Room 442**
JULY 7 **8:30-9:00**	**Roy Yuchen He** (City University of Hong Kong, Hong Kong) Variational Framework for Image Vectorization and Applications	
JULY 7 **9:00-9:30**	**Hao Liu** (Hong Kong Baptist University, Hong Kong) A PCA Model for Surface Reconstruction from Point Clouds	
JULY 7 **9:30-10:00**	**Junxiong Jia** (Xi`an Jiaotong University, Peoples Rep of China) A Gaussian Mixture-Based Sequential Monte Carlo Algorithm for Solving Infinite-Dimensional Statistical Inverse Problems	

SS 35	**Elliptic PDEs: singularities, discontinuities, and nonlinear phenomena** Organizer(s): Umberto Guarnotta , Salvatore Angelo Marano	**Room 434**
JULY 7 **8:00-8:30**	**Francesco Petitta** (Sapienza, University of Rome, Italy) Optimal Global BV Regularity for 1-Laplace type BVP`s with Singular Lower Order Terms	
JULY 7 **8:30-9:00**	**Francescantonio Oliva** (Sapienza university of Rome, Italy) 1-Laplace Dirichlet problems involving first order terms	
JULY 7 **9:00-9:30**	**Riccardo Durastanti** (Universita degli Studi di Napoli Federico II, Italy) Asymptotic behavior as $p\\to 1$ of solutions to p-Laplacian problems in presence of convection and drift terms	
JULY 7 **9:30-10:00**	**Annamaria Barbagallo** (University of Naples Federico II, Italy) The obstacle problem for the p-Laplacian	

SS 37	**Recent development of stochastic optimal control, applications and deep learning methods** Organizer(s): Omar KEBIRI	**Room 436**
JULY 7 **8:00-8:30**	**Antonis Papapantoleon** (TU Delft, Netherlands) Deep gradient flow methods for PDEs and applications in finance	
JULY 7 **8:30-9:00**	**Chao Zhu** (University of Wisconsin-Milwaukee, USA) Long-Term Average Impulse Control with Mean Field Interactions	
JULY 7 **9:00-9:30**	**Calvin Tadmon** (University of Dschang, Cameroon) A two-step stochastic model of anaerobic digestion and opportunities for biogas production	

SS 40	**Applications of dynamical systems in medicine and biology** Organizer(s): Beata Jackowska-Zduniak , Urszula Foryś	**Room 433**
JULY 7 **8:00-8:30**	**Roberto Barrio** (University of Zaragoza, Spain) Cardiomyocyte Dynamics: From Low Dimensional To Realistic Models	

JULY 7 **8:30-9:00**	**Beata Jackowska-Zduniak** (Gda\`nsk University of Technology, Poland) Impact of Aging on Pacemaker Cell Electrophysiology: A Maltsev-Lakatta Modeling Study
JULY 7 **9:00-9:30**	**Justyna Signerska** (Gdansk University of Technology, Poland) Dynamics of 2D hybrid non-autonomous neuron models with dynamical threshold
JULY 7 **9:30-10:00**	**Andrzej Nowakowski** (University of Lodz, Poland) Mathematical Tools Combined with Neural CDE for prediction of Alzheimer diseas

SS 43	**Recent Advances in Inverse Problems, Imaging, and Their Applications** Organizer(s): Peijun Li , Gang Bao	**Room 437**
JULY 7 **8:00-8:30**	**Wangtao Lu** (Zhejiang University, Peoples Rep of China) Numerical algorithms for high-frequency wave propagation problems and related Hamilton-Jacobian equations	
JULY 7 **8:30-9:00**	**Tao Yin** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) Direct and inverse problems in thermoelasticity	
JULY 7 **9:00-9:30**	**Xiaokai Yuan** (Jilin University, Peoples Rep of China) Convergence of the DtR methods for the wave scattering by periodic structures	
JULY 7 **9:30-10:00**	**Weiying Zheng** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) STDDM for the Helmholtz equation in inhomogeneous medium	

SS 45	**Frontiers in Topological Dynamics: Theory, Applications, and Interdisciplinary Connections** Organizer(s): Guohua Zhang , Wen Huang , Song Shao	**Room 440**
JULY 7 **8:00-8:30**	**Zhaosheng Feng** (University of Texas Rio Grande Valley, USA) A Parabolic System for Bacterial Colony Dynamics	
JULY 7 **8:30-9:00**	**Bingbing Liang** (Soochow University, Peoples Rep of China) Mean weak length	

JULY 7 **9:00-9:30**	**Tianyu Wang** (School of Mathematical Sciences Shanghai Jiao Tong University, Peoples Rep of China) Development of Bowen`s specification legacy on thermodynamic formalism and applications to stochastic properties
JULY 7 **9:30-10:00**	**Yongluo Cao** (Soochow University, Peoples Rep of China) Physical measures for a class of partially hyperbolic attractors

SS 55	**Nonlocal effects in diffusion equations** Organizer(s): Xueli Bai , Fang Li , Xuefeng Wang	**Room 311**
JULY 7 **8:00-8:30**	**Xiaoqiang Sun** (Sun Yat-sen University, Peoples Rep of China) Multiscale Nonlocal Modeling of Phenotypic Plasticity and Drug Resistance in Glioblastoma	
JULY 7 **8:30-9:00**	**Xin Xu** (South China Normal University, Peoples Rep of China) Principal Eigenvalue of Second Order Elliptic Operators	
JULY 7 **9:00-9:30**	**Weiwei Zhao** (Hainan University, Peoples Rep of China) A Liouville-Type Theorem for the Weighted Higher-Order Elliptic System with Navier Boundary Conditions	
JULY 7 **9:30-10:00**	**Tao Zhou** (Anhui University, Peoples Rep of China) Spreading speeds of nonlocal Fisher-KPP equations in heterogeneous media	

SS 66	**Geometric insights in Partial Differential Equations: advances and challenges** Organizer(s): Luca Vilasi , Giovanni Molica Bisci , Vicentiu Radulescu	**Room 301**
JULY 7 **9:00-9:30**	**Frank Duzaar** (University of Salzburg, Austria) Parabolic PDEs with Dynamic Data under a Bounded Slope Condition	
JULY 7 **9:30-10:00**	**Luigi D`Onofrio** (Universita` di Napoli Parthenope, Italy) Integrability results for solutions to equations of n--Laplacian type	

SS 77	**Singularity and regularity in nonlinear PDEs** Organizer(s): Berikbol Torebek , Matteo Muratori	**Room 432**

JULY 7 **8:30-9:00**	**Hiroyuki Takamura** (Tohoku University, Japan) The lifespan estimates of solutions to systems of weighted nonlinear wave equations in 1D
JULY 7 **9:00-9:30**	**Elvise Berchio** (Politecnico di Torino, Italy) Weighted Hardy-Rellich inequalities via the Emden-Fowler transform
JULY 7 **9:30-10:00**	**Yuta Wakasugi** (Hiroshima University, Japan) Lifespan estimates for semilinear damped wave equation in a two-dimensional exterior domain

SS 83	**New Aspects of Mathematical Modeling and Analysis in Materials Science** Organizer(s): Toyohiko Aiki , Adrian Muntean	**Room 812**
JULY 7 **8:00-8:30**	**Adrian Muntean** (Karlstad University, Sweden) A stochastic particle-continuum model for the chemical-induced corrosion of marble	
JULY 7 **8:30-9:00**	**Nicklas J\"averg\aard** (Karlstad University, Sweden) Morphology formation in three space dimensions for a coupled system of parabolic equations with nonlinear and nonlocal drift	
JULY 7 **9:00-9:30**	**Masaaki Mizukami** (Kyoto University of Education, Japan) Mathematical analysis of a model for tuberculosis granuloma formation	
JULY 7 **9:30-10:00**	**Kazunori Matsui** (Tokyo University of Marine Science and Technology, Japan) A projection approach to elastoplasticity with kinematic hardening	

SS 87	**Mathematical Insights into Phase-Field Models** Organizer(s): Andrea Signori , Pierluigi Colli , Takeshi Fukao	**Room 740**
JULY 7 **8:30-9:00**	**Luca Scarpa** (Politecnico di Milano, Italy) A stochastic Allen-Cahn equation with jumps for radiotherapy damage	
JULY 7 **9:00-9:30**	**Danielle Hilhorst** (CNRS and Universiy Paris-Saclay, France) Fast reaction limit in a stochastic competition-diffusion system	

JULY 7 **9:30-10:00**	**Makoto Okumura** (Intelligence and Informatics/Konan University, Japan) A high-order spatially accurate structure-preserving scheme for PDEs with dynamic boundary conditions based on a summation-by-parts operator

SS 89	**Partial Differential Equations: Diverse Applications and Connections** Organizer(s): Patrizia Di Gironimo , Marta Macrì , Sara Monsurrò	**Room 314**
JULY 7 **8:00-8:30**	**Gabriella Zecca** (Dipartimento di Matematica e Applicazioni `R.Caccioppoli` - Università degli Studi di Napoli Federico II, Italy) Existence and Qualitative Properties of Solutions for a Class of Nonlinear Fokker-Planck Equations with Superlinear drift	
JULY 7 **8:30-9:00**	**Maria Michaela MM Porzio** (Sapienza University of Rome, Italy) Behavior of the solutions to nonlinear parabolic equations with absorption terms	
JULY 7 **9:00-9:30**	**Luisa Faella** (University of Cassino and Southern Lazio, Italy) On the Obstacle Problem for Nonlinear Materials via the Monotonicity Principle	
JULY 7 **9:30-10:00**	**Emanuel Guariglia** (Kean University, Italy) BV functions, hyperbolic conservation laws and fractal sets	

SS 90	**NONLINEAR ELLIPTIC DIFFERENTIAL EQUATIONS AND APPLICATIONS** Organizer(s): Antonia Chinnì , Maria-Magdalena Boureanu , Beatrice Di Bella	**Room 438**
JULY 7 **8:00-8:30**	**Mircea Sofonea** (University of Perpignan, France) On the Well-posedness of Minimization Problems	
JULY 7 **8:30-9:00**	**Bruno Vassallo** (University of Messina, Italy) Well-posedness Analysis of a Unilateral Contact Problem	
JULY 7 **9:00-9:30**	\`**Angel Ar\`os Rodr\`{\i}guez** (CITMAga, Universidade da Coru\\~na, Spain) Asymptotic analysis of elastic elliptic membrane shells in adhesive contact	
JULY 7 **9:30-10:00**	**Pasquale Candito** (University of Palermo, Italy) On the Well-posedness of Problems with Fixed Point Structure	

SS 91	**Geometric evolution problems** Organizer(s): James McCoy , Yong Wei	Room 822
JULY 7 **8:30-9:00**	**Yoshihiro Tonegawa** (Institute of Science Tokyo, Japan) Existence and regularity of multi-phase mean curvature flow in the hyperbolic space	
JULY 7 **9:00-9:30**	**Tatsuya Miura** (Kyoto Univeristy, Japan) Direction energy method for non-compact mean curvature flows	
JULY 7 **9:30-10:00**	**Jun Sun** (Wuhan University, Peoples Rep of China) On symplectic mean curvature flows	

SS 92	**Numerical Methods for SPDEs: Bridging Theory and Applications** Organizer(s): Hakima Bessaih , Erika Hausenblas , Annie Millet	Room 821
JULY 7 **8:00-8:30**	**Nils Berglund** (IDP, University of Orleans, France) Using Feynman diagrams in renormalisation, some new results	
JULY 7 **8:30-9:00**	**Kazuo Yamazaki** (University of Nebraska-Lincoln, USA) Convex integration on stochastic PDEs	
JULY 7 **9:00-9:30**	**Lubomir Banas** (Bielefeld University, Germany) Higher-order discretisation of the stochastic Navier-Stokes equations with additive noise	
JULY 7 **9:30-10:00**	**Ludovic Goudenege** (CNRS, France) Finite Volume scheme for the Heat equation with transport noise	

SS 95	**The Euler Water Wave Problem** Organizer(s): Bernard Deconinck , Dmitry Pelinovsky , Anastassiya Semenova	Room 823
JULY 7 **8:00-8:30**	**Michael Siegel** (New Jersey Institute of Technology, USA) Well-posedness of vortex sheets in 3D flow with unequal density fluids	
JULY 7 **8:30-9:00**	**Paolo Ventura** (EPFL, Switzerland) Instability Mechanisms in 2D Fluids	

JULY 7 **9:00-9:30**	**Anastassiya Semenova** (Rochester Institute of Technology, USA) Two-Crested Stokes Waves
JULY 7 **9:30-10:00**	**Jon A Wilkening** (UC Berkeley, USA) Rational approximation and branch cuts for standing water waves

SS 105	**Dynamics of Many-Particle Systems and Mean-field Equations** Organizer(s): Hui Huang , Hicham Kouhkouh	**Room 642**
JULY 7 **8:30-9:00**	**Hicham Kouhkouh** (University of Graz, Austria) Analysis of an iterative scheme for computing the Kantorovich problem	
JULY 7 **9:00-9:30**	**Gero Friesecke** (Technical University of Munich (TUM), Germany) Mass splitting in the generalized Euler equations: a new explanation via discretization	
JULY 7 **9:30-10:00**	**WEIQI CHU** (University of Massachusetts Amherst, USA) Pair approximation for continuous-valued dynamics on networks	

SS 110	**Stochastic Dynamics** Organizer(s): Beom-Seok Han , Jae-Hwan Choi	**Room 738**
JULY 7 **8:00-8:30**	**Jaehoon Kang** (Hankyong National University, Korea) Heat kernel estimates for anisotropic jump processes and Dirichlet problems	
JULY 7 **8:30-9:00**	**Panki Kim** (Seoul National University, Korea) Heat kernel estimates for Dirichlet forms degenerate at the boundary	
JULY 7 **9:00-9:30**	**Vanja Wagner** (University of Zagreb, Croatia) Nonhomogeneous boundary condition for spectral nonlocal operators	
JULY 7 **9:30-10:00**	**Daehan Park** (Kangwon National University, Korea) Boundedness of non-local operators with variable coefficients: probabilistic approach and applications	

SS 112	**Nonlinear Dynamics: Methods, Models, and Applications** Organizer(s): Grzegorz Graff , Alfonso Ruiz-Herrera , José María Amigó	Room 739
JULY 7 **8:30-9:00**	**Alexander Schnurr** (Siegen University, Germany) Classes of multivariate ordinal patterns linked to motion	
JULY 7 **9:00-9:30**	**Taichi Haruna** (Tokyo Woman's Christian University, Japan) Double-Partitions Homology for Coupling Complexity Analysis of Multivariate Time Series	
JULY 7 **9:30-10:00**	**Attila Denes** (Bolyai Institute, University of Szeged, Hungary) A stage-structured seasonal model for the spread of flavescence dor\`ee in vineyards	

SS 117	**Patterns and Attractors in Nonlinear Dynamics** Organizer(s): Jia-Yuan Dai , Phillipo Lappicy , Junsik Bae	Room 426
JULY 7 **8:00-8:30**	**Junsik Bae** (Kyungpook National University, Korea) Traveling waves in the reaction-diffusion equation with discontinuity	
JULY 7 **8:30-9:00**	**Namhyun NE Eun** (Korea Institute for Advanced Study, Korea) L^2-contraction of viscous-dispersive shocks for KdV-Burgers equation	
JULY 7 **9:00-9:30**	**HyeonSeop Oh** (Korea Advanced Institute of Science and Technology, Korea) Uniqueness and weak-BV stability for the isentropic Euler system: inflow and outflow problems	
JULY 7 **9:30-10:00**	**Sungho Han** (KAIST, Korea) Time-asymptotic stability of composite waves for compressible Navier-Stokes-Korteweg and Navier-Stokes-Fourier-Korteweg systems	

SS 119	**PDEs and Variational Problems in Physical and Biological Sciences** Organizer(s): Changfeng Gui , Wen Yang , Yeyao Hu	Room 825
JULY 7 **8:00-8:30**	**Fa Peng** (School of Mathematical Sciences, Beihang University, Peoples Rep of China) Regularity from p-harmonic potentials to ∞-harmonic potentials in convex rings	

JULY 7 **8:30-9:00**	**Tangjuan Li** (Jiangsu University, Peoples Rep of China) Game-Theoretic Modeling of Adaptive Behavioral Responses in Epidemics
JULY 7 **9:00-9:30**	**Shiqiu Fu** (Jiangsu University, Peoples Rep of China) Critical Elliptic Boundary Value Problems with Singular Trudinger-Moser Nonlinearities
JULY 7 **9:30-10:00**	**Lidan Wang** (Jiangsu University, Peoples Rep of China) Sign-changing solutions to discrete nonlinear logarithmic Kirchhoff equations

SS 123	**Nonlinear phenomena in elliptic and parabolic equations** Organizer(s): Futoshi Takahashi , Bernhard Ruf , Daisuke Naimen	**Room 619**
JULY 7 **8:00-8:30**	**Nobuhito Miyake** (Faculty of Mathematics, Kyushu University, Japan) Solvability of the Cauchy problem for the porous medium equation with singular initial data	
JULY 7 **8:30-9:00**	**Federica Sani** (University of Modena and Reggio Emilia, Italy) An Orlicz space approach to exponential elliptic problems	
JULY 7 **9:00-9:30**	**Mizuki Kojima** (Kanagawa University, Japan) On self-similar solutions of time-fractional semilinear heat equations	
JULY 7 **9:30-10:00**	**Tobias Barker** (University of Bath, England) Critical norm blow-up rates for the energy supercritical nonlinear heat equation	

SS 126	**Defects, Microstructures, and Failure: Multiscale Variational Models** Organizer(s): Leonard Kreutz , Konstantinos Zemas	**Room 445**
JULY 7 **8:00-8:30**	**Carolin Kreisbeck** (KU Eichst\"att-Ingolstadt, Germany) Variational problems with nonlocal gradients: Heterogeneous horizons and local boundary conditions	
JULY 7 **8:30-9:00**	**Anastasija Pe\v{s} i\`{c}** (WIAS Berlin, Germany) Analysis of a Nonlocal Variational Model for Pattern Formation in Biomembranes	

JULY 7 **9:00-9:30**	**Lennart Machill** (Rheinische Friedrich-Wilhelms-Universit\\"{a}t Bonn, Germany) Lower energy scaling bounds of singular perturbation models for higher order laminates via Fourier-based localization methods
JULY 7 **9:30-10:00**	**Antonio Tribuzio** (University of Bonn, Germany) Multiscale analysis and homogenization of nonlocal thin films

SS 128	**New Trends in Mathematical Fluid Dynamics and Related Problems** Organizer(s): Elena Salguero , Martina Magliocca , Francisco Mengual	**Room 826**
JULY 7 **8:00-8:30**	**Jiajun Tong** (Beijing International Center for Mathematical Research, Peking University, Peoples Rep of China) The Immersed Boundary Problem in 2-D: the Navier-Stokes Case	
JULY 7 **8:30-9:00**	**De Huang** (Peking University, Peoples Rep of China) Existence of the Sadovskii vortex patch	
JULY 7 **9:00-9:30**	**Silvia Sastre Gómez** (Universidad de Sevilla, Spain) Small amplitude steady periodic water waves	
JULY 7 **9:30-10:00**	**Francisco Gancedo** (Universidad de Sevilla, Spain) Stable and unstable interface dynamics for gravity Stokes flow	

SS 130	**Data driven approaches for complex physical systems** Organizer(s): Li Wang , Rongjie Lai	**Room 427**
JULY 7 **8:00-8:30**	**Markos Katsoulakis** (UMass Amherst, USA) Proximal Optimal Transport Divergences and Stable Gradient Flows	
JULY 7 **8:30-9:00**	**Huan Lei** (Michigan State University, USA) Structure-Preserving Construction of Collision Operators for Kinetic Equations from Molecular Dynamics	
JULY 7 **9:00-9:30**	**Nicholas H Nelsen** (Cornell University, USA) Amortized approximation of probabilistic conditioning by neural operators	

JULY 7 **9:30-10:00**	**Braxton Osting** (Dept. Mathematics, University of Utah, USA) Blood pressure monitoring with biophysics-informed machine learning models

SS 147	**From optimal control to large population games: Learning and Applications** Organizer(s): Gokce Dayanikli , Mathieu Lauriere	**Room 827**
JULY 7 **8:00-8:30**	**Daisuke Inoue** (Imperial College London, England) Learning Nonlocal Mean Field Schr\\odinger Bridges	
JULY 7 **8:30-9:00**	**Francisco Silva** (XLIM, Universite de Limoges, France) Initialization-driven neural generation and training for high-dimensional optimal control and first-order mean field games	
JULY 7 **9:00-9:30**	**Ho Man Tai** (University of Sydney, Australia) Optimal Matching Strategies in Two-sided Markets: A Mean Field Approach	
JULY 7 **9:30-10:00**	**Thaleia Zariphopoulou** (The University of Texas at Austin, USA) Mean field games with partial information	

SS 149	**Recent developments in Free Boundary Problems and Nonlinear PDEs** Organizer(s): Marvin Weidner , Aelson Sobral	**Room 639**
JULY 7 **8:00-8:30**	**Mariana Smit Vega Garcia** (Western Washington University, USA) Fractional Parabolic Theory as a High-Dimensional Limit of Fractional Elliptic Theory	
JULY 7 **8:30-9:00**	**Hector A Chang Lara** (Universidad de Coimbra, Portugal) Multiscale Schnauzer Estimates	
JULY 7 **9:00-9:30**	**Nikola Kamburov** (Pontificia Universidad Catolica de Chile, Chile) Constructing nontrivial global periodic solutions to the Bernoulli free boundary problem in 3D	
JULY 7 **9:30-10:00**	**Sunghan Kim** (Uppsala University, Sweden) Regularity of thin constraint maps	

SS 162	**Computer-Assisted Proofs in Dynamical Systems** Organizer(s): Akitoshi Takayasu , Jonathan Jaquette	Room 618
JULY 7 **8:00-8:30**	**Jonathan Jaquette** (New Jersey Institute of Technology, USA) Validated matrix multiplication transform for orthogonal polynomials with applications to computer-assisted proofs for PDEs	
JULY 7 **8:30-9:00**	**Gonzalo Cao-Labora** (EPFL, Switzerland) Instability of the 2D Taylor-Green vortex	
JULY 7 **9:00-9:30**	**Kaname Matsue** (Institute of Mathematics for Industry / International Institute for Carbon-Neutral Energy Research, Kyushu University, Japan) Structures Behind Blow-Up: Algebraic-Geometric Perspectives for Computer-Assisted Proofs	
JULY 7 **9:30-10:00**	**Taisei Asai** (Yamagata University, Japan) Rigorous global search of all solution orbits for nonlinear boundary value problems	

SS 169	**Inverse problems arising in partial differential equations and mathematical physics** Organizer(s): Mengni Li	Room 641
JULY 7 **8:00-8:30**	**Khonatbek Khompysh** (Al-Farabi Kazakh National University, Kazakhstan) Inverse Source Problems for Navier-Stokes Equations	
JULY 7 **8:30-9:00**	**Carlos Valero** (Instituto de Ciencias Matematicas (ICMAT), Spain) A Calderon Problem for the Dirac Operator	
JULY 7 **9:00-9:30**	**Madi Yergaliyev** (Institute of mathematics and mathematical modeling, Kazakhstan) Inverse Problems for the Burgers Equation in Degenerate Domains	
JULY 7 **9:30-10:00**	**Wensheng Zhang Zhang** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) Convergence analysis for a coefficient identification problem	

SS 173	**Mathematical and Numerical Analysis on Nonlinear PDEs** Organizer(s): Hiroyuki Takamura , Ning-An Lai , Takiko Sasaki	Room 430

JULY 7 **8:00-8:30**	**Kyouhei Wakasa** (Muroran Institute of Technology, Japan) Lifespan of solutions to systems of semilinear wave equations in one space dimension
JULY 7 **8:30-9:00**	**Masakazu Kato** (Graduate School of Science, University of Hyogo, Japan) The lifespan of solutions of semilinear wave equations with characteristic weights in two space dimensions
JULY 7 **9:00-9:30**	**Meiirkhan B Borikhanov** (Institute of Mathematics and Mathematical Modeling, Kazakhstan) Lifespan estimates for the semilinear wave equation with a forcing term
JULY 7 **9:30-10:00**	**Nico Michele Schiavone** (Polytechnic University of Madrid, Spain) Fractional dispersion phenomena in the Helmholtz equation

SS 178	**Nonlinear Evolution Equations and Related Topics** Organizer(s): Goro Akagi , Michinori Ishiwata , Mitsuharu Otani	**Room 640**
JULY 7 **8:00-8:30**	**Shun Uchida** (Oita University, Japan) A doubly nonlinear parabolic equation with nonlinear perturbation under relaxed growth and exponent conditions	
JULY 7 **8:30-9:00**	**Aras Bacho** (California Institute of Technology, USA) On the nonsmooth analysis of doubly nonlinear evolution equations of second order	
JULY 7 **9:00-9:30**	**Riccardo Voso** (UTIA, Czech Academy of Sciences, Czech Rep) A variational approach to optimal control of gradient flows	
JULY 7 **9:30-10:00**	**Alice Marveggio** (University of Bonn, Germany) Weighted Inertia-Dissipation-Energy approach to doubly nonlinear wave equations	

CS 2	**PDEs and Applications**	**Room 635**
JULY 7 **8:00-8:20**	**Meraj Alam** (Mahindra University, Hyderabad, India) Existence and Uniqueness Analysis of a Nonlinear Biphasic Mixture Model	
JULY 7 **8:20-8:40**	**Francisco de la Hoz** (University of the Basque Country, Spain) On a Matrix-Based Spectral Approximation of the Fractional Laplacian and Fractional p-Laplacian on $\mathbb{R}^n$	

JULY 7 **8:40-9:00**	**Xue Jiang** (Beijing University of Technology, Peoples Rep of China) Wave-number-explicit analysis for maxwell`s equation with DtN truncation
JULY 7 **9:00-9:20**	**Shuai Miao** (School of Mathematics and Statistics at Xi'an Jiaotong University, Peoples Rep of China) Optimal L2 error quadratic serendipity finite volume element methods for diffusion equations on polygonal meshes
JULY 7 **9:20-9:40**	**Jacson Simsen** (Institute of Mathematics and Computing, Federal University of Itajub\`a, Brazil, Brazil) On attractors for evolution problems with variable exponents
JULY 7 **9:40-10:00**	**Manika Bag** (Indian Institute of Science Education and Research, Thiruvananthapuram, India) Well-posedness of three-dimensional Damped Cahn-Hilliard-Navier-Stokes Equations

CS 3	**Modeling, Math Biology and Math Finance**	**Room 634**
JULY 7 **8:00-8:20**	**Tarek Acila** (University of Warwick, England) Modelling Lipid Raft-Receptor Interactions in Wnt Morphogen Signalling via a Bulk-Surface PDE Framework	
JULY 7 **8:20-8:40**	**Youngseok Chang** (Korea University, Korea) On the Fitness of Nonlinear Diffusion in Competitive Systems Incorporating Perceptual Constraints	
JULY 7 **8:40-9:00**	**Osman R Isik** (Mugla Sitki Kocman University, Turkey) A Mathematical Model for Measles Transmission Dynamics Based on Real Data from Turkey	
JULY 7 **9:00-9:20**	**Yu-Hao Liang** (Department of Applied Mathematics, National University of Kaohsiung, Taiwan) Bipartite Flocking in A Time-Delayed Cucker-Smale Model under Spanning Tree Networks	
JULY 7 **9:20-9:40**	**Chandra Shekhar Nishad** (International Institute of Information Technology, Naya Raipur, India) MHD Stokes Flow past an Array of Staggered Circular Cylinders Inside Topographically Patterned Microchannel using Non-Primitive Boundary Element Method	

Parallel Session 4 :: Tuesday, 07/07, 13:30-16:00

TS 4	**Hyperbolic and mixed-type problems in fluid dynamics** Organizer(s): Mikhail Feldman , Dehua Wang	Room AULA
JULY 7 13:30-14:20	**Gui-Qiang Chen** (University of Oxford, England) Multidimensional Riemann Problems - Transonic Shock Waves and Free Boundary Problems	
JULY 7 14:20-15:10	**Xianpeng Hu** (The Hong Kong Polytechnic University, Peoples Rep of China) Concentration of weak solutions in compressible flows	
JULY 7 15:10-16:00	**Athanasios Tzavaras** (KAUST/Applied Mathematics and Computational Science, Saudi Arabia) Oscillations in hyperbolic-parabolic systems and homogenization via kinetic equations	

TS 5	**Mathematical Modelling and Numerical Simulations** Organizer(s): Weizhu Bao , Qiang Du	Room 204
JULY 7 13:30-14:20	**Wei Jiang** (Wuhan University, Peoples Rep of China) Mathematical modelling and numerical simulations for solid-state dewetting problems	
JULY 7 14:20-15:10	**Kui Ren** (Columbia University, USA) Model-consistent data-driven computational strategies for PDE joint inversion problems	
JULY 7 15:10-16:00	**Jiang Yang** (Southern University of Science and Technology, Peoples Rep of China) High-Order Structure-Preserving Product-type Runge-Kutta Methods for Gradient Flow Models with Variable Mobility	

SS 3	**Analysis of diffuse and sharp interface models** Organizer(s): Alain Miranville , Andrea Giorgini , Maurizio Grasselli	Room 428
JULY 7 13:30-14:00	**Guenther Gruen** (Department of Mathematics, University of Erlangen-Nuremberg, Germany) Estimates on free-boundary propagation for solutions to stochastic porous-media equations	

JULY 7 **14:00-14:30**	**Jonas Stange** (University of Regensburg, Germany) Two-phase flows with bulk-surface interaction: A Navier--Stokes--Cahn--Hilliard model with dynamic boundary conditions
JULY 7 **14:30-15:00**	**Christoph Hurm** (University of Regensburg, Germany) Nonlocal-to-Local Convergence of the Cahn--Hilliard Equation and its Operator
JULY 7 **15:00-15:30**	**Sema Yayla** (Hacettepe University, Turkey) Structure and Stability of Global Attractors for a Cahn-Hilliard Tumor Growth Model
JULY 7 **15:30-16:00**	**Sheetal DHARMATTI** (Indian Institute of Science Education and Research Thiruvananthapuram, India) POINTWISE TRACKING OPTIMAL CONTROL PROBLEM FOR CAHN-HILLIARD NAVIER-STOKES SYSTEM

SS 4	**Mathematical methods in electromagnetism and related topics** Organizer(s): Ioannis Stratis , Pier Domenico Lamberti	**Room 315**
JULY 7 **13:30-14:00**	**Maryna Kachanovska** (POEMS, INRIA, France) Wave propagation in a waveguide filled with hyperbolic media	
JULY 7 **14:00-14:30**	**Francesco Ferraresso** (University of Verona, Italy) The spectrum of dissipative Maxwell operators	
JULY 7 **14:30-15:00**	**Martin Halla** (Karlsruhe Institute of Technology, Germany) Modal bases of coaxial electromagnetic step index fibers	
JULY 7 **15:00-15:30**	**Eric Stachura** (Kennesaw State University, USA) Perturbation of an electrostatic potential by a biaxially anisotropic cylinder	
JULY 7 **15:30-16:00**	**Michele Zaccaron** (ENSTA Paris, France) Bending and twisting of electromagnetic waveguides	

SS 5	**New trends in pattern formations and dynamics for dissipative systems and related topics** Organizer(s): Junping Shi , Danielle Hilhorst , Yoshihisa Morita	**Room 313**

JULY 7 **13:30-14:00**	**Eduard Feireisl** (Institute of Mathematics, Czech Academy of Sciences, Czech Rep) On the data assimilation problem for models of compressible fluids
JULY 7 **14:00-14:30**	**Chuncheng Wang** (Harbin Institute of Technology, Peoples Rep of China) Spatial-temporal dynamics of a nonlocal advection-diffusion model with time delay
JULY 7 **14:30-15:00**	**Toshiko Ogiwara** (Josai University, Japan) On the equilibrium solutions for bistable reaction-diffusion equations on a star-shaped metric graph
JULY 7 **15:00-15:30**	**Seungmin Kang** (National Center for Theoretical Sciences (NCTS), Korea) Kinetic equations with spatial turning frequency and their diffusion limits

SS 6	**Propagation dynamics of PDEs: recent progress and trends** Organizer(s): Yihong Du , Jian Fang , Wenjie Ni	**Room 628**
JULY 7 **14:00-14:30**	**Thomas Giletti** (University Clermont-Auvergne, France) Spreading in a shifting environment: linear and nonlinear features	
JULY 7 **14:30-15:00**	**Hongjun Guo** (Tongji University, Peoples Rep of China) Spreading dynamics for the Lotka-Volterra system with general initial supports: the strong competition	
JULY 7 **15:00-15:30**	**Iuliia Petrova** (University of Sao Paulo (USP), Brazil) Infinite cascade of traveling waves in a nonlocal model of gravitational fingering	
JULY 7 **15:30-16:00**	**Hao Kang** (Tianjin University, Peoples Rep of China) Spreading speeds of diffusive age-structured equations in slowly and rapidly varying media	

SS 12	**Propagation Phenomena in Reaction-Diffusion Systems** Organizer(s): Hirokazu Ninomiya , Masaharu Taniguchi	**Room 637**
JULY 7 **13:30-14:00**	**Francois Hamel** (Aix-Marseille University, France) Biological invasions in patchy landscapes: a reaction-diffusion model with interface conditions	

JULY 7 **14:00-14:30**	**Rana Parshad** (Iowa State University, USA) An eco-epidemiological model with prey taxis and slow diffusion
JULY 7 **14:30-15:00**	**Romain Ducasse** (LJLL, universite Paris Cite, France) Propagation of opinions on a network. The Daley-Kendall model.
JULY 7 **15:00-15:30**	**Luca Rossi** (Sapienza University of Rome, Italy) Invasion shape for nonlocal KPP equations with metric diffusion kernels
JULY 7 **15:30-16:00**	**Keisuke Taga** (Tokyo University of Science, Japan) Reaction-Diffusion Model for Pattern Formation in Tape Peeling

SS 15	**Qualitative properties for solutions to nonlinear elliptic and parabolic equations** Organizer(s): Wenxiong Chen , Yahong Guo , Congming Li	**Room 316**
JULY 7 **13:30-14:00**	**Congming Li** (Shanghai Jiao Tong University, Peoples Rep of China) Some recent work on qualitative analysis of nonlocal PDEs	
JULY 7 **14:00-14:30**	**Sven Jarohs** (Goethe University Frankfurt, Germany) The exterior Bernoulli problem for the half Laplacian	
JULY 7 **14:30-15:00**	**Ariel Salort** (CEU San Pablo, Madrid, Spain) Asymptotic behavior for anisotropic fractional energies	
JULY 7 **15:00-15:30**	**Enea Parini** (Aix Marseille Universite, France) On Hopf`s Lemma for sign-changing supersolutions to fractional Laplacian equations	
JULY 7 **15:30-16:00**	**Lu Chen** (Beijing Institute of Technology, Chile) Stability of Sobolev inequality and Sobolev equation in the endpoint case.	

SS 18	**Progress on delay and fractional differential equations with real-world application** Organizer(s): Kunquan Lan , Elena Braverman	**Room 538**
JULY 7 **13:30-14:00**	**Alexander Domoshnitsky** (Ariel University, Israel) Floquet theory in stability studies of delay differential equations	

JULY 7 **14:00-14:30**	**Sergey Malev** (Ariel University, Israel) Exponential stability of second order delay differential equations through Floquet theory
JULY 7 **14:30-15:00**	**Irina Volinsky** (Ariel University, Israel) Stabilization Method of n-th Order ODEs Using a Distributed Control Functions Expressed in Integral Form
JULY 7 **15:00-15:30**	**Satoshi Tanaka** (Tohoku University, Japan) Existence of positive solutions for boundary value problems involving Riemann-Liouville derivatives
JULY 7 **15:30-16:00**	**Cristiana J. Silva** (Iscte - IUL and CIDMA, University of Aveiro, Portugal) Time delayed models and optimal control in infectious disease dynamics

SS 22	**Models of emergence and collective dynamics** Organizer(s): Roman Shvydkoy , Ewelina Zatorska	**Room 421**
JULY 7 **13:30-14:00**	**David N Reynolds** (University of Warsaw, Poland) Graph-induced rotational twisted states in systems of identical oscillators	
JULY 7 **14:00-14:30**	**Liutang Xue** (Beijing Normal University, China, Peoples Rep of China) On the weak solution of the uni-directional Euler-alignment system with strongly singular communication	
JULY 7 **14:30-15:00**	**Konstantina Trivisa Trivisa** (University of Marylad, USA) On Models of Self-Organized Dynamics and the Euler Equations	
JULY 7 **15:00-15:30**	**Jakub Skrzeczkowski** (University of Oxford, England) Global solutions to cross-diffusion systems with independent advections in one dimension	
JULY 7 **15:30-16:00**	**Agnieszka Swierczewska-Gwiazda** (University of Warsaw, Poland) Relative entropy method for non-local models	

SS 26	**Nonlinear partial differential equations and their applications** Organizer(s): Xiangqing Liu , Yuanze Wu , Fukun Zhao	**Room 825**

JULY 7 **13:30-14:00**	**Jaroslaw Mederski** (Institute of Mathematics, Polish Academy of Sciences, Poland) The nonlinear p-curl-curl problem
JULY 7 **14:00-14:30**	**Isabella Ianni** (Sapienza University, Italy) Uniqueness results for the planar Dirichlet Lane-Emden problem
JULY 7 **14:30-15:00**	**Olimpio Miyagaki** (UFSCAR, Brazil) Multiple nodal solutions of Kirchhoff-Choquard equations with logarithmic potential and critical exponential nonlinearity
JULY 7 **15:00-15:30**	**Gabriele Mancini** (University of Bari Aldo Moro, Italy) Existence of positive solutions for a class of almost critical problems on an annulus
JULY 7 **15:30-16:00**	**Aleks Jevnikar** (University of Udine, Italy) On the bifurcation diagram for free boundary problems arising in plasma physics

SS 32	**Inverse Problems and Image Processing** Organizer(s): Qiyu Jin , Shengzhu Shi , Taofeng Xie	**Room 442**
JULY 7 **14:00-14:30**	**Zhifang Liu** (Tianjin Normal University, Peoples Rep of China) Learned Spherical ADMM for Rician Noise Removal	
JULY 7 **14:30-15:00**	**Faqiang Wang** (Beijing Normal University, Peoples Rep of China) Learnable Mixture Distribution Prior for Image Denoising	
JULY 7 **15:00-15:30**	**Yao Li** (Harbin Institute of Technology, Peoples Rep of China) Boosting Adversarial Transferability via Multi-anchor Probability Manifold Priors	
JULY 7 **15:30-16:00**	**Shengzhu Shi** (Harbin Institute of Technology, Peoples Rep of China) A Damped Second-Order Flow for High-Order Segmentation Models with Efficient SAV Schemes	

SS 35	**Elliptic PDEs: singularities, discontinuities, and nonlinear phenomena** Organizer(s): Umberto Guarnotta , Salvatore Angelo Marano	**Room 434**

JULY 7 **13:30-14:00**	**Vincenzo Ferone** (Universit\`a di Napoli Federico II, Italy) First eigenvalue and torsional rigidity: isoperimetric inequalities for the fractional Laplacian
JULY 7 **14:00-14:30**	**Barbara Brandolini** (Universita` degli Studi di Palermo, Italy) Some recent results on singular anisotropic elliptic equations
JULY 7 **14:30-15:00**	**Francesca Anceschi** (Universita` Politecnica delle Marche, Italy) Dirichlet boundary value problems governed by non-monotone differential operators
JULY 7 **15:00-15:30**	**Giuseppina G. Barletta** (University of Reggio Calabria, Italy) Boundedness of solutions to Dirichlet, Neumann, Robin and mixed problems for elliptic equations in Orlicz spaces
JULY 7 **15:30-16:00**	**Ida de Bonis** (Sapienza University of Rome, Italy) Comparison results for the fractional heat equation with a singular lower order term

SS 37	**Recent development of stochastic optimal control, applications and deep learning methods** Organizer(s): Omar KEBIRI	**Room 436**
JULY 7 **13:30-14:00**	**Omar KEBIRI** (BTU Cottbus-Senftenberg, Germany) Financial Modeling with Stochastic Volatility: Connections to 2BSDEs and Deep Learning Methods	
JULY 7 **14:00-14:30**	**Nicolas Privault** (Nanyang Technological University, Singapore) Stability analysis of a branching diffusion solver for semilinear heat equations	
JULY 7 **14:30-15:00**	**Huijie Qiao** (Southeast University, Peoples Rep of China) Asymptotic behaviors of small perturbation for path-dependent multivalued McKean-Vlasov stochastic differential equations	
JULY 7 **15:00-15:30**	**Sumith Reddy Anugu** (TU Ilmenau, Germany) Exponential Convergence of Relative Value Iteration in Ergodic Control Problems in Diffusions	
JULY 7 **15:30-16:00**	**Xiaofei Shi** (University of Toronto, Canada) Generative Market Equilibrium Models with Stable Adversarial Learning via Reinforcement Link	

SS 40	**Applications of dynamical systems in medicine and biology** Organizer(s): Beata Jackowska-Zduniak , Urszula Foryś	Room 433
JULY 7 **13:30-14:00**	**Bartoszek Krzysztof** (Department of Computer and Information Science, Linkoping University, Sweden) Fast inference for multivariate evolutionary dynamics	
JULY 7 **14:00-14:30**	**Markus Kirkilionis** (University of Warwick, British Virgin Islands) Regulatory Networks In The Life Sciences: Rule-Based And Data-Driven Modeling	
JULY 7 **14:30-15:00**	**Torsten Lindstr\"{o}m** (Linnaeus University, Sweden) On Observability of Limit Cycles in the Chemostat	
JULY 7 **15:00-15:30**	**Jacson Simsen** (Institute of Mathematics and Computing, Federal University of Itajub\`a, Brazil, Brazil) A little bit about math models for drug concentration in the body	

SS 43	**Recent Advances in Inverse Problems, Imaging, and Their Applications** Organizer(s): Peijun Li , Gang Bao	Room 437
JULY 7 **13:30-14:00**	**Jun Lai** (Zhejiang University, Peoples Rep of China) Selective focusing of multiple particles in a layered medium	
JULY 7 **14:00-14:30**	**Jijun Liu** (Southeast University, Peoples Rep of China) On the identification of external forces for two-layer quasi-geostrophic model from partial observation data	
JULY 7 **14:30-15:00**	**Haibing Wang** (Southeast Univerisity, Peoples Rep of China) Efficient Numerical Methods for an Inverse Source Problem of the Wave Equation via Droplet-Induced Asymptotics	
JULY 7 **15:00-15:30**	**Jian Zhai** (Fudan University, Peoples Rep of China) Recovery of weakly anisotropic elastic parameters	
JULY 7 **15:30-16:00**	**Lei Zhang** (Zhejiang University of Technology, Peoples Rep of China) Inverse Problems of Output Feedback Controller via Contraction Metrics	

SS 45	**Frontiers in Topological Dynamics: Theory, Applications, and Interdisciplinary Connections** Organizer(s): Guohua Zhang , Wen Huang , Song Shao	**Room 440**
JULY 7 **13:30-14:00**	**Zhenxin Liu** (Dalian University of Technology, Peoples Rep of China) Continuity of the Lyapunov exponent and measure entropy for stochastic differential equations	
JULY 7 **14:00-14:30**	**Wen-Chiao Cheng** (Chinese Culture University, Taiwan) On Entropy-like Invariants for Dynamical Semigroup Actions	
JULY 7 **14:30-15:00**	**Leiye Xu** (University of Science and Technology of China, Peoples Rep of China) Almost Countable Spectrum and Logarithmic Sarnak Conjecture	
JULY 7 **15:00-15:30**	**Xinsheng Wang** (Shantou University, Peoples Rep of China) Preimage Mean Dimension	
JULY 7 **15:30-16:00**	**Qinqi Wu** (Shanghai University of Finance and Economics, Peoples Rep of China) Product saturation theorem in polynomials	

SS 66	**Geometric insights in Partial Differential Equations: advances and challenges** Organizer(s): Luca Vilasi , Giovanni Molica Bisci , Vicentiu Radulescu	**Room 301**
JULY 7 **14:00-14:30**	**Verena Bogelein** (University of Salzburg, Austria) Regularity for (s,p)-harmonic functions	
JULY 7 **14:30-15:00**	**Cristina Br\"andle-Cerqueira** (U. Carlos III de Madrid, Spain) Species that live in different habitats: How do boundary conditions affect their behavior?	
JULY 7 **15:00-15:30**	**Pablo Alvarez-Caudevilla** (Universidad Carlos III de Madrid, Spain) A three population Lotka-Volterra competition model with two populations interacting through an interface	
JULY 7 **15:30-16:00**	**Giovanni Anello** (Department MIFT, University of Messina, Italy) A critical Kirchhoff type problem in dimension four	

SS 68	**Optimal control theory and applications** Organizer(s): Ellina Grigorieva , Monica Motta , Carlo Mariconda	Room 311
JULY 7 **14:00-14:30**	**Mukhtar Karazym** (teresa scarinci, Italy) Superlinearity and Monotonicity in Electrical Resistance Tomography	
JULY 7 **14:30-15:00**	**Piernicola Bettiol** (University of Brest, France) Necessary conditions of optimality for dynamic optimization problems involving parameters	
JULY 7 **15:00-15:30**	**Ellina Grigorieva** (Texas Woman`s University, USA) A Two-Stage Optimal Control Problem in the Lotka-Volterra Competition Model for Cancer Treatment	
JULY 7 **15:30-16:00**	**Mariusz Michta** (Institute of Mathematics, University of Zielona Gora, Poland) Young differential inclusions and their properties	

SS 77	**Singularity and regularity in nonlinear PDEs** Organizer(s): Berikbol Torebek , Matteo Muratori	Room 432
JULY 7 **13:30-14:00**	**Iwona Chlebicka** (University of Warsaw, Poland) Wasserstein Theory in a Goulash Medium	
JULY 7 **14:00-14:30**	**Fabio Punzo** (Politecnico di Milano, Italy) Propagation and Extinction for a KPP-Type Heat Equation on Regular Metric Trees	
JULY 7 **14:30-15:00**	**Erbol Zhanpeisov** (Tohoku University, Graduate School of Science, Japan) Blow-up rate for the subcritical semilinear heat equation in non-convex domains	
JULY 7 **15:00-15:30**	**Tatsuki Kawakami** (Ryukoku University, Japan) Existence of solutions to the fractional semilinear heat equation with a singular inhomogeneous term	
JULY 7 **15:30-16:00**	**Edoardo Mainini** (University of Genoa, Italy) Aggregation-diffusion models with nonlinear potentials	

SS 82	**Dissipative Systems and Applications** Organizer(s): Lourdes Tello , Wenxian Shen	Room 427

JULY 7 **13:30-14:00**	**Xiaoqiang Zhao** (Memorial University of Newfoundland, Canada) Global dynamics of reaction-diffusion systems with a time-varying domain
JULY 7 **14:00-14:30**	**Janusz Mierczy\`nski** (Wroc{\l}aw University of Science and Technology, Poland) Time-periodic carrying simplex for a competitive system of Carath\`eodory ODEs
JULY 7 **14:30-15:00**	**Marek Kryspin** (Wroclaw University of Science and Technology, Poland) Measure-Based Differential Operators and Equations with Distributed Delay
JULY 7 **15:00-15:30**	**Paulo Nicanor Seminario Huertas** (Polytechnic University of Madrid, Spain) DYNAMICS AND SMOOTH GLOBAL ATTRACTOR FOR A THERMOELASTIC GREEN-LINDSAY PLATE
JULY 7 **15:30-16:00**	**Yi Wang** (University of Science and Technology of China, Peoples Rep of China) Typical behavior of differentially positive systems on a globally orderable Riemannian manifold

SS 83	**New Aspects of Mathematical Modeling and Analysis in Materials Science** Organizer(s): Toyohiko Aiki , Adrian Muntean	**Room 812**
JULY 7 **13:30-14:00**	**Grigor Nika** (Karlstad University, Sweden) Scale size-dependence and homogenization in elasticity	
JULY 7 **14:00-14:30**	**Katsuyuki Ishii** (Kobe University, Japan) A threshold-type algorithm for fourth order geometric motions	
JULY 7 **14:30-15:00**	**Chiharu Kosugi** (Yamaguchi University, Japan) Existence of solutions for the elastic curve model generated by the free energy depending on the curvature	
JULY 7 **15:00-15:30**	**Vishnu Raveendran** (University of Bonn, Germany) Wave propagation through a time-varying heterogeneous interface	
JULY 7 **15:30-16:00**	**Hiroshi Watanabe** (Oita University, Japan) Qualitative properties of entropy solutions to one-dimensional scalar parabolic-hyperbolic conservation laws	

SS 87	**Mathematical Insights into Phase-Field Models** Organizer(s): Andrea Signori , Pierluigi Colli , Takeshi Fukao	Room 740
JULY 7 **13:30-14:00**	**Andrea Giorgini** (Politecnico di Milano, Italy) On the Cahn-Hilliard equation with nonlinear diffusion: the non-convex case	
JULY 7 **14:00-14:30**	**Yadong Liu** (Nanjing Normal University, Peoples Rep of China) Global weak solutions to a diffuse interface model for quasi-incompressible two-phase flows with barycentric velocity and singular potential	
JULY 7 **14:30-15:00**	**Patrik Knopf** (University of Regensburg, Germany) Strong nonlocal-to-local convergence of convolution operators with singular, possibly anisotropic kernels	
JULY 7 **15:00-15:30**	**Yutaka Terasawa** (Nagoya University, Japan) Existence and Nonlocal-to-Local Convergence for Singular, Anisotropic Nonlocal Cahn-Hilliard Equations	
JULY 7 **15:30-16:00**	**Harald Garcke** (Department for Mathematics, Germany) On recent analytical results for a thermodynamically consistent diffuse interface model for incompressible two-phase flows with unmatched densities	

SS 90	**NONLINEAR ELLIPTIC DIFFERENTIAL EQUATIONS AND APPLICATIONS** Organizer(s): Antonia Chinnì , Maria-Magdalena Boureanu , Beatrice Di Bella	Room 438
JULY 7 **14:00-14:30**	**Cristian Danet** (University of Craiova, Romania) On a Hinged Plate Equation: Paradoxes, Existence and Uniqueness	
JULY 7 **14:30-15:00**	**Tornatore Elisabetta** (University of Palermo, Italy) Nonhomogeneous degenerate quasilinear problems with convection and intrinsic operator	
JULY 7 **15:00-15:30**	**Giuseppe Failla** (University of Palermo, Italy) Nonlocal Carrier`s Double Phase Problem	

SS 91	**Geometric evolution problems** Organizer(s): James McCoy , Yong Wei	Room 822

JULY 7 **13:30-14:00**	**Panagiotis Gianniotis** (National and Kapodistrian University of Athens, Greece) Integral curvature bounds and Perelman`s bounded diameter conjecture for Type I Ricci flows
JULY 7 **14:00-14:30**	**Beomjun Choi** (KAIST, Korea) Classifying ancient solutions in mean curvature flow
JULY 7 **14:30-15:00**	**Jiawei Liu** (Nanjing University of Science and Technology, Peoples Rep of China) The conical K\"ahler-Ricci flow and its limit behavior
JULY 7 **15:00-15:30**	**Artem Pulemotov** (The University of Queensland, Australia) Integral Gauss formula and the Poisson equation for the G$_2$-Laplacian
JULY 7 **15:30-16:00**	**Han Hong** (Beijing Jiaotong University, Peoples Rep of China) Rigidity of minimal and CMC hypersurfaces.

SS 92	**Numerical Methods for SPDEs: Bridging Theory and Applications** Organizer(s): Hakima Bessaih , Erika Hausenblas , Annie Millet	**Room 821**
JULY 7 **13:30-14:00**	**Martin Hutzenthaler** (University of Duisburg-Essen, Germany) Strong convergence rates for stochastic Burgers equations	
JULY 7 **14:00-14:30**	**Andreas Petersson** (Linnaeus University, Sweden) Nonparametric Estimation of Noise Covariance in Parabolic SPDEs	
JULY 7 **14:30-15:00**	**Konstantinos Dareiotis** (University of Leeds, England) Asymptotic error distribution of the Euler method for stochastic differential equations with irregular drifts	
JULY 7 **15:00-15:30**	**Vincent R Martinez** (CUNY Hunter College & Graduate Center, USA) Averaging Principle for the 3D Stochastic Primitive Equations	
JULY 7 **15:30-16:00**	**Luca Scarpa** (Politecnico di Milano, Italy) An Allen-Cahn model with jump-diffusion noise for biological damage and repair	

SS 94	**Dynamics and Variational Methods of Quasi-Hamiltonian Systems** Organizer(s): Xifeng Su , Jianlu Zhang	Room 312
JULY 7 **13:30-14:00**	**Renato C Calleja** (IIMAS-UNAM, Mexico) Invariant Tori in Hamiltonian and Conformally Symplectic Systems: A Posteriori KAM Theory and Computation	
JULY 7 **14:00-14:30**	**Qiao Huang** (Southeast University, Peoples Rep of China) Cartan-Schouten Connections: Geometric Reduction and a Connection-Dependent Variational Principle	
JULY 7 **14:30-15:00**	**Zibo Wang** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) On the vanishing viscosity limit of Hamilton-Jacobi equations	
JULY 7 **15:00-15:30**	**Kyle Rosengartner** (Baylor University, USA) Mean Field Games of Controls with Boundary Conditions \& Invariance Constraints	
JULY 7 **15:30-16:00**	**Jiwen Zhang** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) Uniqueness results of ground states for mixed Laplacian and fractional Laplacian.	

SS 98	**Control, Inverse problems and Long time dynamics of Evolutionary Systems** Organizer(s): LOUIS TEBOU , Marcelo CAVALCANTI , Valeria DOMINGOS CAVALCANTI	Room 314
JULY 7 **13:30-14:00**	**George Avalos** (University of Nebraska-Lincoln, USA) Implications of a Novel Pressure Elimination Method for a Certain Nonlinear Fluid-Structure PDE Interaction	
JULY 7 **14:00-14:30**	**Florentina Tone** (University of West Florida, USA) On the Long-time Stability of the Implicit Euler Scheme for a Two-phase Flow Model	
JULY 7 **14:30-15:00**	**Pelin Guven Geredeli** (Clemson University, USA) Qualitative Properties of Composite-Structures and Fluid Interaction PDE Models	
JULY 7 **15:00-15:30**	**Buddhika Priyasad** (University of Konstanz, Germany) Exact Interior Controllability of Magnetoelastic Plates Using Purely Magnetic Actuation	

JULY 7 **15:30-16:00**	**Lionel ROSIER** (Universite du Littoral Cote d`Opale, France) Null controllability of strongly degenerate parabolic equations

SS 99	**Emerging Trends in Analysis and Control of PDEs** Organizer(s): Diego A. Souza , Anna Doubova , Kévin Le Balc`h	**Room 425**
JULY 7 **13:30-14:00**	**Emmanuel Tr\`elat** (Sorbonne University, France) Controllability properties of coupled PDEs	
JULY 7 **14:00-14:30**	**Lorena Bociu** (NC State University, USA) Analysis and Control in Poroelastic Systems with Applications to Biomedicine	
JULY 7 **14:30-15:00**	**Pierre Lissy** (CERMICS, Ecole nationales des ponts et chausses, France) Exact output tracking of the 1-d heat equation	
JULY 7 **15:00-15:30**	**Imene DJEBOUR** (CY Cergy Paris Universite, France) Exponential stability of a generalised Burgers equation in a n-dimensional torus	
JULY 7 **15:30-16:00**	**Felipe W. Chaves-Silva** (Federal University of Paraiba, Brazil) Spectral inequality for the n-dimensional Stokes operator with n-1 observation terms.	

SS 103	**The integrability and bifurcation theory of dynamical systems and its applications** Organizer(s): Dongmei Xiao , Valerij Romanovskij , Yilei Tang	**Room 638**
JULY 7 **13:30-14:00**	**Wenxia Li** (East China Normal University, Peoples Rep of China) On the IFS which admits a specified attactor	
JULY 7 **14:00-14:30**	**Xiang Zhang** (Shanghai Jiao Tong University, Peoples Rep of China) Traveling wave trains and fronts in a reaction--diffusion model of seagrass meadows	
JULY 7 **14:30-15:00**	**Goran Radunovic** (University of Zagreb, Croatia) Support measures and complex dimensions in dynamics	
JULY 7 **15:00-15:30**	**Abdul Jarrah** (American University of Sharjah, United Arab Emirates) First Integrals and Invariants of Systems of ODEs	

JULY 7 **15:30-16:00**	**Weinian Zhang** (Sichuan University, Peoples Rep of China) Parametric normal forms and further simplification

SS 110	**Stochastic Dynamics** Organizer(s): Beom-Seok Han , Jae-Hwan Choi	**Room 738**
JULY 7 **13:30-14:00**	**Kyeongsik Nam** (KAIST, Korea) Sub-critical Exponential random graphs	
JULY 7 **14:00-14:30**	**Seonwoo Kim** (Yonsei University, Korea) Transience time of the subcritical facilitated exclusion process	
JULY 7 **14:30-15:00**	**JAEHUN LEE** (Institute of Science and Technology Austria (ISTA), Austria) Dynamical Methods in Random Matrix Theory and Applications to Correlated Models	
JULY 7 **15:00-15:30**	**Jungkyoung Lee** (Inha University, Korea) Gamma Expansion of the Large Deviation Rate Functional for Diffusion Processes	
JULY 7 **15:30-16:00**	**Jinsol Seo** (KIAS (Korea Institute for Advanced Study), Korea) Inviscid Limit for the Two-Dimensional Navier-Stokes Equations: A Stochastic Lagrangian Approach	

SS 117	**Patterns and Attractors in Nonlinear Dynamics** Organizer(s): Jia-Yuan Dai , Phillipo Lappicy , Junsik Bae	**Room 426**
JULY 7 **13:30-14:00**	**Hobin Lee** (Korea Advanced Institute of Science and Technology, Korea) Time-asymptotic behavior of solutions to the 3D Barotropic Navier-Stokes equations toward viscous shock in outflow problems	
JULY 7 **14:00-14:30**	**Luis Miguel Rodrigues** (Univ Rennes, France) Stability of Multidimensional Periodic Waves of Parabolic Systems	
JULY 7 **14:30-15:00**	**Noboru Chikami** (Nagoya Institute of Technology, Japan) Asymptotic behavior for the incompressible Navier-Stokes system revisited	
JULY 7 **15:00-15:30**	**Jaeyong Shin** (Yonsei University, Korea) Double Beltrami States in Hall magneto-hydrodynamics	

JULY 7 **15:30-16:00**	**Deokwoo Lim** (Korea Institute for Advanced Study, Korea) On the optimal rate of vortex stretching for axisymmetric Euler flows without swirl

SS 120	**Mixtures: Modeling, analysis and computing** Organizer(s): Miroslav Bul\'{i}\v{c}ek , V\'{\i}t Pr\r{u}\v{s}a , Karel T\r{u}ma	**Room 824**
JULY 7 **13:30-14:00**	**Aaron Baier-Reinio** (University of Oxford, England) Finite element methods for electroneutral multicomponent convection-diffusion	
JULY 7 **14:00-14:30**	**Aaron Brunk** (Johannes-Gutenberg University Mainz, Germany) Structure-preserving approximation for the quasi-incompressible Maxwell-Stefan-Navier-Stokes system	
JULY 7 **14:30-15:00**	**Lenka Ko\v{s}\`{a}rkov\`{a}** (Charles University, Czech Rep) Multicomponent flow in domains with moving boundary: discretizations and numerical simulations	
JULY 7 **15:00-15:30**	**Sara Xhahysa** (TU Wien, Austria) Multiphase cross-diffusion models for tissue structures	
JULY 7 **15:30-16:00**	**Vit Prusa** (Charles University, Czech Rep) Modeling metamaterials by second-order rate-type constitutive relations between only the macroscopic stress and strain	

SS 123	**Nonlinear phenomena in elliptic and parabolic equations** Organizer(s): Futoshi Takahashi , Bernhard Ruf , Daisuke Naimen	**Room 619**
JULY 7 **13:30-14:00**	**Michiaki Onodera** (Institute of Science Tokyo, Japan) Polyharmonic Steklov eigenvalue problems	
JULY 7 **14:00-14:30**	**Elide Terraneo** (University of Milan, Italy) Fokker--Planck equations and n--dimensional Poincar\\`e inequalities for isotropic densities	
JULY 7 **15:00-15:30**	**Jie Wan** (Beijing Institute of Technology, Peoples Rep of China) Co-rotating nearly parallel helical vortices of 3D incompressible Euler equations in infinite cylinders	

JULY 7 **15:30-16:00**	**Takeshi Suguro** (Kumamoto University, Japan) Deficit estimates for an entropic form of Gagliardo-Nirenberg inequalities via nonlinear parabolic equations

SS 126	**Defects, Microstructures, and Failure: Multiscale Variational Models** Organizer(s): Leonard Kreutz , Konstantinos Zemas	**Room 445**
JULY 7 **13:30-14:00**	**Marcello Ponsiglione** (Sapienza, University of Roma, Italy) A notion of s-fractional mass for 1-currents in higher codimension	
JULY 7 **14:00-14:30**	**Francesco SOLOMBRINO** (Universit\`a del Salento, Italy) From discrete to continuum in the helical XY-model: emergence of chirality transitions.	
JULY 7 **14:30-15:00**	**Christof Melcher** (RWTH Aachen University, Germany) Tuning chirality and the emergence of antiskyrmions	
JULY 7 **15:00-15:30**	**Luca Briani** (Technical University of Munich, Germany) Energy concentration in a two-dimensional magnetic skyrmion model	
JULY 7 **15:30-16:00**	**Lucia De Luca** (IAC-CNR Roma, Italy) A variational approach to topological singularities through Mumford-Shah type functionals	

SS 128	**New Trends in Mathematical Fluid Dynamics and Related Problems** Organizer(s): Elena Salguero , Martina Magliocca , Francisco Mengual	**Room 826**
JULY 7 **13:30-14:00**	**Antonio Hidalgo Torne** (Max Planck Institute for Mathematics in the Sciences, Spain) Pathological solutions of Navier-Stokes equations on $\mathbb{T}^2$ with gradients in Hardy spaces	
JULY 7 **14:00-14:30**	**Antonio J. Fern\`andez** (Universidad Aut\`onoma de Madrid, Spain) Desingularization of vortex sheets for the Euler equations	
JULY 7 **14:30-15:00**	**Francisco Torres de Lizaur** (Universidad de Sevilla, Spain) Probabilistic solutions of the hydrodynamic equations	

JULY 7 **15:00-15:30**	**Mimi Dai** (University of Illinois at Chicago, USA) Instantaneous blowup for NSE
JULY 7 **15:30-16:00**	**Francesco Fanelli** (Basque Center for Applied Mathematics, Spain) Global well-posedness of a reduced model for micropolar fluids

SS 139	**Recent advances in modeling and simulation of interfacial dynamics** Organizer(s): Zhen Zhang , Shixin Xu , Yu-Hau Tseng	**Room 642**
JULY 7 **13:30-14:00**	**Ping Lin** (University of Dundee, Scotland) A structure-preserving finite element scheme and its error analysis for a diffuse-interface tumor growth model	
JULY 7 **14:00-14:30**	**Ming-Chih Lai** (National Yang Ming Chiao Tung University, Taiwan) TINNs: Time-Induced Neural Networks for Solving Time-Dependent PDEs	
JULY 7 **14:30-15:00**	**Wenrui Hao** (Penn State University, USA) Geometric local parameterization for solving Hele-Shaw problems with surface tension	
JULY 7 **15:00-15:30**	**Guanghui Hu** (University of Macau, Macau) Heterogeneous simulations for interfacial magnetization dynamics	
JULY 7 **15:30-16:00**	**Zhenlin Guo** (Beijing Computational Science Research Center, Peoples Rep of China) How does Tspan4 shape migrasomes?	

SS 147	**From optimal control to large population games: Learning and Applications** Organizer(s): Gokce Dayanikli , Mathieu Lauriere	**Room 827**
JULY 7 **13:30-14:00**	**Daniela Tonon** (University of Padua, Italy) Vanishing viscosity limit for Hamilton-Jacobi Equations defined in the Wasserstein space	
JULY 7 **14:00-14:30**	**Alexander Vladimirsky** (Cornell University, USA) Behavioral patterns, partial observability, and uncertainty in mean-field game epidemiological models	

JULY 7 **14:30-15:00**	**Jiefei Yang** (New York University Shanghai, Peoples Rep of China) Dual Approaches to Stochastic Control via SPDEs and the Pathwise Hopf Formula
JULY 7 **15:00-15:30**	**Naci Saldi** (Bilkent University, Turkey) Inverse Reinforcement Learning for Mean-Field Games
JULY 7 **15:30-16:00**	**Stefanos Theodorakopoulos** (TU Berlin, Germany) Mean-field games with rough common noise: the linear-quadratic case

SS 149	**Recent developments in Free Boundary Problems and Nonlinear PDEs** Organizer(s): Marvin Weidner , Aelson Sobral	**Room 639**
JULY 7 **13:30-14:00**	**Edgard Pimentel** (University of Coimbra, Portugal) Second-order regularity properties from one-side geometric control	
JULY 7 **14:00-14:30**	**Katerina Nik** (KAUST, Saudi Arabia) A mathematical approach to epidermal wound healing	
JULY 7 **14:30-15:00**	**Rafayel Teymurazyan** (KAUST, Saudi Arabia) Improved regularity for a nonlocal dead-core problem	
JULY 7 **15:00-15:30**	**Hui Yu** (National University of Singapore, Singapore) Generic regularity of the free boundary in the Alt-Caffarelli-Phillips problem	

SS 162	**Computer-Assisted Proofs in Dynamical Systems** Organizer(s): Akitoshi Takayasu , Jonathan Jaquette	**Room 618**
JULY 7 **13:30-14:00**	**Jordi Lluis Figueras** (Dept Mathematics Uppsala University, Sweden) On the computation of Tori and their bifurcations	
JULY 7 **14:00-14:30**	**Alex Haro** (Universitat de Barcelona & CRM, Spain) Modified parameterization methods in computer-assisted proofs for KAM theory	
JULY 7 **14:30-15:00**	**Renato C Calleja** (IIMAS-UNAM, Mexico) A Computer-Assisted Proof of Marchal`s Conjecture in the Three-Body Problem	

JULY 7 **15:00-15:30**	**Ann Gierzkiewicz** (Jagiellonian University in Krakow, Poland) An ellipsoidal satellite`s chaotic tumbling model
JULY 7 **15:30-16:00**	**Maximilian Engel** (University of Amsterdam, Netherlands) Computer-Assisted Proofs in Random Dynamical Systems

SS 169	**Inverse problems arising in partial differential equations and mathematical physics** Organizer(s): Mengni Li	**Room 641**
JULY 7 **13:30-14:00**	**Inmaculada Benitez Berral** (Universidad de Granada, Spain) Asymptotic behavior of the Becker-D{\\\\\\\\\\\\\\\\o}ring equations with fixed monomer concentration	
JULY 7 **14:00-14:30**	**Lena Dunst** (German Electron Synchrotron (DESY), Helmholtz Imaging, Germany) Large-Scale Model-Based 3D Image Reconstruction for Raster-Scan Optoacoustic Mesoscopy	
JULY 7 **14:30-15:00**	**Eugenia Franco** (University of Bonn, Germany) Characterizing the detailed balance property by means of measurements in linear chemical systems	
JULY 7 **15:00-15:30**	**Nasrin Nikbakht** (University Of Auckland, New Zealand) On the Robustness of Adaptive Eigenspace Inversion for Inverse Problems	

SS 173	**Mathematical and Numerical Analysis on Nonlinear PDEs** Organizer(s): Hiroyuki Takamura , Ning-An Lai , Takiko Sasaki	**Room 430**
JULY 7 **13:30-14:00**	**Marcello DAbbicco** (University of Bari, Italy) Lp-Lq estimates for evolution equations with damped oscillations	
JULY 7 **14:00-14:30**	**Yuta Wakasugi** (Hiroshima University, Japan) Recent progress on the semilinear damped wave equation with slowly decaying data	
JULY 7 **14:30-15:00**	**Kazumasa Fujiwara** (Ryukoku University, Japan) Global existence for a semilinear damped wave equation with certain positive initial displacement and negative initial velocity	

JULY 7 **15:00-15:30**	**Alessandro Palmieri** (University of Bari, Italy) Blow-up results for Nakao-type problems with time-dependent coefficients
JULY 7 **15:30-16:00**	**Nour Seloula** (University of Caen Normandie, France) Discontinuous Galerkin Methods for the Incompressible Magnetohydrodynamic System with Navier-Type Boundary Conditions

SS 175	**Modern Trends in Partial Differential Equations and General Relativity** Organizer(s): Anahit Galstyan , Makoto Nakamura , Karen Yagdjian	**Room 739**
JULY 7 **13:30-14:00**	**Andras Vasy** (Stanford University, USA) Microlocal analysis of the non-relativistic limit of the Klein-Gordon equation	
JULY 7 **14:00-14:30**	**Dean Baskin** (Texas A&M University, USA) Propagators for the Klein--Gordon equation on asymptotically Minkowski spacetimes	
JULY 7 **14:30-15:00**	**Piero D`Ancona** (Sapienza University, Rome, Italy) Magnetic Uniform Resolvent Estimates	
JULY 7 **15:00-15:30**	**Masahito Ohta** (Tokyo University of Science, Japan) Strong instability of standing waves for a system of nonlinear Klein-Gordon equations with quadratic interaction	
JULY 7 **15:30-16:00**	**Naoyasu Kita** (Kumamoto University, Japan) Stability of t-periodic solutions to the optical fiber model describing EDFA effect	

SS 178	**Nonlinear Evolution Equations and Related Topics** Organizer(s): Goro Akagi , Michinori Ishiwata , Mitsuharu Otani	**Room 640**
JULY 7 **13:30-14:00**	**Stefanie Sonner** (Radboud University, Netherlands) A panoramic view of exponential attractors	
JULY 7 **14:00-14:30**	**Miho Murata** (Shizuoka University, Japan) Global solvability of the Q-tensor model for nematic liquid crystals	
JULY 7 **14:30-15:00**	**Kosuke Kita** (Hokkaido university, Japan) Asymptotic behavior of nonlinear Robin energies with convex boundary nonlinearities	

JULY 7 **15:00-15:30**	**VASILE STAICU** (University of Aveiro, Portugal) Parametric nonlinear nonhomogeneous singular problems with an indefinite perturbation
JULY 7 **15:30-16:00**	**Akisato Kubo** (Fujita Health University, Japan) Non-linear evolution equations arising from mathematical models in biology with proliferation and re-establishment

SS 182	**Recent developments on mathematical finance, stochastic control and related topics** Organizer(s): Zhenhua Wang , Zhou Zhou , Jingjie Zhang	**Room 620**
JULY 7 **14:00-14:30**	**Yang Liu** (The Chinese University of Hong Kong, Shenzhen, Peoples Rep of China) Risk-sensitive Reinforcement Learning based on Convex Scoring Functions	
JULY 7 **14:30-15:00**	**Alex Tse** (University College London, England) Portfolio Optimization under Transaction Costs with Recursive Preferences	
JULY 7 **15:00-15:30**	**Xiaoli Wei** (Harbin Institute of Technology, Peoples Rep of China) Continuous-time q-learning for mean-field control problems with common noise	
JULY 7 **15:30-16:00**	**Ho Man Tai** (University of Sydney, Australia) Incentives of Defined-Contribution Pension Managers	

SS 188	**Dynamics of interacting optical solitons** Organizer(s): Omri Gat	**Room 823**
JULY 7 **13:30-14:00**	**Carles Milian Enrique** (Universitat Politecnica de Valencia, Spain) Dissipative patterns, solitons and bullets under radiative effects, higher dimensions, and topology. Bifurcations and dynamics overview.	
JULY 7 **14:00-14:30**	**Francesco Rinaldo Talenti** (University of Bath, England) Stairway to soliton in the down conversion regime	
JULY 7 **14:30-15:00**	**Yifan Sun** (Universite libre de Bruxelles, Belgium) Pathway-Resolved Noise Channels in Temporal Cavity Solitons	

JULY 7 **15:00-15:30**	**Pedro Parra-Rivas** (Universidad de Almeria, Spain) Localized patterns and slanted snaking in bichromatically driven pure Kerr optical cavities

CS 2	**PDEs and Applications**	**Room 635**
JULY 7 **13:30-13:50**	**Ashot Aleksian** (Heriot-Watt University, Scotland) A PDE Perspective on Averaging for Slow-fast Systems	
JULY 7 **13:50-14:10**	**Bauyrzhan Derbissaly** (Institute of Mathematics and Mathematical Modeling, Kazakhstan) Asymptotic analysis of Steklov eigenvalues in a thin multidomain	
JULY 7 **14:10-14:30**	**Jyoti Jindal** (Indian Institute of Technology, Roorkee, India) A domain hemivariational inequality for 2D and 3D convective Brinkman-Forchheimer extended Darcy equations	
JULY 7 **14:30-14:50**	**Domagoj Vlah** (University of Zagreb Faculty of Electrical Engineering and Computing, Croatia) AE-ViT: Stable Long-Horizon Prediction of Parametric PDE Solution	
JULY 7 **14:50-15:10**	**Shuai Su** (Beijing University of Technology, Peoples Rep of China) Positivity-preserving finite volume schemes for radiation diffusion equations on general meshes	
JULY 7 **15:10-15:30**	**Qi Xin** (The Chinese University of Hong Kong, Shenzhen, and SICIAM, SRIBD, Peoples Rep of China) On the inf-sup Degradation in Dense Microfluidic Arrays and a Robust Preconditioning Strategy for Stokes Flow	
JULY 7 **15:30-15:50**	**Fu Zheng** (National University of Defense Technology, Peoples Rep of China) Accelerated gentlest ascent dynamics for computing excited states of Bose-Einstein condenstates	

CS 3	**Modeling, Math Biology and Math Finance**	**Room 634**
JULY 7 **13:30-13:50**	**Gervy Marie Angeles** (Institute of Mathematics, University of the Philippines Diliman, Philippines) Symmetry breaking induced by filament repulsion in a reduced lamellipodium model	

JULY 7 **13:50-14:10**	**Huan Chen** (Monash University, Australia) Mimicking Brownian martingales
JULY 7 **14:10-14:30**	**Osman R Isik** (Mugla Sitki Kocman University, Turkey) Investigating the Transmission Dynamics of HIV/AIDS in Europe
JULY 7 **14:30-14:50**	**Haibo Liu** (Purdue University, USA) Do Low Internal Carbon Prices Signal Climate Inaction? A Financed-Emissions Perspective
JULY 7 **14:50-15:10**	**Evert Provoost** (KU Leuven, Belgium) Exploring the basins of attraction of dynamical systems with delay
JULY 7 **15:10-15:30**	**WENLIN ZHANG** (Hong Kong University of Science and Technology, Peoples Rep of China) Onsager Variational Principle - Guided Physics Informed Neural Networks for Simulating Interface Evolution in Cahn-Hilliard Equation

Parallel Session 5 :: Tuesday, 07/07, 16:30-19:00

SS 4	**Mathematical methods in electromagnetism and related topics** Organizer(s): Ioannis Stratis , Pier Domenico Lamberti	**Room 315**
JULY 7 **16:30-17:00**	**Bastian Harrach** (Goethe University Frankfurt, Germany) Autoencoder-based global concave optimization for Electrical Impedance Tomography	
JULY 7 **17:00-17:30**	**Elisa Francini** (Universit\`a di Firenze, Italy) Stability estimates for inverse boundary value problems	
JULY 7 **17:30-18:00**	**Andrea Aspri** (Universit\`a degli Studi di Milano Statale, Italy) Lipschitz stable determination of polyhedral conductivity inclusions from local boundary measurements	
JULY 7 **18:00-18:30**	**Mayeul Chavanne** (Institut Polytechnique de Paris, France) Averaged Steklov eigenvalues and applications to electromagnetic imaging problems	
JULY 7 **18:30-19:00**	**Nikolaos Tsitsas** (Aristotle University of Thessaloniki, Greece) Foldy-Lax T-matrix schemes in direct and inverse multiple scattering	

SS 5	**New trends in pattern formations and dynamics for dissipative systems and related topics** Organizer(s): Junping Shi , Danielle Hilhorst , Yoshihisa Morita	**Room 313**
JULY 7 **16:30-17:00**	**Inkyung Ahn** (Korea University, Korea) Interplay Between Starvation-Driven Diffusion and Diverse Interspecific Competition in Heterogeneous Environments	
JULY 7 **17:00-17:30**	**Masaharu Nagayama** (Hokkaido University, Japan) On a reaction-diffusion model for the self-propelled motion of a rigid body	
JULY 7 **17:30-18:00**	**Andrea Poiatti** (University of Parma, Italy) Global in time weak solutions to a Navier-Stokes/Mullins-Sekerka system	

SS 6	**Propagation dynamics of PDEs: recent progress and trends** Organizer(s): Yihong Du , Jian Fang , Wenjie Ni	**Room 628**
JULY 7 **16:30-17:00**	**Hirokazu Ninomiya** (Meiji University, Japan) Dynamics of Curves under the Anisotropic Area-Preserving Curvature Flow	
JULY 7 **17:00-17:30**	**Frithjof Lutscher** (University of Ottawa, Canada) Free boundary problems for the spread of ecosystem engineers	
JULY 7 **17:30-18:00**	**Zhian Wang** (The Hong Kong Polytechnic University, Hong Kong) Stability of traveling wave solutions for the singular Keller-Segel model with logistic source	
JULY 7 **18:00-18:30**	**Masaharu Taniguchi** (Okayama University, Japan) Polyhedral entire solutions in reaction-diffusion equations	
JULY 7 **18:30-19:00**	**Xiaoqiang Zhao** (Memorial University of Newfoundland, Canada) Propagation dynamics of reaction and diffusion equations in a time-heterogeneous shifting environment	

SS 13	**Hyperbolic Partial Differential Equations and Applications** Organizer(s): Yachun Li , Ronghua Pan , Yue-Jun Peng	**Room 637**

JULY 7 **16:30-17:00**	**Ronghua Pan** (Georgia Institute of Technology, USA) Rayleigh-Taylor instability and beyond
JULY 7 **17:00-17:30**	**Wancheng Sheng** (Shanghai University, Peoples Rep of China) Supersonic reacting jet flows from a three-dimensional conical nozzle
JULY 7 **17:30-18:00**	**Yi Zhu** (East China University of Science and Technology, Peoples Rep of China) Global small solutions to the 2D non-resistive compressible MHD system near an equilibrium
JULY 7 **18:00-18:30**	**Haitong Li** (Changchun University of Technology, Peoples Rep of China) Singularity Formation for Supersonic Inward Wave of Radially Symmetric Euler Equations with Damping

SS 14	**New perspectives in the qualitative study of nonlinear differential equations and dynamical systems** Organizer(s): Andrea Tellini , Guglielmo Feltrin	**Room 824**
JULY 7 **16:30-17:00**	**Alberto Boscaggin** (University of Turin, Italy) Non-smooth critical point theory: from relativistic celestial mechanics to symmetry breaking in PDEs	
JULY 7 **17:00-17:30**	**Duccio Papini** (University of Modena and Reggio Emilia, Italy) Bifurcation from periodic solutions of central force problems in the three-dimensional space	
JULY 7 **17:30-18:00**	**Pierluigi Benevieri** (University of S\~ao Paulo, Brazil) Continuation theorems for periodic systems with nonlinear time-dependent differential operators	
JULY 7 **18:00-18:30**	**Satoshi Tanaka** (Tohoku University, Japan) Morse index and symmetry-breaking bifurcation of positive solutions for the one-dimensional Liouville type equation with a step weight	
JULY 7 **18:30-19:00**	**Eduardo Mu\~noz-Hern\`andez** (Complutense University of Madrid, Spain) Global multiplicity results in a Moore-Nehari type problem	

SS 15	**Qualitative properties for solutions to nonlinear elliptic and parabolic equations** Organizer(s): Wenxiong Chen , Yahong Guo , Congming Li	**Room 316**
JULY 7 **16:30-17:00**	**Guolin Qin** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) Existence and local uniqueness of solutions to fractional equations with application to fluid dynamics	
JULY 7 **17:00-17:30**	**Phuc C Nguyen** (Louisiana State University, USA) Uniqueness of entire solutions to quasilinear equations with a sub-natural growth term and measure data	
JULY 7 **17:30-18:00**	**John Villavert** (University of Texas-Rio Grande Valley, USA) Sobolev and Hardy-Sobolev inequalities and supercritical problems	
JULY 7 **18:00-18:30**	**Yahong Guo** (Shanghai Jiao Tong University, Peoples Rep of China) CLASSIFICATION OF SOLUTIONS TO A SINGULAR LANE-EMDEN-FOWLER EQUATION IN THE HALF SPACE	

SS 17	**Analysis of chemotaxis models** Organizer(s): Johannes Lankeit , Masaaki Mizukami , Mario Fuest	**Room 426**
JULY 7 **16:30-17:00**	**Mario Fuest** (University of Kassel, Germany) Absence of critical mass phenomena in one-dimensional critical quasilinear Keller-Segel systems	
JULY 7 **17:00-17:30**	**Andrea Giorgini** (Politecnico di Milano, Italy) On a Thermodynamically Consistent Diffuse-Interface Model for Incompressible Two-Phase Flows with Chemotaxis and Mass Transport	
JULY 7 **17:30-18:00**	**Nikolai V. Chemetov** (University of Sao Paulo, Brazil) Global solvability for a stochastic hyperbolic Keller - Segel system	
JULY 7 **18:00-18:30**	**Osuke Shibata** (Tokyo University of Science, Japan) Existence and uniqueness of global weak solutions to degenerate chemotaxis systems with prevention of overcrowding	

SS 26	**Nonlinear partial differential equations and their applications** Organizer(s): Xiangqing Liu , Yuanze Wu , Fukun Zhao	Room 825
JULY 7 **16:30-17:00**	**Qianqiao Guo** (School of Mathematics and Statistics, Northwestern Polytechnical University, Peoples Rep of China) On some sharp Hardy-Littlewood-Sobolev type inequalities	
JULY 7 **17:00-17:30**	**Yeyao Hu** (Central South University, Peoples Rep of China) Eventual monotonicity of the first nonzero Steklov eigenvalue for perimeter-normalized regular N-gons	

SS 32	**Inverse Problems and Image Processing** Organizer(s): Qiyu Jin , Shengzhu Shi , Taofeng Xie	Room 442
JULY 7 **16:30-17:00**	**Yan Wang** (Chongqing Normal University, Peoples Rep of China) Pediatric Disease Diagnosis Based on Multimodal Data Fusion	
JULY 7 **17:00-17:30**	**Yi Ran** (Harbin Institute of Technology, Peoples Rep of China) A Tunable Despeckling Neural Network Stabilized via Diffusion Equation	
JULY 7 **17:30-18:00**	**Yuchao Tang** (Guangzhou University, Peoples Rep of China) A primal-dual splitting algorithm for monotone inclusions with applications	
JULY 7 **18:00-18:30**	**Fanghui Song** (Harbin Institute of Technology, Peoples Rep of China) COFM:Physics-Informed Design of Input Convex Neural Networks for Consistency Optimal Transport Flow Matching	
JULY 7 **18:30-19:00**	**Taofeng Xie** (Inner Mongolia Medical University, Peoples Rep of China) A Physical-Model and Data-Driven Diffusion Method for PET/MRI Imaging	

SS 35	**Elliptic PDEs: singularities, discontinuities, and nonlinear phenomena** Organizer(s): Umberto Guarnotta , Salvatore Angelo Marano	Room 434
JULY 7 **16:30-17:00**	**Patrick Winkert** (University of Technology Berlin, Germany) Existence results for logarithmic double phase problems with nonlinear Neumann boundary conditions	

JULY 7 **17:00-17:30**	**Jacopo Schino** (University of Warsaw, Poland) Normalised solutions to a fractional Schr\\{o}dinger equation in the strongly sublinear regime
JULY 7 **17:30-18:00**	**Caterina Sportelli** (Universidad de Granada, Spain) Nonlocal operators in divergence form and existence results for L^1 data
JULY 7 **18:00-18:30**	**Vincenzo Ambrosio** (Universita` Politecnica delle Marche, Italy) The nonlinear fractional relativistic Schrodinger-Choquard equation
JULY 7 **18:30-19:00**	**Teresa Isernia** (Universita` Politecnica delle Marche, Italy) Multiple positive and negative energy solutions for (p, q)--Kirchhoff critical equations in $\mathbb{R}^{N}$

SS 37	**Recent development of stochastic optimal control, applications and deep learning methods** Organizer(s): Omar KEBIRI	**Room 436**
JULY 7 **16:30-17:00**	**Alexander Vladimirsky** (Cornell University, USA) Optimality and Robustness in Path-Planning Under Initial Uncertainty	
JULY 7 **17:00-17:30**	**Riccardo Saporiti** (EPFL, Switzerland) Optimal Energy Management via Extended McKean-Vlasov Stochastic Control; a Lagrange Relaxation formulation	
JULY 7 **17:30-18:00**	**Khelifa Berkane** (University of BTU Cottbus-Senftenberg, Germany) Modeling Long-Memory Stochastic Dynamics in a Fractional SIRV^{3}S Epidemic System	
JULY 7 **18:00-18:30**	**Ihsan Arharas** (Linnaeus University, Sweden, Sweden) Deep Learning for Energy Market Contracts: Dynkin Game with Doubly RBSDEs	

SS 43	**Recent Advances in Inverse Problems, Imaging, and Their Applications** Organizer(s): Peijun Li , Gang Bao	**Room 437**
JULY 7 **16:30-17:00**	**Heping Dong** (Jilin University, Peoples Rep of China) Uniqueness of an inverse cavity problem for the biharmonic equation	

JULY 7 **17:00-17:30**	**Yixian Gao** (Northeast Normal University, Peoples Rep of China) Subwavelength resonances and bandgaps in high contrast elastic system
JULY 7 **17:30-18:00**	**Junxiong Jia** (Xi`an Jiaotong University, Peoples Rep of China) Nonlinear Transformation Based Infinite-Dimensional Variational Inference for Statistical Inverse Problems
JULY 7 **18:00-18:30**	**Jue Wang** (Hangzhou Normal University, Peoples Rep of China) Research on nonradiating sources of Maxwell`s equations

SS 45	**Frontiers in Topological Dynamics: Theory, Applications, and Interdisciplinary Connections** Organizer(s): Guohua Zhang , Wen Huang , Song Shao	**Room 440**
JULY 7 **16:30-17:00**	**Jinqiao Duan** (Great Bay University, Peoples Rep of China) A Geometric Framework for Stochastic Dynamics on Manifolds of Probability Densities	
JULY 7 **17:00-17:30**	**Lian Duan** (Anhui University of Science and Technology, Peoples Rep of China) Threshold dynamics of two diffusive epidemic models with heterogeneity parameters	
JULY 7 **17:30-18:00**	**Xiaopeng Chen** (Shantou UNiversity, Peoples Rep of China) Invariant measure for infinite Iterated Function Systems	

SS 58	**New developments in celestial mechanics and related topics** Organizer(s): Guowei Yu , Kuo-Chang Chen , Mitsuru Shibayama	**Room 827**
JULY 7 **16:30-17:00**	**Jianlu ZHANG** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) On the vanishing viscosity limit of Hamilton-Jacobi equations.	
JULY 7 **17:00-17:30**	**Lei Zhang** (Dalian University of Technology, Peoples Rep of China) A KAM Theorem for the Anisotropic Heisenberg Chain with Quasi-Periodic Coupling	
JULY 7 **17:30-18:00**	**Wentian Kuang** (Great Bay University, Peoples Rep of China) Birkhoff sections for integrable flows on 3-manifolds	

JULY 7 **18:00-18:30**	**Ku-Jung Hsu** (School of Mathematical Sciences Huaqiao University, Peoples Rep of China) On the Sundman-Sperling estimates for the restricted one-center-two-body problem

SS 66	**Geometric insights in Partial Differential Equations: advances and challenges** Organizer(s): Luca Vilasi , Giovanni Molica Bisci , Vicentiu Radulescu	**Room 301**
JULY 7 **16:30-17:00**	**Kanishka Perera** (Florida Institute of Technology, USA) Scaling-based existence and multiplicity results for mixed fractional p-Laplacian equations in R^N	
JULY 7 **17:00-17:30**	**Giuseppe G DEVILLANOVA** (Politecnico di Bari, Italy) SYMMETRY CONSTRAINTS AND VARIATIONAL METHODS FOR SCALAR FIELD EQUATIONS ON UNBOUNDED DOMAIN	
JULY 7 **17:30-18:00**	**Paolo Malanchini** (Universita` degli Studi di Milano - Bicocca, Italy) Existence and decay for a Grushin problem in $\mathbb{R}^N$ with singular, convective, critical reaction	
JULY 7 **18:00-18:30**	**Luca Vilasi** (University of Messina, Italy) On a weighted Brezis-Nirenberg-type fractional problem with mixed boundary conditions	

SS 68	**Optimal control theory and applications** Organizer(s): Ellina Grigorieva , Monica Motta , Carlo Mariconda	**Room 311**
JULY 7 **16:30-17:00**	**Monica Motta** (Department of Mathematics, University of Padova, Italy) Minimizers that are not impulsive minimizers and higher order abnormality	
JULY 7 **17:00-17:30**	**Rampazzo Franco** (University of Padova, Italy) Set-valued Lie brackets and non-smooth controllability	
JULY 7 **17:30-18:00**	**Peter Wolenski** (Louisiana State University, USA) Self-Dual Approximations in Fully Convex Control Problems	
JULY 7 **18:00-18:30**	**Manika Bag** (Indian Institute of Science Education and Research, Thiruvananthapuram, India) Optimal boundary control for the Cahn-Hilliard-Navier-Stokes Equations	

SS 70	**Progress and Challenges in Nonlocal and Nonhomogeneous PDEs** Organizer(s): Anouar Bahrouni , Ariel Salort	**Room 421**
JULY 7 **16:30-17:00**	**Carlo Alberto Antonini** (University of Milan (UniMi), Italy) Regularity results and maximum principles for quasilinear operators of mixed local-nonlocal type	
JULY 7 **17:00-17:30**	**Cristina Br\"andle-Cerqueira** (U. Carlos III de Madrid, Spain) ON UNBOUNDED SOLUTIONS OF ERGODIC PROBLEMS FOR NON-LOCAL HAMILTON-JACOBI EQUATIONS	
JULY 7 **17:30-18:00**	**Rakesh Arora** (Indian Institute of Technology, Varanasi, India) Irregular double-phase evolution problem: Existence and Global regularity	
JULY 7 **18:00-18:30**	**Giampiero Palatucci** (University of Parma, Italy) Periodically perforated energies in the nonlocal setting	
JULY 7 **18:30-19:00**	**Minhyun Kim** (Hanyang University, Korea) Wiener criterion for nonlocal and nonhomogeneous equations	

SS 77	**Singularity and regularity in nonlinear PDEs** Organizer(s): Berikbol Torebek , Matteo Muratori	**Room 432**
JULY 7 **16:30-17:00**	**Filomena Feo** (University of Naples Parthenope, Italy) The asymptotic behaviour for solutions to an anisotropic diffusion equation in the slow diffusion regime	
JULY 7 **17:00-17:30**	**Soon-Yeong Chung** (Sogang University, Seoul, Korea) Fujita`s critical exponent for Fractional Reaction-Diffusion Systems on $\\mathbb{R}^{N}$	
JULY 7 **17:30-18:00**	**Antonio Esposito** (University of L'Aquila, Italy) Competing effects in fractional thin film equations	
JULY 7 **18:00-18:30**	**Averkios Averkiou** (University of Bath, England) Helical vortex structures with compactly supported cross-sectional vorticity for the 3D incompressible Euler equations	

JULY 7 **18:30-19:00**	**Tej eddine Ghoul** (New York university Abu Dhabi, United Arab Emirates) Collision Bubbles for the Keller-Segel Model

SS 82	**Dissipative Systems and Applications** Organizer(s): Lourdes Tello , Wenxian Shen	**Room 427**
JULY 7 **16:30-17:00**	**Peter Takac** (University of Rostock, Germany) On the Uniqueness and Multiplicity of positive solutions to an elliptic spectral problem with concave and convex nonlinearity	
JULY 7 **17:00-17:30**	**Maria Michaela MM Porzio** (Sapienza University of Rome, Italy) Local or non local properties of the solutions of some elliptic and parabolic PDE`s	
JULY 7 **17:30-18:00**	**Juan Francisco JF Padial** (Depto Matem\`atica Aplicada. Universidad Polit\`ecnica de Madrid, Spain) Existence Results for Elliptic and Parabolic Bernoulli Free Boundary Problems with Radon Measure Data	
JULY 7 **18:00-18:30**	**Ruben De La Cruz** (Universidad Politecnica de Madrid, Spain) A two-layer heterogeneous green roof mathematical model.	
JULY 7 **18:30-19:00**	**Lourdes Tello** (Universidad Politecnica de Madrid, Spain) On a Global Climate Model with Nonlinear Diffusion and non-monotone Coalbedo.	

SS 83	**New Aspects of Mathematical Modeling and Analysis in Materials Science** Organizer(s): Toyohiko Aiki , Adrian Muntean	**Room 812**
JULY 7 **16:30-17:00**	**Maria Gokieli** (Cardinal Stefan Wyszynski University in Warsaw, Poland) Quasi-variational inequality approach to modeling superconductivity	
JULY 7 **17:00-17:30**	**Naotaka Ukai** (Department of Mathematics and Informatics, Graduate School of Science and Engineering, Chiba University, Japan) Parabolic gradient flows of energy functionals with state dependent coefficients	
JULY 7 **17:30-18:00**	**Daisuke Kubota** (Graduate School of Science and Engineering, Chiba University, Japan) Asymptotic behavior of inhomogeneous damped total variation flows with time-dependent coefficients	

JULY 7 **18:00-18:30**	**Yoshiho Akagawa** (Kyoto University of Education, Japan) Quasi-variational inequality for elastoplasticity with nonlinear kinematic hardening

SS 90	**NONLINEAR ELLIPTIC DIFFERENTIAL EQUATIONS AND APPLICATIONS** Organizer(s): Antonia Chinnì , Maria-Magdalena Boureanu , Beatrice Di Bella	**Room 438**
JULY 7 **16:30-17:00**	**Laura Angeloni** (Department of Mathematics and Computer Science, University of Perugia, Italy) Polynomial-type operators that preserve logarithmic functions	
JULY 7 **17:00-17:30**	**Alejandro Velez-Santiago** (University of Puerto Rico - Rio Piedras Campus, USA) Quasi-linear fractional Wentzell problems	
JULY 7 **17:30-18:00**	**Giuseppina G. Barletta** (University of Reggio Calabria, Italy) On the sub and supersolution method for nonlinear elliptic equations with a convective term.	

SS 91	**Geometric evolution problems** Organizer(s): James McCoy , Yong Wei	**Room 822**
JULY 7 **16:30-17:00**	**Yann Bernard** (Monash University, Australia) Analysis of Critical Points of Conformally Invariant Curvature Energies in 4d	
JULY 7 **17:00-17:30**	**Yingxiang Hu** (Beihang University, Peoples Rep of China) Capillary Christoffel-Minkowski problem	
JULY 7 **17:30-18:00**	**Simon Blatt** (University Salzburg, Austria) Degenerate and Singular Fractional Equations and Optimally Embedded Submanifolds	

SS 93	**Local and nonlocal elliptic boundary value problems** Organizer(s): Pasquale Candito , Kanishka Perera , Giuseppe Failla	**Room 739**
JULY 7 **16:30-17:00**	**Antonio Iannizzotto** (University of Cagliari, Italy) Existence and regularity results for nonlinear fractional order equations	

JULY 7 **17:00-17:30**	**Tuhina Mukherjee** (Indian Institute of Technology Jodhpur, India) On elliptic problems involving local-nonlocal operator under mixed boundary conditions
JULY 7 **17:30-18:00**	**Patrick Winkert** (University of Technology Berlin, Germany) Morse-theoretic approach for logarithmic double phase problems
JULY 7 **18:00-18:30**	**Maria-Magdalena Boureanu** (University of Craiova, Romania) On the homogenization of a class of variable exponent problems
JULY 7 **18:30-19:00**	**Leszek Gasinski** (University of the National Education Commission, Poland) Multiple positive solutions for quasilinear nonlocal problem via topological, variational and set-valued methods

SS 94	**Dynamics and Variational Methods of Quasi-Hamiltonian Systems** Organizer(s): Xifeng Su , Jianlu Zhang	**Room 312**
JULY 7 **16:30-17:00**	**Shengqing Hu** (Shenzhen SMU-BIT University, Peoples Rep of China) Long time stability of Hamiltonian derivative nonlinear Schr\odinger equations	
JULY 7 **17:00-17:30**	**Qinbo Chen** (Nanjing University, Peoples Rep of China) On selection problems for second-order Hamilton-Jacobi equations	
JULY 7 **17:30-18:00**	**Kai Zhao** (Tongji university, Peoples Rep of China) Periodic, Quasi-Periodic and Almost Periodic Solutions of the Hamilton-Jacobi Equation	
JULY 7 **18:00-18:30**	**Gengyu Liu** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) Comparison principle of general Hamilton-Jacobi equations and applications	

SS 96	**Recent Trends in Navier-Stokes Equations, Euler Equations, and Related Problems** Organizer(s): Sarka Necasova , Reimund Rautmann , Werner Varnhorn	**Room 428**
JULY 7 **16:30-17:00**	**Paolo Maremonti** (Universiit\`{a} degli Studi della Campania ``L. Vanvitelli``, Italy) Dynamic interaction between a rigid-body and an incompressible viscous fluid: some new results for the IBVP	

JULY 7 **17:00-17:30**	**Ondrej Kreml** (Institute of Mathematics, Czech Academy of Sciences, Czech Rep) Time-periodic solutions to incompressible flows in moving domains
JULY 7 **17:30-18:00**	**Vaclav Macha** (Institute of Mathematics, Czech Academy of Sciences, Czech Rep) On time-periodic solutions to an interaction problem between compressible viscous fluids and viscoelastic beams
JULY 7 **18:00-18:30**	**Kuntal Bhandari** (Institute of Mathematics of the Czech Academy of Sciences, Czech Rep) Inviscid incompressible limit of the compressible Navier-Stokes system with a moving rigid body

SS 98	**Control, Inverse problems and Long time dynamics of Evolutionary Systems** Organizer(s): LOUIS TEBOU , Marcelo CAVALCANTI , Valeria DOMINGOS CAVALCANTI	**Room 314**
JULY 7 **16:30-17:00**	**Cristina Pignotti** (University of L`Aquila, Italy) Energy decay for Korteweg-de Vries-Burgers type equations with delay feedback	
JULY 7 **17:00-17:30**	**Victor Hugo Gonzalez Martinez** (Universidade Federal de Pernambuco, Brazil) Long-time dynamics of KdV-KdV systems	
JULY 7 **17:30-18:00**	**GENNI FRAGNELLI** (University of Siena, Italy) Stability for non-autonomous degenerate wave equations.	
JULY 7 **18:00-18:30**	**Valeria Domingos Cavalcanti** (Universidade Estadual de Maringa - State University of Maringa, Brazil) Asymptotic behaviour of the viscoelastic wave equation	

SS 99	**Emerging Trends in Analysis and Control of PDEs** Organizer(s): Diego A. Souza , Anna Doubova , Kévin Le Balc`h	**Room 425**
JULY 7 **16:30-17:00**	**Cristina Urbani** (Universitas Mercatorum, Italy) Small-Time Approximate and Exact Controllability for Nonlinear Parabolic Equations with Bilinear Controls	
JULY 7 **17:00-17:30**	**Mohammad Akil** (Universite Polytechnique Hauts de France, France) Control and Energy Decay in Wave Networks with N-Inertial Interfaces.	

JULY 7 **17:30-18:00**	**Veronica Danesi** (University of Rome Tor Vergata, Italy) Reconstruction of degeneracy region and power for parabolic equations and systems
JULY 7 **18:00-18:30**	**Nazim Kacher** (Sorbonne Universite, France) Fredholm backstepping for self-adjoint operators and applications to the rapid stabilization of parabolic and fractional parabolic equations in arbitrary dimensions

SS 103	**The integrability and bifurcation theory of dynamical systems and its applications** Organizer(s): Dongmei Xiao , Valerij Romanovskij , Yilei Tang	**Room 638**
JULY 7 **16:30-17:00**	**Bo Huang** (Beihang University, Peoples Rep of China) Elimination Methods for Computing Invariant Algebraic Surfaces of Dynamical Systems	
JULY 7 **17:00-17:30**	**Shi-Liang Wu** (xidian university, Peoples Rep of China) Long-time behavior for some reaction-diffusion systems	
JULY 7 **17:30-18:00**	**Yilei Tang** (Shanghai Jiao Tong University, Peoples Rep of China) Research on Center-Related Problems of Generalized Kukles Systems	
JULY 7 **18:00-18:30**	**Dongmei Xiao** (Shanghai Jiao Tong University, Peoples Rep of China) The stability and bifurcation of ecosystems within a defined energy landscape	
JULY 7 **18:30-19:00**	**Maja Resman** (University of Zagreb, Croatia) Rigidity of saddle loops	

SS 109	**Cluster Algebras, Hall Algebras and Their Applications** Organizer(s): Xueqing Chen , Fang Li , Min Huang	**Room 204**
JULY 7 **16:30-17:00**	**Jie Xiao** (Beijing Normal University, Peoples Rep of China) Root categories and Lie groups	
JULY 7 **17:00-17:30**	**Frantisek Marko** (The Pennsylvania State University, USA) Presentation of rational Schur algebras	
JULY 7 **17:30-18:00**	**Changjian FU** (Sichuan University, Peoples Rep of China) Representations of bound quivers over the virtual field and their Ringel-Hall algebras	

JULY 7 **18:00-18:30**	**Ming Lu** (Sichuan University, Peoples Rep of China) Exceptional curves and quantum loop algebras
JULY 7 **18:30-19:00**	**JUN HU** (Beijing Institute of Technology, Peoples Rep of China) Ring theoretic approach to double centralizer property and applications

SS 110	**Stochastic Dynamics** Organizer(s): Beom-Seok Han , Jae-Hwan Choi	**Room 738**
JULY 7 **16:30-17:00**	**Ildoo Kim** (Korea university, Korea) AN EXISTENCE AND UNIQUENESS THEORY TO STOCHASTIC PARTIAL DIFFERENTIAL EQUATIONS WITH PSEUDO-DIFFERENTIAL OPERATORS	
JULY 7 **17:00-17:30**	**Kyeong Hun Kim** (Korea University, Korea) The Dirichlet problem for stochastic partial differential equations (SPDEs) with nonlocal operators in $C^{1,\sigma}$ open sets	
JULY 7 **17:30-18:00**	**Junhee Ryu** (KIAS, Korea) L_p-estimates for nonlocal equations with general L\`evy measures	
JULY 7 **18:00-18:30**	**Jaeyunb Yi** (Korea Institute for Advanced Study, Korea) Instantaneous shrinking of the support of solutions to stochastic PDEs.	

SS 115	**Topology and Dynamics in Data** Organizer(s): Cerene Rathilal , Maria Vivien Visaya	**Room 740**
JULY 7 **16:30-17:00**	**Maria Vivien Visaya** (University of Johannesburg, So Africa) Topological signatures of admixture in genomic data	
JULY 7 **17:00-17:30**	**Paul Samuel Ignacio** (University of the Philippines Baguio, Philippines) Binding Closed Ties: Ensuring Topological Fidelity of Delay-Embedded Attractors via Redundant KNN Coverage	
JULY 7 **17:30-18:00**	**Chuan-Shen Hu** (National University of Kaohsiung, Taiwan) Sheaf-Theoretic Models for Signal Interaction on Complex Networks	
JULY 7 **18:00-18:30**	**Baris Coskunuzer** (University of Texas at Dallas, USA) Temporal Graph Classification with Topological Machine Learning	

JULY 7 **18:30-19:00**	**Cerene Rathilal** (University of KwaZulu-Natal (South Africa), So Africa) On Mapper - a TDA approach to visualising data

SS 122	**Topological Data Analysis Theory, Algorithms, and Applications** Organizer(s): Firas Khasawneh	**Room 538**
JULY 7 **16:30-17:00**	**Paul Schrader** (Air Force Research Laboratory (AFRL), USA) Autonomous Applications of Topologically-Informed Data Driven Analytics & Fusion	
JULY 7 **17:00-17:30**	**Sarah Tymochko** (College of the Holy Cross, USA) Using Persistent Homology to Analyze Access to Heterogeneous-Quality Resources and Heterogeneous-Severity Nuisances	
JULY 7 **17:30-18:00**	**Ryu Hayakawa** (Kyoto University, Japan) Quantum computing and persistence in topological data analysis	
JULY 7 **18:00-18:30**	**Davide Guzzetti** (Auburn University, USA) The Shape of Orbits in the Circular Restricted Three-Body Problem: Opportunities for Topological Data Analysis	
JULY 7 **18:30-19:00**	**Ling Zhou** (Duke University, USA) Topological optimization with birth and death cochains	

SS 123	**Nonlinear phenomena in elliptic and parabolic equations** Organizer(s): Futoshi Takahashi , Bernhard Ruf , Daisuke Naimen	**Room 619**
JULY 7 **16:30-17:00**	**Masato Hashizume** (The University of Osaka, Japan) Vanishing phenomena for Trudinger-Moser Inequalities with a scale parameter	

SS 126	**Defects, Microstructures, and Failure: Multiscale Variational Models** Organizer(s): Leonard Kreutz , Konstantinos Zemas	**Room 445**
JULY 7 **16:30-17:00**	**Emanuele Spadaro** (University of Rome La Sapienza, Italy) Energy of semi-coherent interfaces	

JULY 7 **17:00-17:30**	**Giacomo Del Nin** (Max Planck Institute Leipzig, Germany) Gamma-convergence of the square sticky disk to the octagonal crystalline perimeter
JULY 7 **17:30-18:00**	**Vito Crismale** (Sapienza Universita di Roma, Italy) Phase-field approximation of sharp-interface energies accounting for lattice symmetry
JULY 7 **18:00-18:30**	**Marco Bresciani** (Johannes Kepler University Linz, Austria) Curvature-dependent cavitation energies
JULY 7 **18:30-19:00**	**Maicol Caponi** (University of L`Aquila, Italy) A fractional approach to strain-gradient theory for plasticity: beyond core-radius of discrete dislocations

SS 139	**Recent advances in modeling and simulation of interfacial dynamics** Organizer(s): Zhen Zhang , Shixin Xu , Yu-Hau Tseng	**Room 642**
JULY 7 **17:00-17:30**	**Weiqing Ren** (National University of Singapore, Singapore) Moving contact lines on elastic sheets	
JULY 7 **17:30-18:00**	**Xianmin XU** (Chinese Academy of Sciences, Peoples Rep of China) Macroscopic modeling and simulations for thin film with moving contact lines	
JULY 7 **18:00-18:30**	**Yuzhe Qin** (Shanxi University, Peoples Rep of China) Mathematical modeling, analysis and numerical investigation of ion active transport with free boundaries	
JULY 7 **18:30-19:00**	**Haicheng Zhang** (Heidelberg University, Germany) Multilevel Schwarz Methods for the Coupled Stokes-Darcy Problem	

SS 150	**Water Waves and Beyond** Organizer(s): Jörg Weber , Dag Nilsson	**Room 639**
JULY 7 **16:30-17:00**	**Evgeniy Lokharu** (Lund University, Sweden) Slope bounds for water waves	
JULY 7 **17:00-17:30**	**Giang To** (Lund University, Sweden) Stratified Large-Amplitude Steady Periodic Water Waves with General Density	

JULY 7 **17:30-18:00**	**Bastian Hilder** (Technical University of Munich, Germany) Global bifurcation of doubly periodic water waves in Beltrami flows
JULY 7 **18:00-18:30**	**Stefano Boehmer** (Lund University, Sweden) Symmetric periodic and rotational three-dimensional waves in water of infinite depth

SS 154	**Optimization methods and numerical methods for nonlinear PDEs** Organizer(s): Ruchi Guo , Jun Zou , Long Chen	**Room 641**
JULY 7 **16:30-17:00**	**Eun-Jae Park** (Yonsei University, Korea) Adaptive multilevel Newton methods for nonlinear PDEs	
JULY 7 **17:00-17:30**	**Mi Young Kim** (Inha University, Korea) An edgewise iterative scheme for the discontinuous Galerkin method with Lagrange multiplier for Poisson`s equation	
JULY 7 **17:30-18:00**	**Wenjun Ying** (Shanghai Jiao Tong University, Peoples Rep of China) A Cartesian grid method for acoustic scattering	
JULY 7 **18:00-18:30**	**Fei Wang** (Xi`an Jiaotong University, Peoples Rep of China) Randomized Neural Networks for PDEs with Applications in MHD	
JULY 7 **18:30-19:00**	**ZHAONAN DONG** (INRIA Paris, France) A posteriori error analysis and adaptivity of a space-time finite element method for the wave equation in second order formulation	

SS 162	**Computer-Assisted Proofs in Dynamical Systems** Organizer(s): Akitoshi Takayasu , Jonathan Jaquette	**Room 618**
JULY 7 **16:30-17:00**	**Florent BREHARD** (CRIStAL, CNRS, Universite de Lille, France) Validated Numerics Guided by Symbolic Computations: A Hybrid Newton-Puiseux Algorithm	
JULY 7 **17:00-17:30**	**Ryoga Iwanami** (Waseda University, Japan) Efficient implementation of affine arithmetic for rigorous integration of delay differential equations	

JULY 7 **17:30-18:00**	**Robert Szczelina** (Jagiellonian University, Poland) Symbolic dynamics in Pseudospectral projection of Delay Differential Equations
JULY 7 **18:00-18:30**	**Thomas Wanner** (George Mason University, USA) Computer-assisted bifurcation point validation
JULY 7 **18:30-19:00**	**Akitoshi Takayasu** (University of Tsukuba, Japan) Multi-stepping scheme for rigorous integration of semilinear parabolic PDEs

SS 173	**Mathematical and Numerical Analysis on Nonlinear PDEs** Organizer(s): Hiroyuki Takamura , Ning-An Lai , Takiko Sasaki	**Room 430**
JULY 7 **16:30-17:00**	**Makoto Nakamura** (The University of Osaka, Japan) Blowing-up solutions of Klein-Gordon equations with gauge variant semilinear terms in FLRW spacetimes	
JULY 7 **17:00-17:30**	**Shijie Dong** (Southern University of Science and Technology, Peoples Rep of China) Scattering and energy cascade for the 2D Klein-Gordon-Zakharov	
JULY 7 **17:30-18:00**	**Atsuhide Ishida** (Tokyo University of Science, Japan) On inverse scattering for time-decaying harmonic and repulsive potentials	
JULY 7 **18:00-18:30**	**Sandra Lucente** (Dipartimento Interuniversitario di Fisica, Bari University, Italy) Wave type equations with perturbed derivatives	
JULY 7 **18:30-19:00**	**Ryunosuke Kusaba** (Tohoku University, Japan) Asymptotic expansions of global solutions to the convection-diffusion equation with critical dissipation	

SS 178	**Nonlinear Evolution Equations and Related Topics** Organizer(s): Goro Akagi , Michinori Ishiwata , Mitsuharu Otani	**Room 640**
JULY 7 **16:30-17:00**	**Nilay Mutlubas** (Sabanci University, Turkey) Cauchy Problem for a Cubic Novikov Equation	

JULY 7 **17:00-17:30**	**Tatsuya Watanabe** (Kyoto Sangyo University, Japan) Ground state solution for the nonlinear Schr\odinger-Poisson system and its link with the Gagliardo-Nirenberg-Coulomb inequality
JULY 7 **17:30-18:00**	**Tomoyuki Oka** (Department of Intelligent Mechanical Engineering/Fukuoka Institute of Technology, Japan) Two-material optimal design problem for the heat equation
JULY 7 **18:00-18:30**	**Yuya Tanaka** (Department of Mathematical Sciences, Kwansei Gakuin University, Japan) Long-term behavior in a model for tuberculosis granuloma formation
JULY 7 **18:30-19:00**	**Yutaro Chiyo** (Tokyo University of Science, Japan) Global existence and boundedness in a quasilinear attraction-repulsion chemotaxis system
JULY 7	**Yoshihiro Ueda** (Kobe University, Japan) Asymptotic stability of the composite wave for the generalized Burgers equation

SS 180	**Individual and Collective Cells Dynamics in Medicine and Biology** Organizer(s): Dumitru Trucu , Raluca Eftimie , Yangjin Kim	**Room 433**
JULY 7 **16:30-17:00**	**Yangjin Kim** (Konkuk University/Brown University, Korea) Mathematical modeling of glioblastoma dynamics and development of anti-cancer therapy in brain: Trojan neutrophils	
JULY 7 **17:00-17:30**	**GEORGIOS LOLAS** (INCELLIA, Greece) An Age-Structured and Renewal Perspective on Metastatic Growth	
JULY 7 **17:30-18:00**	**Nishith NM Mohan** (RPTU Kaiserslautern-Landau, Germany) A cell-based mathematical model for meniscus tissue regeneration	
JULY 7 **18:00-18:30**	**Tracy Stepien** (University of Florida, USA) Modeling Tumor-Immune Interactions in the Glioblastoma Microenvironment	
JULY 7 **18:30-19:00**	**Darae Jeong** (Kangwon National University, Korea) Modeling Collective Pattern Formation in Biological Reaction-Diffusion Systems Using Moving Mesh Methods	

SS 181	**Dirichlet Forms and Related Topics** Organizer(s): Toshihiro Uemura , Panki Kim , Daniel Lenz	**Room 821**
JULY 7 **16:30-17:00**	**Zoran Vondra\v{c}ek** (University of Zagreb and SOIS-FT, Croatia) Dirichlet Forms with Jump Kernels Decaying at the Boundary	
JULY 7 **17:00-17:30**	**Toshihiro Uemura** (Department of Mathematics, Kansai University, Japan) Homogenization of Non-Symmetric Pure Jump Processes on a Bounded Domain	
JULY 7 **17:30-18:00**	**Marcel Schmidt** (Friedrich-Schiller-University Jena, Germany) Subharmonic functions and the BMS conjecture for regular Dirichlet forms	
JULY 7 **18:00-18:30**	**Kazuhiro Kuwae** (Fukuoka University/Department of Applied Mathematics, Japan) A remark on subharmonicity for symmetric Dirichlet forms	
JULY 7 **18:30-19:00**	**Ali BenAmor** (University of Sousse, high school for transport and logistics, Tunisia) Feller property and convergence for semi-groups of time-changed processes	
JULY 7	**Krzysztof Bogdan** (Wroclaw University of Science and Technology, Poland) Fractional Laplacian in Angular Momentum Channels	

SS 182	**Recent developments on mathematical finance, stochastic control and related topics** Organizer(s): Zhenhua Wang , Zhou Zhou , Jingjie Zhang	**Room 620**
JULY 7 **16:30-17:00**	**Xin Zhang** (NYU, USA) Optimization of win martingales	
JULY 7 **17:00-17:30**	**Fengyi Yuan** (The Chinese University of Hong Kong (Shenzhen), Peoples Rep of China) Mean-field games with rough common noise: the compactification approach	
JULY 7 **17:30-18:00**	**Jiacheng Zhang** (the Chinese University of Hong Kong, Hong Kong) Major-Minor Mean Field Game of Stopping: An Entropy Regularization Approach	
JULY 7 **18:00-18:30**	**Zimu Zhu** (Hong Kong University of Science and Technology (Guangzhou), Peoples Rep of China) DeepPAAC: A New Deep Galerkin Method for Principal-Agent Problems	

SS 188	**Dynamics of interacting optical solitons** Organizer(s): Omri Gat	Room 823
JULY 7 **16:30-17:00**	**Lukasz A Sterczewski** (Wroclaw Univeristy of Science and Technology, Poland) Two-photon dual-comb imaging of soliton dynamics	
JULY 7 **17:00-17:30**	**Wenbin He** (Shanghai Institute of Optics and Fine Mechanics, CAS, Peoples Rep of China) Laser soliton interactions through optoacoustic effects in photonic crystal fibers	
JULY 7 **17:30-18:00**	**Sonia Boscolo** (VPIphotonics GmbH & Aston Institute of Photonic Technologies, Germany) Nonlinear synchronisation and routes to complexity in breathing-soliton lasers	

SS 189	**Analysis and applications of elliptic and parabolic equations** Organizer(s): Lihe Wang , Dongsheng Li , Congming Li	Room 826
JULY 7 **16:30-17:00**	**Lihe Wang** (University of Iowa, USA) Partial Regularity for Navier-Stokes equations	
JULY 7 **17:00-17:30**	**Rui Yang** (Central South University, Peoples Rep of China) Regularity for ω-minimizers of general p-Laplacian type functionals with matrix weights	
JULY 7 **17:30-18:00**	**Shulin Zhou** (Peking University, Peoples Rep of China) Mathematical analysis of a tumor invasion model	

CS 1	**ODEs and Applications**	Room 634
JULY 7 **16:30-16:50**	**Zhanar Artykbayeva** (Institute of Mathematics and Mathematical Modeling, Almaty, Kazakhstan) Self-adjoint differential-algebraic operators with boundary terms	
JULY 7 **16:50-17:10**	**Natalia Dilna** (Institute of Mathematics of the Slovak Academy of Sciences, Slovak Rep) Ulam-Hyers-Rassias stability of Caputo fractional differential equations with deviating arguments on unbounded intervals.	

JULY 7 **17:10-17:30**	**Aleksei Kazakov** (National Research University Higher School of Economics, Russia) Robustly chaotic dynamics in networks of phase oscillators
JULY 7 **17:30-17:50**	**Fuzheng Ma** (School of Mathematics, Southeast University, Peoples Rep of China) Bounded Non-response solutions with Liouvillean forced frequencies for nonlinear Schr\odinger equations on $\mathbb{T}$
JULY 7 **17:50-18:10**	**ANDREI SULTAN** (Moldova State University, Vladimir Andrunachievici Institute of mathematics, Moldova) Finite-dimensional Approximation of Attractors
JULY 7 **18:10-18:30**	**Bhawna Verma** (Indian Institute of Technology Mandi, India) Controllability and Hyers-Ulam Stability Analysis of Fractional q-Difference System
JULY 7 **18:30-18:50**	**Chenwan Zhou** (New York University Shanghai, Peoples Rep of China) Stochastic bifurcations of a three-dimensional stochastic Kolmogorov system

CS 2	**PDEs and Applications**	**Room 635**
JULY 7 **16:30-16:50**	**Nayeon Kim** (KAIST, Korea) Asymptotic Stability towards superposition of rarefaction and shock of the 1D Jin-Xin relaxation model for the p-system	
JULY 7 **16:50-17:10**	**Tomasz W. Dlotko** (Institute of Mathematics, University of Silesia in Katowice, Poland) On damped fractional Navier-Stokes equations	
JULY 7 **17:10-17:30**	**Urvashi Joshi** (IIT Roorkee, India) Self-Similarity and Physics-Informed Neural Networks for Spherical Shock Waves in a Non-Ideal Radiating Gas	
JULY 7 **17:30-17:50**	**Karuppasamy Murugan** (Central University of Tamil Nadu, India) Trotto Kato Approximation of Diffusion Transport Equation with Dynamical Boundary Conditions	
JULY 7 **17:50-18:10**	**Chuanlong Sun** (Southeast University, Peoples Rep of China) Isometric Study of Wasserstein Spaces- Bounded Intervals	

JULY 7 **18:10-18:30**	**Qi Xin** (The Chinese University of Hong Kong, Shenzhen, and SICIAM, SRIBD, Peoples Rep of China) On the inf-sup Degradation in Dense Microfluidic Arrays and a Robust Preconditioning Strategy for Stokes Flow
JULY 7 **18:30-18:50**	**UNIVERSIDAD NACIONAL MAYOR DE SAN MARCOS** (Universidad Nacional Mayor de San Marcos, Peru) Ground state solutions for elliptic equations involving the biharmonic operator

Parallel Session 6 :: Wednesday, 07/08, 8:00-10:00

SS 1	**Recent Advances in Brezis-Nirenberg Problem** Organizer(s): Juncheng Wei , Yuanze Wu	**Room 311**
JULY 8 **8:00-8:30**	**Paul Laurain** (University Gustave Eiffel, France) Multi-Bubble Analysis for the Brezis-Nirenberg Problem	
JULY 8 **8:30-9:00**	**Tobias K\"onig** (Goethe University Frankfurt, Germany) The Brezis-Peletier conjecture for one and several bubbles: blow-up analysis in dimension three	
JULY 8 **9:00-9:30**	**Giulio Ciraolo** (University of Milan, Italy) Classification results, rigidity theorems and semilinear pdes on Riemannian manifolds: a P-Function approach	
JULY 8 **9:30-10:00**	**Gianmaria Verzini** (Politecnico di Milano, Italy) Normalized solutions to Sobolev critical Schr\odinger equations	

SS 11	**Stochastic Partial Differential Equations** Organizer(s): Benjamin Gess , Michael Röckner	**Room 438**
JULY 8 **8:00-8:30**	**Annie MILLET** (University Paris 1 Pantheon Sorbonne, France) On modified stochastic Boussinesq-Benard equations in dimension 3	
JULY 8 **8:30-9:00**	**Nikolay Barashkov** (Max Planck Institute for Mathematics in the Sciences, Germany) On spectral gaps for Stochastic Wave equations.	

JULY 8 **9:00-9:30**	**Marco Rehmeier** (TU Berlin, Germany) The Leibenson equation and its associated nonlinear Markov process
JULY 8 **9:30-10:00**	**Sebastian Grube** (Bielefeld University, Germany) The Leibenson process as a strong solution to its associated McKean--Vlasov SDE

SS 13	**Hyperbolic Partial Differential Equations and Applications** Organizer(s): Yachun Li , Ronghua Pan , Yue-Jun Peng	**Room 637**
JULY 8 **8:00-8:30**	**Yaguang Wang** (Shanghai Jiao Tong University, Peoples Rep of China) Study of fluid equations in non-smooth domains	
JULY 8 **8:30-9:00**	**Jianli Liu** (Shanghai university, Peoples Rep of China) Formation of singularities for the relativistic membrane equation with radial symmetry	
JULY 8 **9:00-9:30**	**Shang Zhaoyang** (Shanghai Lixin University of Accounting and Finance, Peoples Rep of China) Global existence of large solutions to the 3D full compressible Navier-Stokes equations with temperature-dependent coefficients and vacuum	
JULY 8 **9:30-10:00**	**Yue Cao** (East China University of Science and Technology, Peoples Rep of China) Local-in-time well-posedness for the regular solution to the 2D full compressible Navier-Stokes equations with degenerate viscosities and heat conductivity	

SS 14	**New perspectives in the qualitative study of nonlinear differential equations and dynamical systems** Organizer(s): Andrea Tellini , Guglielmo Feltrin	**Room 824**
JULY 8 **8:30-9:00**	**Alberto Cagnetta** (Universit\`a degli Studi di Udine, Italy) Existence of a periodic solution for planar systems with possible finite-time blow-up	
JULY 8 **9:00-9:30**	**Alejandro Sahuquillo** (Universidad Complutense de Madrid, Spain) Large positive solutions for a class of 1-D diffusive logistic problems with general boundary conditions	
JULY 8 **9:30-10:00**	**Ricardo Ziegele** (Universit\\`{a} degli studi di Torino, Italy) Nodal solutions for the Minkowski mean curvature operator: multiplicity and large-$\ \mu$ asymptotics	

SS 15	**Qualitative properties for solutions to nonlinear elliptic and parabolic equations** Organizer(s): Wenxiong Chen , Yahong Guo , Congming Li	Room 316
JULY 8 **8:00-8:30**	**Lihe Wang** (University of Iowa, USA) Geometric Approach to DeGorgi Nash regularity theorem	
JULY 8 **8:30-9:00**	**Sun-Sig Byun** (Seoul National University, Korea) Regularity for Local-Nonlocal Elliptic Equations with (p,q)-Growth and Matrix Weights	
JULY 8 **9:00-9:30**	**Tong Li** (University of Iowa, USA) Global existence and zero relaxation limit for a hyperbolic system arising in traffic flow with large data	
JULY 8 **9:30-10:00**	**Jinping Zhuge** (Morningside Center of Mathematics, Chinese Academy of Sciences, Peoples Rep of China) Optimal convergence rates and uniform regularity for multiscale elliptic homogenization	

SS 17	**Analysis of chemotaxis models** Organizer(s): Johannes Lankeit , Masaaki Mizukami , Mario Fuest	Room 426
JULY 8 **8:30-9:00**	**Xueli Bai** (Northwestern Polytechnical University, Peoples Rep of China) On the blow-up profile and sharp threshold of Keller-Segel-Patlak system	
JULY 8 **9:00-9:30**	**Tomomi Yokota** (Tokyo University of Science, Japan) A sufficient condition for boundedness in direct (and indirect) chemotaxis-consumption models with signal-dependent sensitivity	
JULY 8 **9:30-10:00**	**Dongkwang Kim** (Ulsan National Institute of Science and Technology (UNIST), Korea) Global Existence and Asymptotic Behavior for a Swirl-Free 3D Axisymmetric Chemotaxis-Navier-Stokes System	

SS 33	**Variational, Topological and Set-Valued Methods for Nonlinear Differential Problems** Organizer(s): Eleonora Amoroso , Franziska Borer , Patrick Winkert	Room 312

JULY 8 **8:30-9:00**	**Lin Li** (Chongqing Technology and Business University, Peoples Rep of China) Concentration Phenomena and Multi-bump Structures in Logarithmic p-Laplacian Equations
JULY 8 **9:00-9:30**	**Jijiang Sun** (Nanchang University, Peoples Rep of China) Existence and concentration of ground state solutions for a Kirchhoff type problem involving the 1-Laplacian operator
JULY 8 **9:30-10:00**	**Bruno Vassallo** (University of Messina, Italy) Remarks on positive solutions to a p-Laplacian problem with a possibly singular nonlinearity

SS 34	**Recent advances on integrable systems and related topics** Organizer(s): Xiaochuan Liu , Xiangke Chang , Bo Xue	**Room 638**
JULY 8 **8:00-8:30**	**Cheng He** (School of Mathematics and Statistics, Ningbo University, Peoples Rep of China) Rational solutions for algebraic solitons in the massive Thirring model	
JULY 8 **8:30-9:00**	**Lili Huang** (Chongqing Normal University, Peoples Rep of China) On a generalized nonlocal shallow-water equation	
JULY 8 **9:00-9:30**	**Jing Kang** (Northwest University, Peoples Rep of China) Point of constancy of the periodic linear Schr$\mathrm{\ddot{o}}$dinger equation	
JULY 8 **9:30-10:00**	**Ruomeng Li** (Zhengzhou University, Peoples Rep of China) Oscillatory solutions of Camassa-Holm equation	

SS 39	**Recent Developments in Gradient Flows: Theory, Numerics, and Applications** Organizer(s): Chaoyu Quan , Xiaoming Wang , Jiang Yang	**Room 301**
JULY 8 **8:30-9:00**	**Xiaoping Wang** (The Chinese University of Hong Kong (Shenzhen) /Shenzhen International Center for Industrial and Applied Mathematics, Peoples Rep of China) Adaptive feature capture method for solving partial differential equations with near singular solutions	

JULY 8 **9:00-9:30**	**Alain Miranville** (University Le Havre Normandie, France) The Cahn-Hilliard equation with a source term
JULY 8 **9:30-10:00**	**Guanghui Hu** (University of Macau, Macau) A gradient flow model for ground state calculations in wigner formalism based on density functional theory

SS 45	**Frontiers in Topological Dynamics: Theory, Applications, and Interdisciplinary Connections** Organizer(s): Guohua Zhang , Wen Huang , Song Shao	**Room 440**
JULY 8 **8:00-8:30**	**Aihua Fan** (Central Normal University, Peoples Rep of China) Some interactions between Dynamical systems and Harmonic analysis	
JULY 8 **8:30-9:00**	**Ruxi Shi** (Fudan University, Peoples Rep of China) Uniform rokhlin property and double variational principle for mean dimension	
JULY 8 **9:00-9:30**	**Dongchen Li** (Shanghai Center for Mathematical Sciences, Fudan University, Peoples Rep of China) Symplectic blenders near whiskered tori and persistence of saddle-center homoclinics	
JULY 8 **9:30-10:00**	**Ruifeng Zhang** (Hefei University of Technology, Peoples Rep of China) Metric mean dimension of amenable group actions via entropy of subsets	

SS 51	**Recent progress on the rogue waves and their applications** Organizer(s): Jinbing Chen , Liming Ling , Bo Yang	**Room 640**
JULY 8 **8:30-9:00**	**Malek ABID** (Aix-Marseille Universit\`e/IRPHE, France) Numerical simulations of nonlinear evolution of modulational instabilities of Short-Crested Waves	
JULY 8 **9:00-9:30**	**Agissilaos Athanassoulis** (University of Dundee, Scotland) Onset of instability for the Alber equation, and applications for rogue waves	
JULY 8 **9:30-10:00**	**Sitai Li** (Xiamen University, Peoples Rep of China) Soliton interactions in the sharp-line Maxwell-Bloch system	

SS 58	**New developments in celestial mechanics and related topics** Organizer(s): Guowei Yu , Kuo-Chang Chen , Mitsuru Shibayama	**Room 827**
JULY 8 **8:00-8:30**	**Guglielmo Feltrin** (University of Udine, Italy) Periodic dynamics in the perturbed relativistic Kepler problem	
JULY 8 **8:30-9:00**	**Mar Giralt** (Observatoire de Paris - Universite PSL, France) On the Arnold diffusion mechanism in Medium Earth Orbit	
JULY 8 **9:00-9:30**	**Gian Marco Canneori** (University of Turin, Italy) The 2-homogeneous 2-centre problem: symbolic dynamics and scattering	
JULY 8 **9:30-10:00**	**Stefano Baranzini** (Universita San Raffaele Roma, Italy) Rigidity for Kepler billiards	

SS 74	**Recent advances in local and nonlocal PDEs** Organizer(s): Eugenio Vecchi , Stefano Biagi	**Room 315**
JULY 8 **8:00-8:30**	**Giulio Tralli** (University of Ferrara, Italy) Liouville theorems for linear operators with linear drift	
JULY 8 **8:30-9:00**	**Fabio Punzo** (Politecnico di Milano, Italy) Relaxed uniqueness conditions for the parabolic Schrodinger equation on Riemannian manifolds	
JULY 8 **9:00-9:30**	**Francesca Anceschi** (Universita` Politecnica delle Marche, Italy) Regularity results for nonlinear Fokker-Planck equations	
JULY 8 **9:30-10:00**	**Jacopo Somaglia** (Politecnico di Milano, Italy) Liouville type theorem for semilinear equations on weighted graphs	

SS 77	**Singularity and regularity in nonlinear PDEs** Organizer(s): Berikbol Torebek , Matteo Muratori	**Room 432**
JULY 8 **8:30-9:00**	**Oliver Gough** (University of Bath, England) Blow-up and stability for quadratic derivative nonlinear wave equations	

JULY 8 **9:00-9:30**	**Troy Petitt** (Universidad Carlos III de Madrid, Spain) The Porous Medium Equation in Cones and Half-spaces
JULY 8 **9:30-10:00**	**Bruno Volzone** (Politecnico di Milano, Italy) Mass concentration comparison for nonlinear diffusion on model manifolds

SS 85	**Phase-field models and their singular limits** Organizer(s): Andrea Poiatti , Helmut Abels , Harald Garcke	**Room 437**
JULY 8 **9:00-9:30**	**Matthias R\"oger** (Departement of Mathematics, TU Dortmund University, Germany) Singular limit of phase field models on varying surfaces	
JULY 8 **9:30-10:00**	**Sebastian Hensel** (University of Leipzig, Germany) A weak-strong uniqueness principle for Mullins-Sekerka flow	

SS 88	**Diffusion problems with non-standard growth conditions** Organizer(s): Gabriella Zecca , Stefano Buccheri	**Room 642**
JULY 8 **8:00-8:30**	**Martina Magliocca** (Universidad de Sevilla, Spain) The regularizing effect of superlinear terms in Elliptic and Parabolic Equations	
JULY 8 **8:30-9:00**	**Fessel Achhoud** (University of Messina, Italy) Regularity results for a degenerate double phase type operator with irregular data	
JULY 8 **9:00-9:30**	**Ida de Bonis** (Sapienza University of Rome, Italy) Existence and regularity results for a class of singular parabolic problems with L^1 data	
JULY 8 **9:30-10:00**	**Francesco Della Pietra** (Universita degli studi di Napoli Federico II, Italy) Nonlinear elliptic problems with quadratic gradient growth and singular Robin eigenvalues	

SS 91	**Geometric evolution problems** Organizer(s): James McCoy , Yong Wei	**Room 822**
JULY 8 **8:00-8:30**	**Tailong Zhou** (Sichuan University, Peoples Rep of China) A Heintze-Karcher-type inequality for capillary hypersurfaces in hyperbolic space	

JULY 8 **8:30-9:00**	**Hayk Mikayelyan** (University of Nottingham Ningbo China, Peoples Rep of China) Stabilization technique applied on curve shortening flow in R^2 and R^3
JULY 8 **9:00-9:30**	**Xianfeng Wang** (Nankai University, Peoples Rep of China) Uniqueness of self-similar solutions to curvature flows and uniqueness of solutions to isotropic curvature problems
JULY 8 **9:30-10:00**	**Chun-Chi Lin** (National Taiwan Normal University, Taiwan) The p-elastic flow of inextensible planar curves

SS 93	**Local and nonlocal elliptic boundary value problems** Organizer(s): Pasquale Candito , Kanishka Perera , Giuseppe Failla	**Room 739**
JULY 8 **8:00-8:30**	**Artur Marinho** (Florida Institute of Technology, Brazil) Solutions to critical equations with a superposition of nonlocal Hartree-type nonlinearities	
JULY 8 **8:30-9:00**	**Laura Gambera** (University of Catania, Italy) Fractional Dirichlet problems with singular and non-locally convective reaction	
JULY 8 **9:00-9:30**	**Antonia Chinnì** (University of Messina, Italy) Fourth-order problems on extension domains involving variable exponents	
JULY 8 **9:30-10:00**	**Francesco Chiacchio** (Universita` degli Studi di Napoli Federico II, Italy) Weighted Isoperimetric Inequalities for Manifolds with Double Densities and Applications to PDEs	

SS 96	**Recent Trends in Navier-Stokes Equations, Euler Equations, and Related Problems** Organizer(s): Sarka Necasova , Reimund Rautmann , Werner Varnhorn	**Room 428**
JULY 8 **8:00-8:30**	**Nour Seloula** (University of Caen Normandie, France) Divergence-Free Dual Spaces and L^p Analysis for the Stokes and Navier--Stokes Equations with Mixed Navier-Type Boundary Conditions	
JULY 8 **8:30-9:00**	**Sourav Mitra** (IIT Indore, India) Thermal effects in fluid structure interactions	

JULY 8 **9:00-9:30**	**John Sebastian Simon** (University of Koblenz, Germany) Long-time behavior of solutions to fluid dynamic shape optimization problems via phase-field method
JULY 8 **9:30-10:00**	**Joanna Renc{\l}awowicz** (Institute of Mathematics and Cryptology, Cybernetics Faculty, Military University of Technology, Poland) Long time density-dependent Navier-Stokes equations with large flux

SS 98	**Control, Inverse problems and Long time dynamics of Evolutionary Systems** Organizer(s): LOUIS TEBOU , Marcelo CAVALCANTI , Valeria DOMINGOS CAVALCANTI	**Room 314**
JULY 8 **8:00-8:30**	**Carole Rosier** (University of Littoral, France) A Direct Approach for Detection of Bottom Topography in Shallow Water	
JULY 8 **8:30-9:00**	**Lorena Bociu** (NC State University, USA) Infinite Horizon Control Problems for Semilinear Parabolic Equations with Pointwise State Constraints	
JULY 8 **9:00-9:30**	**Marcia Federson** (Universidade de Sao Paulo, Brazil) Biological Concepts of Random Dynamical Systems in Infinite Dimension	
JULY 8 **9:30-10:00**	**Wellington W Corr\^ea** (Federal Technological University of Parana, Brazil) Finite Time Extinction and Stabilization for the Defocusing Schr\\{o}dinger Equation with Localized Damping	

SS 106	**Nonlocal and Local Interactions in Population Dynamics: Mathematical Analysis and Numerical Approaches.** Organizer(s): Silvia Sastre Gómez , Cristian Morales Rodrigo , Juan Vicente Gutiérrez Santacreu	**Room 427**
JULY 8 **8:30-9:00**	**Junping Shi** (College of William & Mary, USA) Spatiotemporal pattern formation in nonlocal aggregation-diffusion model driven by asymmetric spatial cognitive map	
JULY 8 **9:00-9:30**	**Juan Casado-Diaz** (University of Sevilla, Spain) Modeling the viscoelastic behavior of the skin using homogenization theory	

JULY 8 **9:30-10:00**	**David Poyato** (University of Granada, Spain) Hydrodynamic limit of the kinetic Cucker-Smale model toward the incompressible Euler-alignment model

SS 114	**Recent Advances in Partial Differential Equations and Harmonic Analysis** Organizer(s): Irina Mitrea , Dorina Mitrea	**Room 823**
JULY 8 **8:00-8:30**	**Natasa Pavlovic** (The University of Texas at Austin, USA) What happens when bosons are mixed with fermions	
JULY 8 **8:30-9:00**	**Massimo Lanza de Cristoforis** (Dipartimento di Matematica `Tullio Levi-Civita`, Italy) Inequalities of the electromagnetism for H\{o}lder continuous functions	
JULY 8 **9:00-9:30**	**Dionyssis Mantzavinos** (University of Kansas, USA) Low regularity solutions of the nonlinear Schr\{o}dinger equation on the spatial quarter-plane	

SS 116	**Partial Differential Equations with Applications in Biology** Organizer(s): King Yeung Lam , Yuan Lou , Idriss Mazari-Fouquer	**Room 425**
JULY 8 **8:00-8:30**	**Chiu-Yen Kao** (Claremont McKenna College, USA) Personalized Spatiotemporal Radiotherapy for GBM: A PDE-Constrained Optimization Study	
JULY 8 **8:30-9:00**	**Tommaso Lorenzi** (Politecnico di Torino, Italy) PDE models for the growth of heterogeneous cell populations: travelling fronts, sharp interfaces, and concentration phenomena	
JULY 8 **9:00-9:30**	**Quentin GRIETTE** (LMAH, University of Le Havre Normandy, France) Continuous and Discontinuous Traveling Waves in a Hyperbolic Keller-Segel Equation	
JULY 8 **9:30-10:00**	**Wei Feng** (University of North Carolina Wilmington, USA) On Models of Shared Resource Competition, Coexistence, Stability and Traveling Waves	

SS 122	**Topological Data Analysis Theory, Algorithms, and Applications** Organizer(s): Firas Khasawneh	Room 538
JULY 8 **8:00-8:30**	**Teresa Heiss-Synak** (the Australian National University, Australia) New Method for Analyzing The Hole-Structure of a Crystal: Merge Tree for Periodic Data	
JULY 8 **8:30-9:00**	**Henry KIrveslahti** (Univerrsity of Southern Denmark, Denmark) Digitalizing the Euler Characteristic Transform	
JULY 8 **9:00-9:30**	**Andrew Thomas** (University of Iowa, USA) Nested sequential inference for hotspots in noisy images with cubical persistent homology	
JULY 8 **9:30-10:00**	**Jonathan Jaquette** (New Jersey Institute of Technology, USA) Robustness of persistent homology when noising and denoising 3D images	

SS 126	**Defects, Microstructures, and Failure: Multiscale Variational Models** Organizer(s): Leonard Kreutz , Konstantinos Zemas	Room 445
JULY 8 **8:00-8:30**	**Manuel Friedrich** (JKU Linz, Austria) Quasi-static crack growth in cohesive-type fracture	
JULY 8 **8:30-9:00**	**Pascal Steinke** (Institute for Applied Mathematics, University of Bonn, Germany) Linearization of Quasistatic Fracture Evolution in Brittle Materials	
JULY 8 **9:00-9:30**	**Kerrek Stinson** (University of Utah, USA) Concentration-Compactness in Fracture Mechanics	
JULY 8 **9:30-10:00**	**Camille Labourie** (University of Lorraine, France) On quantitative properties of Griffith quasi-minimizers	

SS 133	**New developments on nonlinear expectations** Organizer(s): Shige Peng , Juan Li	Room 421
JULY 8 **8:00-8:30**	**Shige Shige** (Shandong University, Peoples Rep of China) Nonlinear Expectation: A Robust Framework for Uncertainty in Finance and AI	

JULY 8 **8:30-9:00**	**Min Dai** (The Hong Kong Polytechnic University, Hong Kong) When Reinforcement Learning Aligns with Estimate-Then-Plug-In? Insights from Continuous-Time Portfolio Selection
JULY 8 **9:00-9:30**	**Zuo Quan Xu** (The Hong Kong Polytechnic University, Peoples Rep of China) Comparison theorems for multi-dimensional BSDEs with jumps and applications to stochastic LQ control
JULY 8 **9:30-10:00**	**Yongsheng Song** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) On Infinite-Time Mean Field Games and the Associated Elliptic Master Equations

SS 138	**Differential Equations and Applications to Biology** Organizer(s): Hao Kang , Ran Zhang , Xue Ren	**Room 738**
JULY 8 **8:00-8:30**	**Arnaud Ducrot** (Universite Le Havre Normandie, France) Spreading speed for a time-periodic vector-borne disease system on a growing domain	
JULY 8 **8:30-9:00**	**Daihai He** (The Hong Kong Polytechnic University, Hong Kong) The 1978 English boarding school influenza outbreak: where the classic SEIR model fails	
JULY 8 **9:00-9:30**	**Guo Lin** (Lanzhou University, Peoples Rep of China) Propagation dynamics of non-cooperative systems and applications to delayed equations	
JULY 8 **9:30-10:00**	**Toshikazu Kuniya** (The University of Osaka, Japan) Hopf bifurcation in a time-delayed multi-group SIR epidemic model for behavior change	

SS 145	**Dynamic Models under Uncertainty in Economics and Finance** Organizer(s): Salvatore Federico , Giorgio Ferrari , Neofytos Rodosthenous	**Room 740**
JULY 8 **8:00-8:30**	**Gokce Dayanikli** (University of Illinois Urbana-Champaign, USA) Cooperation, Competition, and Common Pool Resources in Mean Field Games and Extensions with Inverse Learning	
JULY 8 **8:30-9:00**	**Federico Cannerozzi** (Bielefeld University, Germany) Stationary Mean-Field singular control of an Ornstein-Uhlenbeck process	

JULY 8 **9:00-9:30**	**Alexandros Pavlis** (LSE, England) Optimal Regulation of Exhaustible Resources in a Mean-Field Model with Aggregate Uncertainty
JULY 8 **9:30-10:00**	**Asaf Cohen** (University of Michigan, USA) Turnpike properties in N-player differential games

SS 150	**Water Waves and Beyond** Organizer(s): Jörg Weber , Dag Nilsson	**Room 639**
JULY 8 **8:00-8:30**	**Mats Ehrnstrom** (NTNU Norwegian University of Science and Technology, Norway) A variational construction of solitary waves for the Babenko equation on finite depth	
JULY 8 **8:30-9:00**	**Dan J Hill** (University of Oxford, England) Think Global, Act Local: Inducing Fully Localised Planar Patterns via Spatial Heterogeneity	
JULY 8 **9:00-9:30**	**Kristoffer Varholm** (University of Pittsburgh, USA) Hollow desingularization of vortices	
JULY 8 **9:30-10:00**	**Vasileios Oikonomou** (University of Missouri, USA) Global bifurcation of hollow vortex streets	

SS 154	**Optimization methods and numerical methods for nonlinear PDEs** Organizer(s): Ruchi Guo , Jun Zou , Long Chen	**Room 641**
JULY 8 **8:00-8:30**	**Yulong Xing** (The Ohio State University, USA) Hyperbolicity-Preserving Stochastic Galerkin Methods for Conservation Laws with Uncertainty via Associative Truncated Polynomial Products	
JULY 8 **8:30-9:00**	**Andrea Cangiani** (SISSA, Italy) Virtual element methods for a class of fully nonlinear elliptic PDEs	
JULY 8 **9:00-9:30**	**Shuonan Wu** (Peking University, Peoples Rep of China) A class of stabilized nonconforming finite element methods for fourth-order PDEs on surfaces	

JULY 8 **9:30-10:00**	**Wei Gong** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) Numerical Analysis of PDE-Constrained Shape Optimization via Shape Gradient Flow

SS 157	**Advances in PDE-Based and Data-Driven Approaches for Applied Sciences** Organizer(s): Matteo Fornoni , Andrea Aspri , Cecilia Cavaterra	**Room 434**
JULY 8 **8:00-8:30**	**Andrea Poiatti** (University of Parma, Italy) Convergence to equilibrium of weak solutions to the Cahn--Hilliard equation with non-degenerate mobility: a novel perspective	
JULY 8 **8:30-9:00**	**Maurizio Grasselli** (Politecnico di Milano, Italy) A mathematical model of phase separation on biomembranes	
JULY 8 **9:00-9:30**	**Abramo Agosti** (University of Pavia, Italy) Inverse and constrained optimization problems with applications to personalized medicine	
JULY 8 **9:30-10:00**	**Pierluigi Colli** (University of Pavia, Italy) PDE-constrained optimal control of viscous Cahn--Hilliard systems with hyperbolic relaxation	

SS 158	**From PDE control to the qualitative study of (random) dynamical systems** Organizer(s): Manuel Rissel , Vahagn Nersesyan , Marius Tucsnak	**Room 812**
JULY 8 **9:00-9:30**	**Vahagn Nersesyan** (NYU Shanghai, Peoples Rep of China) Controllability as a key tool for studying long-time behaviour of random dynamical systems	
JULY 8 **9:30-10:00**	**Deng Zhang** (Shanghai Jiao Tong University, Peoples Rep of China) Continuous energy solutions to 3D (stochastic) Navier-Stokes and MHD equations	

SS 160	**Recent progress on stochastic analysis and stochastic control with applications** Organizer(s): Chao Zhu	**Room 436**

JULY 8 **8:30-9:00**	**Gu Wang** (Worcester Polytechnic Institute, USA) Minimizing the Ruin Probability with Irreversible Reinsurance and Investments
JULY 8 **9:00-9:30**	**Qing Zhang** (University of Georgia, USA) Pairs Trading under Geomertic Brownian Motions
JULY 8 **9:30-10:00**	**Guangchen Wang** (Shandong University, Peoples Rep of China) Recent progress on optimal control of partially observable forward-backward stochastic system

SS 161	**DYNAMICS AND SPECTRUM OF QUASIPERIODIC SCHRODINGER OPERATORS** Organizer(s): Qi Zhou , Wencai Liu , Zhenghe Zhang	**Room 620**
JULY 8 **8:00-8:30**	**Anton Gorodetski** (UC Irvine, USA) Generalized Aubry-Andre formula and continuity of the intersection spectrum of the Almost Mathieu operator	
JULY 8 **8:30-9:00**	**Milivoje Lukic** (Emory University, USA) New universality classes associated to fractals	
JULY 8 **9:00-9:30**	**Ilya Kachkovskiy** (Michigan State University, USA) Localization and spectral gaps for quasiperiodic operators with monotone potentials	
JULY 8 **9:30-10:00**	**Disheng Xu** (Great Bay University, Peoples Rep of China) hyperbolic geodesic flow insights and spectral theory for long-range operators	

SS 166	**Numerical methods, viscosity solutions and free boundary problems** Organizer(s): Edgard Pimentel , Ercilia Sousa	**Room 618**
JULY 8 **8:00-8:30**	**Diogo Gomes** (KAUST, Saudi Arabia) Ranking Mean-Field Planning Games	
JULY 8 **8:30-9:00**	**Fabio Camilli** (Univ. di Chieti Pescara, Italy) L^p-estimates for numerical schemes of Hamilton--Jacobi equations.	

JULY 8 **9:00-9:30**	**Elisabetta Carlini** (Sapienza University of Rome, Italy) High order Tensor-Train-based schemes for high-dimensional Mean Field Games
JULY 8 **9:30-10:00**	**Adriano Festa** (Politecnico di Torino, Italy) Evolving Clusters: A Dynamical Perspective on Time-Dependent Mixture Models

SS 168	**Stochastic Analysis and Large Scale Interacting Systems** Organizer(s): Danielle Hilhorst , Perla El Kettani , Bin Xie	**Room 313**
JULY 8 **8:30-9:00**	**Erika Hausenblas** (Technical University of Leoben, Austria) Nonlinear stochastic PDEs in biochemical systems	
JULY 8 **9:00-9:30**	**Fernanda Cipriano** (NOVA University Lisbon, Portugal) Invariant Measures for Stochastic Fluid Flows in Bounded Domains with Permeable BoundariesAbstract	
JULY 8 **9:30-10:00**	**Manuel Gnann** (TU Delft, Netherlands) Solitary Waves in a Stochastic Parametrically Forced Nonlinear Schr\odinger Equation	

SS 173	**Mathematical and Numerical Analysis on Nonlinear PDEs** Organizer(s): Hiroyuki Takamura , Ning-An Lai , Takiko Sasaki	**Room 430**
JULY 8 **8:00-8:30**	**Yi Zhou** (Fudan University, Peoples Rep of China) Physical space approach to bilinear estimates and applications to wave and dispersive equations	
JULY 8 **8:30-9:00**	**Berikbol Torebek** (Institute of Mathematics and Mathematical Modeling, Kazakhstan) Lifespan estimates of solutions for the semilinear parabolic equations	
JULY 8 **9:00-9:30**	**Hideo Kubo** (Hokkaido University, Japan) Global Weak Solutions to Nonlinear Wave Equations with Damping under Fractional Derivative Control	
JULY 8 **9:30-10:00**	**Kosuke Kita** (Hokkaido university, Japan) Space-time decay of global solutions to a system of damped wave equations	

SS 176	**Non-local Stochastic Evolutionary Systems: Theory and Applications** Organizer(s): Hao Tang , Kenneth Karlsen , Feng-Yu Wang	Room 619
JULY 8 **8:30-9:00**	**Jinghai Shao** (Tianjin University, Peoples Rep of China) On the stability of stochastic processes with regime-switching	
JULY 8 **9:00-9:30**	**Zhenfu Wang** (Peking University, Peoples Rep of China) Quantitative Convergence and Gaussian Fluctuations for Sequential Interacting Diffusions via Incremental Relative Entropy	
JULY 8 **9:30-10:00**	**Avi Mayorcas** (University of Bath, England) Convergence and Fluctuations of Sginular Interacting Particle Systems with Non-Markov Noise	

SS 180	**Individual and Collective Cells Dynamics in Medicine and Biology** Organizer(s): Dumitru Trucu , Raluca Eftimie , Yangjin Kim	Room 433
JULY 8 **8:00-8:30**	**Dumitru Trucu** (University of Dundee, Scotland) Novel 3D multiscale advancements in modelling Glioblastoma invasion and relapse	
JULY 8 **8:30-9:00**	**Qiyao (Alice) Peng** (Lancaster University, England) Towards Data-Driven Modeling of Cell Cycle and Wound Closure Processes	
JULY 8 **9:00-9:30**	**Ali R Daher** (Marie and Louis Pasteur University, France) Beyond Differential Expression: A Robust ML Framework for Keloid Biomarker Discovery	
JULY 8 **9:30-10:00**	**Wenrui Hao** (Penn State University, USA) Data-driven modeling for Alzheimer`s disease	

SS 181	**Dirichlet Forms and Related Topics** Organizer(s): Toshihiro Uemura , Panki Kim , Daniel Lenz	Room 821
JULY 8 **8:00-8:30**	**Kamil Kaleta** (Wroclaw University of Science and Technology, Poland) Decay of resolvent kernels and Schr\\\\odinger eigenstates for L\\\\`evy operators	

JULY 8 **8:30-9:00**	**Kyung-Youn Kim** (National Chung-Hsing University/Applied Mathematics, Taiwan) Non-local Feynman-Kac perturbations for jump diffusions on metric measure spaces
JULY 8 **9:00-9:30**	**Kouhei Matsuura** (University of Tsukuba, Japan) On the Markov property of subsequential limits for a sequence of Markov chains
JULY 8 **9:30-10:00**	**Micha{\l} Gutowski** (Wroc{\l}aw University of Science and Technology, Poland) Beurling--Deny formula for Sobolev--Bregman forms

SS 184	**Mean-Field Games: From Partial Differential Equations to Numerical Methods** Organizer(s): Diogo Gomes , Alpar Meszaros , Marco Cirant	**Room 825**
JULY 8 **8:00-8:30**	**Iain Smears** (University College London, England) Fully nonlinear mean field games with nondifferentiable Hamiltonians	
JULY 8 **8:30-9:00**	**Melih Ucer** (KAUST, Turkey) Solving First-Order Time-Dependent Mean-Field Games via Monotone Operator Theory	
JULY 8 **9:00-9:30**	**Valentina Coscetti** (University of Rome "La Sapienza", Italy) A semi-Lagrangian scheme for First-Order Mean Field Games based on monotone operators	
JULY 8 **9:30-10:00**	**Yohance Osborne** (Durham University, England) Numerical approximation of first-order time-dependent, non-separable mean field games under displacement monotonicity	

SS 190	**Amplitude equations for continuous, discrete, non-local, and stochastic nonlinear dispersive and dissipative dynamical systems** Organizer(s): Ioannis Giannoulis , Anna Logioti , Guido Schneider	**Room 628**
JULY 8 **8:00-8:30**	**Christian Kuehn** (TUM, Germany) Amplitude Equations for Nonlocal Swift-Hohenberg Equation	
JULY 8 **8:30-9:00**	**Theo Belin** (Lund University, Sweden) Validity of the Ginzburg-Landau Approximation for Pattern Forming Quasilinear Systems	

JULY 8 **9:00-9:30**	**Anna Logioti** (University of Stuttgart, Germany) Validity of the stochastic Ginzburg-Landau approximation in higher space dimensions -- A Wiener algebra approach --
JULY 8 **9:30-10:00**	**Alexander Meiners** (University of Oldenburg, Germany) Bifurcation of cylindrical solutions in the spontaneous curvature model

CS 1	**ODEs and Applications**	**Room 634**
JULY 8 **8:00-8:20**	**BHARATH B K** (Periyar University, India) Stability Analysis and Optimal Control of Photocatalytic Water Splitting Processes	
JULY 8 **8:20-8:40**	**Omri Gat** (The Hebrew University of Jeruslaem, Israel) Universality and hysteresis in slow sweeping of bifurcations	
JULY 8 **8:40-9:00**	**Manoj Kumar** (Indian Institute of Technology Mandi, India) Fractal dimension and control of Julia set of the discrete fractional disease model	
JULY 8 **9:00-9:20**	**Zhi Cheng** (School of Mathematics, Southeast University, Peoples Rep of China) Response solutions of a class of nonlinear quasi-periodic systems with multi-dimensional Liouvillean frequency	
JULY 8 **9:20-9:40**	**Sergey Tikhomirov** (Pontificia Universidade Catolica do Rio de Janeiro - PUC-Rio, Brazil) Hyperbolicity for dynamics on Banach spaces: generalized $(C, \\\\\\\\lambda)$-structure.	
JULY 8 **9:40-10:00**	**Adetunji Adeyanju** (Federal University of Agriculture Abeokuta, Nigeria) Results on Behavior of Solutions of Third Order Delay Differential Equations	

CS 2	**PDEs and Applications**	**Room 635**
JULY 8 **8:00-8:20**	**Brahim Alouini** (University of Monastir, Faculty of Sciences of Monastir, Research Laboratory Analysis, Probabilities and Fractals LR18ES17, Tunisia) On the asymptotic behavior of solutions to a dissipative nonlocal NLS type equation	

JULY 8 **8:20-8:40**	**Maria Farcaseanu** (The University of Sydney, Australia & ISMMA, Romania, Australia) Nonlinear elliptic equations with singular potentials and gradient-dependent nonlinearities
JULY 8 **8:40-9:00**	**Greeshma K** (Indian Institute of Science Education and Research, Thiruvananthapuram, India) POINTWISE TRACKING APPROXIMATE CONTROLLABILITY FOR THE CAHN-HILLIARD EQUATION
JULY 8 **9:00-9:20**	**Tianyi Pan** (New York University, Shanghai., Peoples Rep of China) Mixing for stochastic PDEs driven by spatially localized white-in-time noises
JULY 8 **9:20-9:40**	**Idem Susuzlu** (Izmir Institute of Technology, Turkey) Stabilization of damped and viscoelastic linear wave equations exposed to external Neumann manipulation
JULY 8 **9:40-10:00**	**McCusker Joseph** (University of Birmingham, England) A heterogeneous nonlocal advection--diffusion equation

Parallel Session 7 :: Wednesday, 07/08, 13:30-16:00

TS 1	**Some recent advances in elliptic and parabolic PDEs** Organizer(s): Yihong Du , Susanna Terracini	**Room AULA**
JULY 8 **13:30-14:20**	**Juncheng Wei** (Chinese University of Hong Kong, Hong Kong) On Brezis` two open questions	
JULY 8 **14:20-15:10**	**Cristiana Filippis** (University of Parma, Italy) Nonuniform Ellipticity and Nonlinear Potentials	
JULY 8 **15:10-16:00**	**Junping Shi** (College of William & Mary, USA) Bifurcation and Pattern formation in reaction-diffusion models with nonlocal advection and time delays	

SS 1	**Recent Advances in Brezis-Nirenberg Problem** Organizer(s): Juncheng Wei , Yuanze Wu	**Room 311**

JULY 8 **13:30-14:00**	**Bruno Premoselli** (Universite Libre de Bruxelles, Belgium) Least-energy solutions for the Brezis-Nirenberg problem in dimension 3 in the non-coercive case
JULY 8 **14:00-14:30**	**Seunghyeok Kim** (Hanyang University, Korea) Sharp quantitative stability estimates for the Brezis-Nirenberg problem
JULY 8 **14:30-15:00**	**Liming Sun** (Academy of mathematics and systems science, Chinese Academy of Sciences, Peoples Rep of China) Some new nodal solutions to the Yamabe equation
JULY 8 **15:00-15:30**	**Averkios Averkiou** (University of Bath, England) Helical vortex structures with compactly supported cross-sectional vorticity for the 3D incompressible Euler equations
JULY 8 **15:30-16:00**	**Oliver Gough** (University of Bath, England) Blow-up and stability for quadratic derivative nonlinear wave equations

SS 11	**Stochastic Partial Differential Equations** Organizer(s): Benjamin Gess , Michael Röckner	**Room 438**
JULY 8 **13:30-14:00**	**Adrian Martini** (Technical University of Berlin, Germany) Ergodicity for SPDEs driven by divergence-free transport noise	
JULY 8 **14:00-14:30**	**Alexandra Blessing** (University of Konstanz, Germany) Renormalization destroys a finite time bifurcation in the Φ^4_2 equation	
JULY 8 **14:30-15:00**	**Nicolas Perkowski** (Free University Berlin, Germany) On the role of the maximum principle in high order approximations of the Dean-Kawasaki equation	
JULY 8 **15:00-15:30**	**Nils Berglund** (IDP, University of Orleans, France) Concentration results for time-dependent SPDEs with Gaussian and fractional noise	
JULY 8 **15:30-16:00**	**Artur Rutkowski** (Wroc\l{}aw University of Science and Technology, Poland) Mean-field games and Hamilton--Jacobi equations with nonlocal diffusions	

SS 13	**Hyperbolic Partial Differential Equations and Applications** Organizer(s): Yachun Li , Ronghua Pan , Yue-Jun Peng	Room 637
JULY 8 **13:30-14:00**	**Ming Mei** (Jiangxi Normal University, Peoples Rep of China) Stability of viscous shock for Burgers equations with double singularities in viscosity and flux	
JULY 8 **14:00-14:30**	**Lv Cai** (Shanghai University, Peoples Rep of China) Blow-up mechanism for 2-D compressible MHD equations with radial symmetry	
JULY 8 **14:30-15:00**	**Yachun Li** (Shanghai Jiao Tong University, Peoples Rep of China) Non-uniqueness of weak solutions for the hypo-viscous compressible Navier-Stokes equations	

SS 14	**New perspectives in the qualitative study of nonlinear differential equations and dynamical systems** Organizer(s): Andrea Tellini , Guglielmo Feltrin	Room 824
JULY 8 **13:30-14:00**	**Thomas Giletti** (University Clermont-Auvergne, France) Propagating terraces in periodic media	
JULY 8 **14:00-14:30**	**Luca Rossi** (Sapienza University of Rome, Italy) Liouville-type results for the Fisher-KPP equation: old and new	
JULY 8 **14:30-15:00**	**Jian Fang** (Harbin Institute of Technology, Peoples Rep of China) A delay-induced nonlocal free boundary problem	
JULY 8 **15:00-15:30**	**Romain Ducasse** (LJLL, universite Paris Cite, France) Optimizing vaccine allocation in an age-structured SIR model	
JULY 8 **15:30-16:00**	**Elisa Affili** (Universite de Rouen Normandie, France) Which diffusion strategy is best for a prey and a predator moving with Fractional Laplacians?	

SS 15	**Qualitative properties for solutions to nonlinear elliptic and parabolic equations** Organizer(s): Wenxiong Chen , Yahong Guo , Congming Li	Room 316

JULY 8 **13:30-14:00**	**Weisheng Niu** (Anhui University, Peoples Rep of China) Uniform Calder\`{o}n-Zygmund estimates in multiscale elliptic homogenization
JULY 8 **14:00-14:30**	**Yeonghun Youn** (Incheon National University, Korea) Regularity of Elliptic Double Phase Problems with Measure Data: Exploring the Exponent Ranges
JULY 8 **14:30-15:00**	**Wenxiong Chen** (Yeshiva University, USA) Monotonicity for solutions to a fractional nonlinear problem in a half space
JULY 8 **15:00-15:30**	**Yahong Guo** (Shanghai Jiao Tong University, Peoples Rep of China) Boundary regularity and a priori estimates for fractional equations on unbounded domains

SS 17	**Analysis of chemotaxis models** Organizer(s): Johannes Lankeit , Masaaki Mizukami , Mario Fuest	**Room 426**
JULY 8 **13:30-14:00**	**Shohei Kohatsu** (Tokyo University of Science, Japan) Recent progress on stability of stationary solutions to a chemotaxis system with flux-dependent sensitivity	
JULY 8 **14:00-14:30**	**Gregor M Fluechter** (Paderborn University, Germany) Behavior of Dirac Singularities in the Parabolic-Elliptic Keller-Segel System in Dimensions $n\\geq 3$	
JULY 8 **14:30-15:00**	**Hiroshi Wakui** (University of Fukui, Japan) Stability of constant steady states of solutions to a chemotaxis model	
JULY 8 **15:00-15:30**	**Mengyao Ding** (Harbin institute of Technology, Peoples Rep of China) Threshold dynamics in the nonlinear stability exchange of constant steady states for Keller-Segel systems	
JULY 8 **15:30-16:00**	**Jaewook Ahn** (Dongguk University, Korea) Can Navier-Stokes fluid flows induce blow-up in the logarithmic Keller-Segel system?	

SS 32	**Inverse Problems and Image Processing** Organizer(s): Qiyu Jin , Shengzhu Shi , Taofeng Xie	**Room 442**

JULY 8 **13:30-14:00**	**Ji Li** (Capital Normal University, Peoples Rep of China) Image Inverse Problems with Generative Priors
JULY 8 **14:00-14:30**	**Zhangling Chen** (Tianjin Normal University, Peoples Rep of China) Physics-Driven Deep Learning for CT Metal Artifact Reduction
JULY 8 **14:30-15:00**	**Evangelos Papoutsellis** (Finden Ltd, University of Manchester, England) Accelerating Imaging Inverse Problems with Data Sampling and Proximal Skipping
JULY 8 **15:00-15:30**	**Yutong Li** (Tianjin Normal University, Peoples Rep of China) Geometry-Aware Super-Resolution Imaging
JULY 8 **15:30-16:00**	**Liang Chen** (Hunan University, Peoples Rep of China) An efficient augmented Lagrangian method for dynamic optimal transport based on second-order cone programming

SS 33	**Variational, Topological and Set-Valued Methods for Nonlinear Differential Problems** Organizer(s): Eleonora Amoroso , Franziska Borer , Patrick Winkert	**Room 312**
JULY 8 **13:30-14:00**	**Franziska Borer** (University of Technology Berlin, Germany) The Prescribed Gauss Curvature Problem and its corresponding Flows	
JULY 8 **14:00-14:30**	**Leszek Gasinski** (University of the National Education Commission, Poland) Anisotropic Singular Logistic Equations	
JULY 8 **14:30-15:00**	**Francesca Colasuonno** (Universita degli Studi di Torino, Italy) Symmetry breaking for elliptic equations with exponential nonlinearities	
JULY 8 **15:00-15:30**	**Umberto Guarnotta** (University of Catania, Italy) The p-Laplacian obstacle problem with singular and discontinuous reaction term	
JULY 8 **15:30-16:00**	**Angela Sciammetta** (University of Palermo, Italy) Existence and localization results for elliptic problems with intrinsic operators	

SS 34	**Recent advances on integrable systems and related topics** Organizer(s): Xiaochuan Liu , Xiangke Chang , Bo Xue	**Room 638**

JULY 8 **13:30-14:00**	**Gaozhan Li** (Tsinghua University, Peoples Rep of China) Painlev\\`{e} XXXIV asymptotics for the defocusing nonlinear Schr\\{o}dinger equation with a finite-genus algebro-geometric background
JULY 8 **14:00-14:30**	**Xiaochuan Liu** (Xi`an Jiaotong University, Peoples Rep of China) On the nonlinear waves for the coupled complex mKdV system
JULY 8 **14:30-15:00**	**Xudan Luo** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) Obliquely interacting solitary waves and wave wakes in free-surface flows
JULY 8 **15:00-15:30**	**Jiao Wei** (Zhengzhou University, Peoples Rep of China) Algebro-geometric solutions for the Ito hierarchy
JULY 8 **15:30-16:00**	**ZHIWEI WU** (Sun Yat-sen University, Peoples Rep of China) On the algebraic structure of Kadomtsev-Petviashvili hierarchies with constraints

SS 39	**Recent Developments in Gradient Flows: Theory, Numerics, and Applications** Organizer(s): Chaoyu Quan , Xiaoming Wang , Jiang Yang	**Room 301**
JULY 8 **13:30-14:00**	**Jie Shen** (Eastern Institute of Technology, Ningbo, Peoples Rep of China) Structure-preserving compact splitting methods for Schr\\odinger-type equations	
JULY 8 **14:00-14:30**	**Qing Cheng** (Tongji University, Peoples Rep of China) Adaptive time-stepping and maximum-principle-preserving flow dynamic approach for gradient flows	
JULY 8 **14:30-15:00**	**Fukeng Huang** (Eastern Institute of Technology, Ningbo, Peoples Rep of China) A generalized SAV approach for nonlinear dissipative systems	
JULY 8 **15:00-15:30**	**Yuan Chen** (Chinese University of Hong Kong(Shenzhen), Peoples Rep of China) Dynamics in some phase field models	
JULY 8 **15:30-16:00**	**Paolo Piersanti** (The Chinese University of Hong Kong, Shenzhen, Peoples Rep of China) Mixed finite element methods for biharmonic obstacle problems	

SS 45	**Frontiers in Topological Dynamics: Theory, Applications, and Interdisciplinary Connections** Organizer(s): Guohua Zhang , Wen Huang , Song Shao	**Room 440**
JULY 8 **13:30-14:00**	**Disheng Xu** (Great Bay University, Peoples Rep of China) Symmetry vs Ergodicity	
JULY 8 **14:00-14:30**	**Xiaoyao Zhou** (Nanjing Normal University, Peoples Rep of China) Variational principles for (metric) mean dimension	
JULY 8 **14:30-15:00**	**Xiao Ma** (University of Science and Technology of China, Peoples Rep of China) Periodic and Horseshoe-like Structures in Partially Hyperbolic Systems	
JULY 8 **15:00-15:30**	**Kairan Liu** (Chongqing University, Peoples Rep of China) Dynamical systems and their induced systems	

SS 51	**Recent progress on the rogue waves and their applications** Organizer(s): Jinbing Chen , Liming Ling , Bo Yang	**Room 640**
JULY 8 **13:30-14:00**	**Chengfa Wu** (Shenzhen University, Peoples Rep of China) The Kadomtsev-Petviashvili reduction method and its applications to the (coupled) Sasa-Satsuma equation	
JULY 8 **14:00-14:30**	**Shouming Zhou** (Chongqing normal University, Peoples Rep of China) Modeling and Mathematical Analysis of a Higher-Order CH-KP Model for Shallow Water Waves	
JULY 8 **14:30-15:00**	**Xuan Sun** (Donghua University, Peoples Rep of China) Stability of Elliptic Function Solutions and Dynamics of Elliptic-Localized Waves	
JULY 8 **15:00-15:30**	**Tao Xu** (China University of Petroleum-Beijing, Peoples Rep of China) Equivalence between Wronskian- and Grammian-type solutions and asymptotic analysis of N-soliton solutions for the Gerdjikov-Ivanov equation	
JULY 8 **15:30-16:00**	**Nianhua Li** (Huaqiao University, Peoples Rep of China) Smooth soliton solutions of the Camasssa-Holm type equations	

SS 58	**New developments in celestial mechanics and related topics** Organizer(s): Guowei Yu , Kuo-Chang Chen , Mitsuru Shibayama	**Room 827**
JULY 8 **13:30-14:00**	**Otto van Koert** (Seoul National University, Korea) Floer homology and the restricted three body problem	
JULY 8 **14:00-14:30**	**Eiko Kin** (The University of Osaka, Japan) A study of braids arising from simple choreographies of the planar Newtonian N-body problem	
JULY 8 **14:30-15:00**	**Chankyu Joung** (Seoul National University, Korea) Bifurcations of highly inclined near halo orbits using Moser regularization	
JULY 8 **15:00-15:30**	**Yuika Kajihara** (Kyoto University, Japan) Hamiltonian systems and monotone twist mappings for braids	
JULY 8 **15:30-16:00**	**Mitsuru Shibayama** (Kyoto University, Japan) Existence of Really Perverse Central Configurations in the Spatial N-Body Problem	

SS 74	**Recent advances in local and nonlocal PDEs** Organizer(s): Eugenio Vecchi , Stefano Biagi	**Room 315**
JULY 8 **13:30-14:00**	**Matteo Muratori** (Politecnico di Milano, Italy) Existence and non-existence of radial solutions for the subcritical Lane-Emden equation on model manifolds	
JULY 8 **14:00-14:30**	**Eurica Henriques** (Universidade Tras os Montes e Alto Douro, CMAT, Portugal) Qualitative Properties to Anisotropic Parabolic PDEs	
JULY 8 **14:30-15:00**	**Ariel Salort** (CEU San Pablo, Madrid, Spain) Regularity estimates for 0-order p-Laplacian evolution problems	
JULY 8 **15:00-15:30**	**Claudia Bucur** (University of Milan, Italy) Complete stickiness for nonlocal minimal graphs with obstacles in highly nonlocal regimes	
JULY 8 **15:30-16:00**	**Mattia Galeotti** (University of Bologna, Italy) Critical problems in Carnot groups	

SS 85	**Phase-field models and their singular limits** Organizer(s): Andrea Poiatti , Helmut Abels , Harald Garcke	Room 437
JULY 8 **13:30-14:00**	**Maurizio Grasselli** (Politecnico di Milano, Italy) A Cahn-Hilliard-Darcy-Forchheimer surfactant model	
JULY 8 **14:00-14:30**	**HAO WU** (Fudan University, Peoples Rep of China) Rayleigh-Taylor problem for incompressible two-phase flows with unmatched densities	
JULY 8 **14:30-15:00**	**Kei Fong Lam** (Hong Kong Baptist University, Hong Kong) Two-phase flow with micropolar effects: Modelling, analysis and asymptotic limits	
JULY 8 **15:00-15:30**	**Andrea Signori** (Politecnico di Milano, Italy) Active Phase Separation and Self-Organizing Droplets	

SS 88	**Diffusion problems with non-standard growth conditions** Organizer(s): Gabriella Zecca , Stefano Buccheri	Room 642
JULY 8 **13:30-14:00**	**Giampiero Palatucci** (University of Parma, Italy) Fractional capacitary potentials at the critical threshold: decay, breakdown, and vanishing capacity	
JULY 8 **14:00-14:30**	**Luigi Greco** (Universit\\`a di Napoli, Italy) Quasilinear elliptic systems with critical growth	
JULY 8 **14:30-15:00**	**Giuseppina di Blasio** (University of Campania "L. Vanvitelli", Italy) Recent developments on noncoercive anisotropic operators with singular lower order terms	
JULY 8 **15:00-15:30**	**Antonio J. Fern\\`andez** (Universidad Aut\\`onoma de Madrid, Spain) Schiffer type problems on the plane and the 2-sphere.	
JULY 8 **15:30-16:00**	**Salvador L\`{o}pez Mart\`{i}nez** (Autonomous University of Madrid, Spain) Periodic solutions to the Lorentz force equation	

SS 93	**Local and nonlocal elliptic boundary value problems** Organizer(s): Pasquale Candito , Kanishka Perera , Giuseppe Failla	Room 739

JULY 8 **13:30-14:00**	**Mircea Sofonea** (University of Perpignan, France) Convergence Analysis of a Differential Variational Inequality
JULY 8 **14:00-14:30**	**Rakesh Arora** (Indian Institute of Technology, Varanasi, India) Nonlocal elliptic problems involving the Logarithmic Laplacian
JULY 8 **14:30-15:00**	**Anna Ochal** (Jagiellonian University in Krakow, Poland) Variational analysis of elliptic hemivariational inequalities with nonmonotone boundary conditions
JULY 8 **15:00-15:30**	**Mousomi Bhakta** (Indian Institute of Science Education and Research Pune (IISER Pune), India) Brezis-Nirenberg problems for mixed local-nonlocal operators with superlinear perturbations: compactness and applications
JULY 8 **15:30-16:00**	**Beatrice Di Bella** (University of Messina, Italy) Existence of solutions for a parametric weighted degenerate $p(\cdot)$-Laplacian Dirichlet problem

SS 96	**Recent Trends in Navier-Stokes Equations, Euler Equations, and Related Problems** Organizer(s): Sarka Necasova , Reimund Rautmann , Werner Varnhorn	**Room 428**
JULY 8 **13:30-14:00**	**Petr Kaplicky** (Charles University, Czech Rep) On the stability of steady states for a generalized Navier-Stokes-Fourier system	
JULY 8 **14:00-14:30**	**Aneta Wr\`oblewska-Kami\`nska** (Institute of Mathematics, Polish Academy of Sciences, Poland) Coupled Vlasov and non-Newtonian dynamics	
JULY 8 **14:30-15:00**	**Piotr Mucha** (University of Warsaw, Poland) Regular Solutions in Fluid Mechanics: Choosing Between Besov and Sobolev Frameworks	
JULY 8 **15:00-15:30**	**Ana Silvestre** (Instituto Superior T\`ecnico, Universidade de Lisboa, Portugal) On the Navier-Stokes equations with energy-stable outflow boundary conditions	

SS 98	**Control, Inverse problems and Long time dynamics of Evolutionary Systems** Organizer(s): LOUIS TEBOU , Marcelo CAVALCANTI , Valeria DOMINGOS CAVALCANTI	**Room 314**
JULY 8 **13:30-14:00**	**Enzo Vitillaro** (Dipartimento di Matematica e Informatica Universit\`a degli Studi di Perugia, Italy) Stationary solutions for the wave equation with hyperbolic boundary conditions	
JULY 8 **14:00-14:30**	**Jaqueline Mesquita** (Universidade Estadual de Campinas, Brazil) Instability results for Volterra-Stieltjes integral equations	
JULY 8 **14:30-15:00**	**Maria Astudillo** (Federal University of Parana, Brazil) On the stability of a thermoelastic transmission problem with Kelvin-Voigt Damping	
JULY 8 **15:00-15:30**	**Salim Messaoudi** (University of Sharjah, United Arab Emirates) On the Global Existence and Energy Decay of a Logarithmically Damped Wave Equation	
JULY 8 **15:30-16:00**	**Marcelo Cavalcanti** (State University of Maringa, Brazil) Stabilization of the Critical Wave Equation via Energy-Dependent Nonlinear Damping	

SS 106	**Nonlocal and Local Interactions in Population Dynamics: Mathematical Analysis and Numerical Approaches.** Organizer(s): Silvia Sastre Gómez , Cristian Morales Rodrigo , Juan Vicente Gutiérrez Santacreu	**Room 427**
JULY 8 **13:30-14:00**	**Silvia Sastre Gómez** (Universidad de Sevilla, Spain) Convergence of principal eigenvalue for equation with local and nonlocal terms	
JULY 8 **14:00-14:30**	**Manuel Luna-Laynez** (Universidad de Sevilla, Spain) Non-local behavior of strongly heterogeneous thin elastic materials	
JULY 8 **14:30-15:00**	**Paulo Nicanor Seminario Huertas** (Polytechnic University of Madrid, Spain) SPATIAL ECOLOGY MODELS WITH INERTIA AND TIME-DEPENDENT PARAMETERS: A NONAUTONOMOUS HYPERBOLIC CAUCHY PROBLEM APPROACH	
JULY 8 **15:00-15:30**	**Cristian Morales Rodrigo** (Universidad de Sevilla, Spain) Lotka-Volterra models with Nonlocal Coefficient Diffusion	

JULY 8 **15:30-16:00**	**Faustino Maestre** (Universidad de Sevilla, Spain) On the regularity of optimal potentials for some elliptic control problems

SS 114	**Recent Advances in Partial Differential Equations and Harmonic Analysis** Organizer(s): Irina Mitrea , Dorina Mitrea	**Room 823**
JULY 8 **13:30-14:00**	**Andrea Carbonaro** (University of Genoa, Italy) p-Ellipticity for Elliptic Systems with Complex Coefficients	
JULY 8 **14:00-14:30**	**Luisa M Velasco** (University of Texas at Austin, USA) The inhomogeneous six-wave kinetic equation	
JULY 8 **14:30-15:00**	**Laurent Moonens** (Universite Paris Saclay, France) Maximal operators of Zygmund type	
JULY 8 **15:00-15:30**	**Andrew Haar** (Charles University, Czech Rep) Shifted Maximal Functions and the Boundedness of Rough Singular Integral Operators	
JULY 8 **15:30-16:00**	**Marius Mitrea** (Baylor University, USA) Transmission Problems in Planar Domains	

SS 116	**Partial Differential Equations with Applications in Biology** Organizer(s): King Yeung Lam , Yuan Lou , Idriss Mazari-Fouquer	**Room 425**
JULY 8 **13:30-14:00**	**Hirokazu Ninomiya** (Meiji University, Japan) Pattern formation in two-component reaction-diffusion systems with equal diffusion coefficients	
JULY 8 **14:00-14:30**	**Catharine Lo** (Shenzhen University, Peoples Rep of China) Recovering Model Parameters from Boundaries and Turing Patterns: An Inverse Problems Approach to PDEs in Mathematical Biology	
JULY 8 **14:30-15:00**	**Leo Girardin** (CNRS, France) An abstract framework for a class of nonlocal structured population models: existence, uniqueness and stability of steady states	

JULY 8 **15:00-15:30**	**Zhennan Zhou** (Westlake University, Peoples Rep of China) Analytical and Numerical Perspectives on Necrotic Tumor Growth via Obstacle Problems
JULY 8 **15:30-16:00**	**Shuang Liu** (Beijing Institute of Technology, Peoples Rep of China) On principal eigenvalues for elliptic operators with divergence-free drifts

SS 122	**Topological Data Analysis Theory, Algorithms, and Applications** Organizer(s): Firas Khasawneh	**Room 538**
JULY 8 **13:30-14:00**	**Enrico Amico** (University of Birmingham, England) Higher-order connectomics of human brain function	
JULY 8 **14:00-14:30**	**Chad Giusti** (Oregon State University, USA) How do biological neural networks learn topologically structured data?	
JULY 8 **14:30-15:00**	**Bernadette Stolz** (Max Planck Institute of Biochemistry, Germany) Topological model selection: a case-study in tumour-induced angiogenesis	
JULY 8 **15:00-15:30**	**Iris Yoon** (Wesleyan University, USA) Topological decoding of grid cell activity via path lifting to covering spaces	
JULY 8 **15:30-16:00**	**Alexandria Volkening** (Purdue University, USA) TDA-driven parameter inference in an agent-based model of zebrafish patterns	

SS 126	**Defects, Microstructures, and Failure: Multiscale Variational Models** Organizer(s): Leonard Kreutz , Konstantinos Zemas	**Room 445**
JULY 8 **13:30-14:00**	**Caterina Ida Zeppieri** (University of Muenster, Germany) The random fractional obstacle problem	
JULY 8 **14:00-14:30**	**Elise Bonhomme** (Universite de Bretagne Occidentale, France) Homogenization of the stochastic double-porosity model.	
JULY 8 **14:30-15:00**	**Riccardo Voso** (UTIA, Czech Academy of Sciences, Czech Rep) Dimension reduction in dynamical continuum mechanics	

JULY 8 **15:00-15:30**	**Roberta Marziani** (University of Siena, Italy) Gamma-convergence for the plane-to-wrinkles transition problem
JULY 8 **15:30-16:00**	**Andreas Vikelis** (University of Vienna, Austria) Measure-valued solutions for non-associative finite plasticity

SS 133	**New developments on nonlinear expectations** Organizer(s): Shige Peng , Juan Li	**Room 421**
JULY 8 **13:30-14:00**	**Long Hu** (Shandong University, Peoples Rep of China) Boundary stabilization of 1D hyperbolic balance laws	
JULY 8 **14:00-14:30**	**Shuzhen Yang** (Shandong University, Peoples Rep of China) Large Language Models training under Sublinear Expectation	
JULY 8 **14:30-15:00**	**Xinpeng Li** (Shandong University, Peoples Rep of China) Generalized Divergence Measures and Weak Convergence for the Sets of Probability Measures	
JULY 8 **15:00-15:30**	**Ying Peng** (Shandong University, Peoples Rep of China) A control method for solving high-dimensional fully coupled FBSDEs via deep learning	
JULY 8 **15:30-16:00**	**Peng Luo** (Shanghai Jiao Tong University, Peoples Rep of China) Quadratic forward backward stochastic differential equations driven by G-Brownian motion	

SS 138	**Differential Equations and Applications to Biology** Organizer(s): Hao Kang , Ran Zhang , Xue Ren	**Room 738**
JULY 8 **13:30-14:00**	**Chen Jia** (Beijing Computational Science Research Center, Peoples Rep of China) Stochastic theory of gene expression and gene regulation	
JULY 8 **14:00-14:30**	**Quentin GRIETTE** (LMAH, University of Le Havre Normandy, France) Slowly oscillating periodic solutions in a nonlinear Volterra equation with non-symmetric feedback	

JULY 8 **14:30-15:00**	**Kamal Khalil** (LMAH, University of Le Havre Normandie, FR-CNRS-3335, ISCN, Le Havre 76600, France., France) Invariant sets under semiflows via a Lie--Trotter product formula for semilinear evolution equations
JULY 8 **15:00-15:30**	**Rui Li** (Shenzhen Technology University, Peoples Rep of China) Dynamics of Consumer Resource Systems
JULY 8 **15:30-16:00**	**Yifei Li** (Harbin Institute of Technology, Peoples Rep of China) Exploring the evolution of maturation time via strong competition model with stage structure

SS 145	**Dynamic Models under Uncertainty in Economics and Finance** Organizer(s): Salvatore Federico , Giorgio Ferrari , Neofytos Rodosthenous	**Room 740**
JULY 8 **13:30-14:00**	**Katia Colaneri** (University of Rome Tor Vergata, Italy) Focus or Diversification? Dynamic Allocation of Climate Technology Investments under Budget Constraints	
JULY 8 **14:00-14:30**	**Athena Picarelli** (University of Verona, Italy) An Optimal Energy Production Problem with Energy Source Switching and Load Following Nuclear Power Plants	
JULY 8 **14:30-15:00**	**Tim Niclas Sch\"utz** (Bielefeld University, Germany) Optimal Consumption and Portfolio Choice with No-Borrowing Constraint in the Kim-Omberg Model: The Complete Market Case	
JULY 8 **15:00-15:30**	**Maria Laura Torrente** (University of Genoa, Italy) Irreversible reinsurance: Minimization of Capital Injections in Presence of a Fixed Cost	

SS 149	**Recent developments in Free Boundary Problems and Nonlinear PDEs** Organizer(s): Marvin Weidner , Aelson Sobral	**Room 639**
JULY 8 **13:30-14:00**	**Jose Miguel Urbano** (KAUST, Saudi Arabia) A sharp differentiability threshold for minimizers of singular energies	

JULY 8 **14:00-14:30**	**Maria Soria Carro** (Universidad Autonoma de Madrid, Spain) On fractional k-Hessian operators
JULY 8 **14:30-15:00**	**Hayk Mikayelyan** (University of Nottingham Ningbo China, Peoples Rep of China) A Free Boundary Problem with Nonlocal Obstacle
JULY 8 **15:00-15:30**	**Makson Santos** (University of Lisbon, Portugal) Spectral partition problems for the divergence operator with volume and inclusion constraints

SS 151	**Encounter and Merging of Mesh-based Methods and Meshless Methods in the Era of Machine Learning** Organizer(s): Shuo Zhang , Haijun Yu , Chensong Zhang	**Room 826**
JULY 8 **13:30-14:00**	**Ruchi Guo** (Sichuan University, Peoples Rep of China) Transformer: structure conforming operator learning	
JULY 8 **14:00-14:30**	**Yuwen Li** (Zhejiang University, Peoples Rep of China) On the interplay between iterative methods and error estimators	
JULY 8 **14:30-15:00**	**Wei Gong** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) A penalty approach for topology optimization problems	
JULY 8 **15:00-15:30**	**Chunmei Su** (Tsinghua University, Peoples Rep of China) Structure-preserving parametric finite element method for surface diffusion	
JULY 8 **15:30-16:00**	**Haijun Yu** (Academy of Mathematics and Systems Science, Peoples Rep of China) A morphology-adaptive random feature method for inverse source problem of the Helmholtz equation	

SS 152	**Recent advances in kinetic theory** Organizer(s): Mirco Piccinini , Francesca Anceschi	**Room 432**
JULY 8 **13:30-14:00**	**Hongjie Dong** (Brown University, USA) Global wellposedness for the relativistic Vlasov-Maxwell-Landau system in bounded domains	

JULY 8 **14:00-14:30**	**Havva Yoldas** (Delft University of Technology, Netherlands) Fisher information and the well-posedness of the multi-species Landau equation
JULY 8 **14:30-15:00**	**Dingqun Deng** (Akita University, Japan) Uniqueness of Weak Solutions to the Non-cutoff Boltzmann equation
JULY 8 **15:00-15:30**	**Xingyu Li** (Universita degli Studi di Trieste, Italy) Global stability of vacuum for the relativistic Vlasov-Maxwell-Boltzmann system
JULY 8 **15:30-16:00**	**Andrei Tarfulea** (Louisiana State University, USA) Convergence of Barrier Model to Specular Reflection for the Boltzmann Equation

SS 154	**Optimization methods and numerical methods for nonlinear PDEs** Organizer(s): Ruchi Guo , Jun Zou , Long Chen	**Room 641**
JULY 8 **13:30-14:00**	**Hehu Xie** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) Machine learning method for solving high dimensional eigenvalue problems	
JULY 8 **14:00-14:30**	**Huibin Chang** (Tianjin Normal University, Peoples Rep of China) Unsupervised Phase Unwrapping via Tailed Nonconvex Optimization and Generalized Itoh Conditions	
JULY 8 **14:30-15:00**	**Guozhi Dong** (Central South University, Peoples Rep of China) BDFs meet projection-free iterative schemes in non-convex constrained variational minimization	
JULY 8 **15:00-15:30**	**Kuang Huang** (The University of Hong Kong, Hong Kong) Entropy-consistent numerical methods and singular limit for nonlocal conservation laws	
JULY 8 **15:30-16:00**	**Yuhuang Meng** (Delft University of Technology, Netherlands) Neural networks-based nonlinear preconditioning for Newton`s method	

SS 157	**Advances in PDE-Based and Data-Driven Approaches for Applied Sciences** Organizer(s): Matteo Fornoni , Andrea Aspri , Cecilia Cavaterra	**Room 434**

JULY 8 **13:30-14:00**	**Elena Beretta** (New York University Abu Dhabi, United Arab Emirates) On the reconstruction of early stages in tumour growth models
JULY 8 **14:00-14:30**	**Simone Sanna** (University of Genoa, Italy) The Calder\`on problem with random measurements
JULY 8 **14:30-15:00**	**Eva Sincich** (University of Trieste, Italy) Recovery of an Anisotropic Conductivity from the Neumann-to-Dirichlet Map in a Semilinear Elliptic Equation
JULY 8 **15:00-15:30**	**Yi-Hsuan Lin** (National Yang Ming Chiao Tung University, Taiwan) An inverse problem for the Monge-Ampere equation
JULY 8 **15:30-16:00**	**Cong Shi** (University of Vienna, Austria) Neural network parametrized level sets for image segmentation

SS 158	**From PDE control to the qualitative study of (random) dynamical systems** Organizer(s): Manuel Rissel , Vahagn Nersesyan , Marius Tucsnak	**Room 812**
JULY 8 **14:00-14:30**	**Marius Tucsnak** (University of Bordeaux, France) Holomorphic regularity of processes generated by the heat equation with white noise boundary data	
JULY 8 **14:30-15:00**	**Ben Goldys** (Sydney University, Australia) Differentiability of transition semigroup of generalized Ornstein-Uhlenbeck process	
JULY 8 **15:00-15:30**	**Laurent Mertz** (City University of Hong Kong, Hong Kong) Sensitivity analysis of colored-noise-driven interacting particle systems	
JULY 8 **15:30-16:00**	**Shengquan Xiang** (Peking University, Peoples Rep of China) Symmetry and observability for wave equations on the torus	

SS 160	**Recent progress on stochastic analysis and stochastic control with applications** Organizer(s): Chao Zhu	**Room 436**

JULY 8 **13:30-14:00**	**Huijie Qiao** (Southeast University, Peoples Rep of China) Large deviation principles for fully coupled multiscale multivalued stochastic systems
JULY 8 **14:00-14:30**	**Fuke Wu** (Huazhong University of Science and Technology, Peoples Rep of China) Fast-Slow Coupled Forward-Backward Stochastic Differential Equations
JULY 8 **14:30-15:00**	**Meilin Tang** (Department of Mathematics Huazhong University of Science and Technology, Peoples Rep of China) Averaging Principle for Fully Coupled Two-Time-Scale Stochastic Systems with Infinite Integral-Type Delays and Application to Near-Optimal Control
JULY 8 **15:00-15:30**	**Jie Xiang** (School of Mathematics, Southeast University, Peoples Rep of China) Averaging principles for nonautonomous multiscale McKean-Vlasov stochastic systems

SS 161	**DYNAMICS AND SPECTRUM OF QUASIPERIODIC SCHRODINGER OPERATORS** Organizer(s): Qi Zhou , Wencai Liu , Zhenghe Zhang	**Room 620**
JULY 8 **13:30-14:00**	**Simon Becker** (ETH Zurich, Switzerland) Aspects of quasi-periodicity in continuum models	
JULY 8 **14:00-14:30**	**Iris Emilsdottir** (University of California Irvine, USA) Dynamical Lifshitz Tails	
JULY 8 **14:30-15:00**	**Cai Ao** (Soochow University, School of Mathematical Sciences, Peoples Rep of China) Random compositions of quasi-periodic cocycles	
JULY 8 **15:00-15:30**	**Rodrigo Matos** (PUC-RIO, Brazil) Lower Bounds for Green`s Function Fractional Moments of Random Operators and Their Consequences	
JULY 8 **15:30-16:00**	**Xianzhe Li** (University of California, Berkeley, USA) Continuity of intersection spectrum at rationals	

SS 166	**Numerical methods, viscosity solutions and free boundary problems** Organizer(s): Edgard Pimentel , Ercilia Sousa	**Room 618**

JULY 8 **13:30-14:00**	**Iain Smears** (University College London, England) Rates of convergence of finite element approximations of second-order mean field games with nondifferentiable Hamiltonians
JULY 8 **14:00-14:30**	**Indranil Chowdhury** (Indian Institute of Technology Kanpur, India) Convergent Numerical approximation for fractional Mean Field Games
JULY 8 **14:30-15:00**	**Robin Lien** (Norwegian University of Science and Technology (NTNU), Norway) Discretization of fractional fully nonlinear equations by powers of discrete Laplacians
JULY 8 **15:00-15:30**	**Ivan Majic** (UCL, England) From the Monge-Amp\`ere equation to Stochastic Optimal Control and Reinforcement Learning

SS 168	**Stochastic Analysis and Large Scale Interacting Systems** Organizer(s): Danielle Hilhorst , Perla El Kettani , Bin Xie	**Room 313**
JULY 8 **13:30-14:00**	**giuseppina guatteri** (Politecnico di Milano, Italy) Stochastic Maximum Principle for Delay Equations: the Non-Convex Case	
JULY 8 **14:00-14:30**	**Ioannis Gasteratos** (TU Berlin, Germany) Kolmogorov equations for stochastic Volterra processes with singular kernels	
JULY 8 **14:30-15:00**	**Federica Masiero** (Milano-Bicocca University, Italy) Peng`s Maximum Principle for Stochastic Delay Differential Equations of Mean-Field Type	
JULY 8 **15:00-15:30**	**Yuzuru Inahama** (Kyushu University, Japan) Fractional Diffusion Bridges	
JULY 8 **15:30-16:00**	**Andrea Di Primio** (Scuola Normale Superiore, Italy) Stochastic diffuse interface models driven by conservative noise	

SS 173	**Mathematical and Numerical Analysis on Nonlinear PDEs** Organizer(s): Hiroyuki Takamura , Ning-An Lai , Takiko Sasaki	**Room 430**

JULY 8 **13:30-14:00**	**Kohei Higashi** (Musashino University, Japan) On lifespan estimates for a discrete Fujita equation
JULY 8 **14:00-14:30**	**Takiko Sasaki** (Musashino University, Japan) Numerical quenching time for rescaling algorithm on nonlinear wave equations
JULY 8 **14:30-15:00**	**Tetsuji Tokihiro** (Musashino University, Japan) Quenching of finite-difference solutions to nonlinear heat equations with non-local terms
JULY 8 **15:00-15:30**	**Tatsuki Mori** (Musashino University, Japan) Analytical and numerical results on the global bifurcation structure of a cell polarization problem

SS 176	**Non-local Stochastic Evolutionary Systems: Theory and Applications** Organizer(s): Hao Tang , Kenneth Karlsen , Feng-Yu Wang	**Room 619**
JULY 8 **13:30-14:00**	**Dejun Luo** (Academy of Mathematics and Systems Science, Chinese Academy of Sciehces, Peoples Rep of China) Eddy viscosity by Levy transport noise	
JULY 8 **14:00-14:30**	**Krutika Tawri** (University of Washington, USA) Statistically stationary solutions to the stochastic compressible Euler equations with linear damping	
JULY 8 **14:30-15:00**	**Weiwei Qi** (Academy of Mathematics and Systems Science, CAS, Peoples Rep of China) Intrinsic vs. Extrinsic Noise in Transient Dynamics: A Quasi-Stationary Approach	
JULY 8 **15:00-15:30**	**Xiaoli Wei** (Harbin Institute of Technology, Peoples Rep of China) Mean Field Control with Poissonian Common Noise: A Pathwise Compactification Approach	
JULY 8 **15:30-16:00**	**Huaiqian Li** (Tianjin University, Peoples Rep of China) A Dimension-Free Limiting Formula for Negative Sobolev Norms	

SS 180	**Individual and Collective Cells Dynamics in Medicine and Biology** Organizer(s): Dumitru Trucu , Raluca Eftimie , Yangjin Kim	**Room 433**

JULY 8 **13:30-14:00**	**Sandesh Athni Hiremath** (Rhinelandpfalz Technical University, Germany) Optimal Control of Cell Plasticity in GBM Cells via Levy-Driven Microscopic Dynamics
JULY 8 **14:00-14:30**	**Honda Naoki** (Nagoya University, Japan) Decoding Genetically Encoded Wiring Principles of the Brain from Connectome and Spatial Transcriptome Data
JULY 8 **14:30-15:00**	**Leili Shahriyari** (University of Massachusetts Amherst, USA) Data driven mathematical modeling of immune cells interactions in tissues
JULY 8 **15:00-15:30**	**Harsh Jain** (University of Minnesota Duluth, USA) Behavioral Feedback and Perceived Prevalence: Reconciling Epidemic Dynamics in a Classic Boarding School Outbreak
JULY 8 **15:30-16:00**	**Donggu Lee** (Konkuk University, Korea) Asthma-mediated control of optic glioma growth via T cell-microglia interactions: A mathematical model

SS 181	**Dirichlet Forms and Related Topics** Organizer(s): Toshihiro Uemura , Panki Kim , Daniel Lenz	**Room 821**
JULY 8 **13:30-14:00**	**Martin Grothaus** (RPTU University Kaiserslautern-Landau, Germany) Construction of distorted Brownian motion with permeable sticky behaviour on sets with Lebesgue measure zero	
JULY 8 **14:00-14:30**	**Iulian Cimpean** (University of Bucharest, Faculty of Mathematics and Computer Science, and Romanian Academy, Romania) Regularization of the superposition principle: Potential theory meets Fokker-Planck equations	
JULY 8 **14:30-15:00**	**Takumu Ooi** (Tokyo University of Science, Japan) Topological properties of the Revuz correspondence	
JULY 8 **15:00-15:30**	**Daehong Kim** (Kumamoto University, Japan) On quasi-ergodic limits for symmetric Markov processes	
JULY 8 **15:30-16:00**	**Jun Masamune** (Kyoto University, Japan) Emergence of an unsaturated Darcy's law and a Richards-type equation via homogenization of the Stokes-Cahn-Hilliard system	

SS 184	**Mean-Field Games: From Partial Differential Equations to Numerical Methods** Organizer(s): Diogo Gomes , Alpar Meszaros , Marco Cirant	Room 825
JULY 8 **13:30-14:00**	**Davide Francesco Redaelli** (University of Rome Tor Vergata, Italy) A non-asymptotic approach to games with many players and the universality of the mean field game limit	
JULY 8 **14:00-14:30**	**Songbo S Wang** (Universit\`{e} C\^{o}te d`Azur, France) A quantitative limit theory for quadratic mean-field controls	
JULY 8 **14:30-15:00**	**Nicol\`o De Bernardi** (Universit\`a degli Studi di Padova, Italy) On the Local Turnpike Property in Mean Field Control and Games	
JULY 8 **15:00-15:30**	**Elisa Continelli** (University of Padova, Italy) Uniqueness of solutions for MFG with large discount	
JULY 8 **15:30-16:00**	**Giovanni G Carlon** (University of Padova, Italy) Non-asymptotic estimates for differential games with large discount	

SS 190	**Amplitude equations for continuous, discrete, non-local, and stochastic nonlinear dispersive and dissipative dynamical systems** Organizer(s): Ioannis Giannoulis , Anna Logioti , Guido Schneider	Room 628
JULY 8 **13:30-14:00**	**Simone Paleari** (Universit\\`{a} di Milano, Italy) On the closeness of the dynamics for some nonlinear lattices	
JULY 8 **14:00-14:30**	**Martina Chirilus-Bruckner** (Leiden University, Netherlands) Heterogeneities in reaction-diffusion systems: A feature, not a perturbation	
JULY 8 **14:30-15:00**	**VASSILIOS ROTHOS** (Aristostle University of Thessaloniki, Greece) Time-Periodic Dynamics in Driven-Damped ϕ^4 Models: From Reduced Chaos to PDE-Level Existence Theory	
JULY 8 **15:00-15:30**	**Joannis Alexopoulos** (Karlsruhe Institute of Technology, Germany) A dispersive relaxation mechanism: blow-up vs. stability in absence of any localization assumptions on initial data	

JULY 8 **15:30-16:00**	**Robert Wegner** (Karlsruhe Institute of Technology, Germany) Long-wave KdV hierarchy approximation of the NLS hierarchy with nonzero boundary condition

SS 197	**Intelligent Control and Game Theory** Organizer(s): Shujun Wang , Guangchen Wang , Tianyang Nie	**Room 822**
JULY 8 **13:30-14:00**	**Zhuo Jin** (Macquarie University, Australia) Optimal Cybersecurity Investment with Risk Sharing	
JULY 8 **14:00-14:30**	**Zhi-Xue Zhao** (School of Mathematical Sciences, Tianjin Normal University, Peoples Rep of China) Simultaneous identifiability of piecewise-constant reaction coefficient and initial condition in a reaction--diffusion equation	
JULY 8 **14:30-15:00**	**Huacheng Zhou** (Central South University, Peoples Rep of China) Output regulation problem for passive systems with strong stability	
JULY 8 **15:00-15:30**	**Weiwei Sun** (Qufu Normal University, Peoples Rep of China) Resilient Event-Triggered Data-Driven LFC under DoS Attacks	
JULY 8 **15:30-16:00**	**Yuan-Hua Ni** (Nankai University, Peoples Rep of China) Policy Optimization in the Linear Quadratic Gaussian Problem: A Frequency Domain Perspective	

Parallel Session 8 :: Wednesday, 07/08, 16:30-18:00

SS 11	**Stochastic Partial Differential Equations** Organizer(s): Benjamin Gess , Michael Röckner	**Room 438**
JULY 8 **16:30-17:00**	**Daniel Heydecker** (University of Oslo, Norway) The Porous Medium Equation: Multiscale Integrability in Large Deviations	
JULY 8 **17:00-17:30**	**Lucio Galeati** (University of L`Aquila, Italy) Large deviations and weak solution concepts in a stochastic Galerkin-Euler system	
JULY 8 **17:30-18:00**	**Wei Liu** (Jiangsu Normal University, Peoples Rep of China) Variational Framework for SPDE: Old and New	

SS 14	**New perspectives in the qualitative study of nonlinear differential equations and dynamical systems** Organizer(s): Andrea Tellini , Guglielmo Feltrin	**Room 824**
JULY 8 **16:30-17:00**	**Zaizheng Li** (Hebei Normal University, Peoples Rep of China) Rotating spirals and bifurcation analysis for competition systems	
JULY 8 **17:00-17:30**	**Elisa Sovrano** (University of Modena and Reggio Emilia, Italy) Reaction--diffusion systems with degenerate diffusivity: wavefronts and their qualitative properties	
JULY 8 **17:30-18:00**	**Paolo Gidoni** (University of Udine, Italy) Limit cycle and asymptotic gait for a dynamic model of rectilinear locomotion	

SS 17	**Analysis of chemotaxis models** Organizer(s): Johannes Lankeit , Masaaki Mizukami , Mario Fuest	**Room 426**
JULY 8 **16:30-17:00**	**Bao-Ngoc Tran** (University of Graz, Austria) Cross-diffusion system with doubly degenerate nonlinear diffusion and strong chemotactic effect	

JULY 8 **17:00-17:30**	**Yuya Tanaka** (Department of Mathematical Sciences, Kwansei Gakuin University, Japan) Blow-up in a chemotaxis system with p-Laplacian diffusion
JULY 8 **17:30-18:00**	**Rachidi B Salako** (University of Nevada Las Vegas, USA) On positive steady states of an epidemic PDE model with singular chemotaxis sensitivity

SS 20	**Lie Symmetries, Conservation Laws, and Other Approaches in Solving Nonlinear Differential Equations** Organizer(s): Chaudry Masood Khalique , Wen-Xiu Ma , Maria Luz Gandarias	**Room 641**
JULY 8 **16:30-17:00**	**Wen-Xiu Ma** (University of South Florida, USA) Reduced integable equations and Darboux transformations	
JULY 8 **17:00-17:30**	**Mehmet Pakdemirli** (Manisa Celal Bayar University, Turkey) Approximate Symmetry Methods with Applications	
JULY 8 **17:30-18:00**	**Jen-Hsu Chang** (National Defense University, Taiwan) Totally non-negative Pfaffian and its constructions	

SS 33	**Variational, Topological and Set-Valued Methods for Nonlinear Differential Problems** Organizer(s): Eleonora Amoroso , Franziska Borer , Patrick Winkert	**Room 312**
JULY 8 **16:30-17:00**	**Matheus Stapenhorst** (Universidade Estadual Paulista Julio de Mesquita Filho, Brazil) A Leray-Lions approach to logarithmic double phase problems with natural growth terms	
JULY 8 **17:00-17:30**	**Maria-Magdalena Boureanu** (University of Craiova, Romania) Qualitative results for elliptic systems with variable exponents	
JULY 8 **17:30-18:00**	**Alejandro Velez-Santiago** (University of Puerto Rico - Rio Piedras Campus, USA) Global regularity for Robin-type double phase boundary value problems	

SS 34	**Recent advances on integrable systems and related topics** Organizer(s): Xiaochuan Liu , Xiangke Chang , Bo Xue	**Room 638**

JULY 8 **16:30-17:00**	**Yiling Yang** (Chongqing Unversity, Peoples Rep of China) Critical asymptotics for the semiclassical Camassa-Holm equation at the point of gradient catastrophe
JULY 8 **17:00-17:30**	**Yunfei Yue** (Chongqing Technology and Business University, Peoples Rep of China) Controllable rogue waves on the Jacobi-periodic background for the higher-order nonlinear Schrodinger equation
JULY 8 **17:30-18:00**	**Haiqiong Zhao** (Shanghai University of International Business and Economics, Peoples Rep of China) Statistical mean and variance analysis for the dynamical behaviors of stochastic Boussinesq equations

SS 39	**Recent Developments in Gradient Flows: Theory, Numerics, and Applications** Organizer(s): Chaoyu Quan , Xiaoming Wang , Jiang Yang	**Room 301**
JULY 8 **16:30-17:00**	**Daozhi Han** (State University of New York at Buffalo, USA) Super-convergent HDG methods for the Cahn-Hilliard equation	
JULY 8 **17:00-17:30**	**Xiaoming Wang** (Eastern Institute of Technology, Peoples Rep of China) High-order energy stable numerical schemes for gradient flows	

SS 45	**Frontiers in Topological Dynamics: Theory, Applications, and Interdisciplinary Connections** Organizer(s): Guohua Zhang , Wen Huang , Song Shao	**Room 440**
JULY 8 **16:30-17:00**	**Jian Li** (Shantou University, Peoples Rep of China) The equivalence of precompactness, zero maximal pattern entropy and bounded mean complexity for finite partitions	
JULY 8 **17:00-17:30**	**Yiwei Zhang** (Anhui University of Science and Technology, Peoples Rep of China) On fast Lyapunov spectra for Markov-R\`{e}nyi maps	
JULY 8 **17:30-18:00**	**Xiaomin Zhou** (Huazhong University of Science and Technology, Peoples Rep of China) Discrete spectrum of probability measures for locally compact group actions	

SS 51	**Recent progress on the rogue waves and their applications** Organizer(s): Jinbing Chen , Liming Ling , Bo Yang	Room 640
JULY 8 **16:30-17:00**	**Jinbing Chen** (Southeast University, Peoples Rep of China) Periodic waves in the Jaulent--Miodek equation: modulational stability and algebraic solitons	

SS 64	**Reaction-diffusion equations and applications** Organizer(s): Wan-Tong Li , Zhi-Cheng Wang , Shi-Liang Wu	Room 637
JULY 8 **16:30-17:00**	**Rong Wang** (Lanzhou University, Peoples Rep of China) Spreading speeds of a nonlocal diffusive epidemic model with a new weight-type free boundary condition	
JULY 8 **17:00-17:30**	**Yun-Rui Yang** (Lanzhou Jiaotong University, Peoples Rep of China) The propagation dynamics for a class of time-period SIAR system with nonlocal dispersal and delay	
JULY 8 **17:30-18:00**	**Shi-Liang Wu** (xidian university, Peoples Rep of China) Long time behavior for Lotka-Volterra competiton-diffusion systems	
JULY 8 **18:00-18:30**	**Weisong Zhou** (School of Mathematics and Statistics, Chongqing University of Posts and Telecommunications,, Peoples Rep of China) Pullback measure random attractors of lattice FitzHugh-Nagumo systems	

SS 74	**Recent advances in local and nonlocal PDEs** Organizer(s): Eugenio Vecchi , Stefano Biagi	Room 315
JULY 8 **16:30-17:00**	**Umberto Guarnotta** (University of Catania, Italy) Singular p-Laplacian problems with discontinuous convection terms	
JULY 8 **17:00-17:30**	**Martina Magliocca** (Universidad de Sevilla, Spain) TRAVELING MOTILITY OF ACTIN LAMELLAR FRAGMENTS UNDER SPONTANEOUS SYMMETRY BREAKING	
JULY 8 **17:30-18:00**	**Riccardo Durastanti** (Universita degli Studi di Napoli Federico II, Italy) Replicator dynamics with genetic drift as the large population limit of a discrete Moran process	

JULY 8 **18:00-18:30**	**Bruno Volzone** (Politecnico di Milano, Italy) Advances in symmetrization methods for nonlocal problems

SS 84	**Mathematical modeling and analysis in spatial ecology and epidemiology** Organizer(s): Yu Jin , Yijun Lou , Xiaoqiang Zhao	**Room 430**
JULY 8 **16:30-17:00**	**Junping Shi** (College of William & Mary, USA) Bifurcation of rotating wave solutions in reaction-diffusion systems on a circle	
JULY 8 **17:00-17:30**	**Weihua Jiang** (School of Mathematics, Harbin Institute of Technology, Peoples Rep of China) Global dynamics of a predator-prey model with prey-dependent search rate	
JULY 8 **17:30-18:00**	**Hongbin Wang** (School of Mathematics, Harbin Institute of Technology, Peoples Rep of China) Equivariant Turing-Turing Bifurcations and Pattern Formation on a Square Domain	

SS 85	**Phase-field models and their singular limits** Organizer(s): Andrea Poiatti , Helmut Abels , Harald Garcke	**Room 437**
JULY 8 **16:30-17:00**	**Yoshihiro Tonegawa** (Institute of Science Tokyo, Japan) Some problems for two-phase flow coupled with the Allen-Cahn equation	
JULY 8 **17:00-17:30**	**Keisuke Takasao** (Kyoto University, Japan) Brakke`s inequality and the existence of Brakke flow for volume preserving mean curvature flow	
JULY 8 **17:30-18:00**	**Yadong Liu** (Nanjing Normal University, Peoples Rep of China) Sharp Interface Limit for 3D Navier-Stokes/Allen Cahn Systems	

SS 88	**Diffusion problems with non-standard growth conditions** Organizer(s): Gabriella Zecca , Stefano Buccheri	**Room 642**
JULY 8 **16:30-17:00**	**Antonella Nastasi** (University of Palermo, Italy) L$^\\infty$ estimates for a class of nonlinear elliptic systems with nonstandard growth	

JULY 8 **17:00-17:30**	**Gianpaolo Piscitelli** (Universita` degli studi di Napoli Parthenope, Italy) The asymptotic behavior of Quasilinear CalderOn problem w.r.t. the boundary data
JULY 8 **17:30-18:00**	**Anna Mercaldo** (University of Naples Federico II, Italy) Singular elliptic equations having a gradient term with natural growth

SS 93	**Local and nonlocal elliptic boundary value problems** Organizer(s): Pasquale Candito , Kanishka Perera , Giuseppe Failla	**Room 739**
JULY 8 **16:30-17:00**	**Caterina Sportelli** (Universidad de Granada, Spain) The superposition of operators of mixed fractional order and their applications	
JULY 8 **17:00-17:30**	**Roberto Livrea** (University of Messina, Italy) Existence and multiplicity results for differential boundary value problems with possible discontinuous reaction	

SS 96	**Recent Trends in Navier-Stokes Equations, Euler Equations, and Related Problems** Organizer(s): Sarka Necasova , Reimund Rautmann , Werner Varnhorn	**Room 428**
JULY 8 **16:30-17:00**	**Cherif Amrouche** (Universite de Pau et des Pays de l`Adour, France) $\\boldsymbol L^p$-theory for the operator $\\mathbf{curl}(\\alpha \\mathbf{curl}\ \cdot)$ and applications	
JULY 8 **17:00-17:30**	**Werner Varnhorn** (Institute of Mathematics, Kassel University, Germany) Some remarks on Leray`s structure theorem	
JULY 8 **17:30-18:00**	**Sarka Necasova** (Czech Academy of Sciences, Czech Rep) The primitive equations and conjecture of Onsager	

SS 98	**Control, Inverse problems and Long time dynamics of Evolutionary Systems** Organizer(s): LOUIS TEBOU , Marcelo CAVALCANTI , Valeria DOMINGOS CAVALCANTI	**Room 314**
JULY 8 **16:30-17:00**	**Fernando Gallego** (Universidad Nacional de Colombia, Colombia) Decay Properties of Higher-Order KdV-Type Systems with Dissipation and Time Delay	

JULY 8 **17:00-17:30**	**Elias A Gudino** (Federal University of Parana, Brazil) Supraconvergence and supercloseness in non-Fickian diffusion
JULY 8 **17:30-18:00**	**LOUIS TEBOU** (Florida International University, USA) Interacting flexible structures with localized strong damping: Semigroup stability and regularity

SS 106	**Nonlocal and Local Interactions in Population Dynamics: Mathematical Analysis and Numerical Approaches.** Organizer(s): Silvia Sastre Gómez , Cristian Morales Rodrigo , Juan Vicente Gutiérrez Santacreu	**Room 427**
JULY 8 **16:30-17:00**	**Juan Vicente Guti\`errez-Santacreu** (Universidad de Sevilla, Spain) Challenging the Blow-up Threshold: Numerical Analysis of the Keller-Segel-Navier-Stokes System	
JULY 8 **17:00-17:30**	**Sergio Junquera** (Universidad Complutense de Madrid, Spain) The phenomenon of quenching in a system with non-local diffusion	
JULY 8 **17:30-18:00**	**Ana Casado Sanchez** (Universidad de Sevilla, Spain) Nonlocal diffusion equations in measure spaces	

SS 114	**Recent Advances in Partial Differential Equations and Harmonic Analysis** Organizer(s): Irina Mitrea , Dorina Mitrea	**Room 823**
JULY 8 **16:30-17:00**	**Camil Muscalu** (Cornell University, USA) On some singular integrals of Brascamp-Lieb type	
JULY 8 **17:00-17:30**	**Tiago Picon** (University of Sao Paulo, Brazil) Stein-Weiss type inequality in L1 norm for vector fields and applications	
JULY 8 **17:30-18:00**	**Carlos Perez Moreno** (Ikerbasque at BCAM and University of The Basque Country, Spain) A Geometric Perspective on Poincar\`e-Sobolev Inequalities thru Harmonic Analysis and without derivatives	

SS 116	**Partial Differential Equations with Applications in Biology** Organizer(s): King Yeung Lam , Yuan Lou , Idriss Mazari-Fouquer	Room 425
JULY 8 **16:30-17:00**	**Zhian Wang** (The Hong Kong Polytechnic University, Hong Kong) Dynamics of a consumer-resource model: persistence, extinction and blowup	
JULY 8 **17:00-17:30**	**Samuel ST Treton** (University of Nantes, France) A piston to counteract diffusion: The influence of an inward-shifting boundary on the heat equation in half-space	
JULY 8 **17:30-18:00**	**Xiao Yu** (South China Normal University, Peoples Rep of China) Propagation direction of bistable pulsating waves for population models in discrete periodic habitat	

SS 122	**Topological Data Analysis Theory, Algorithms, and Applications** Organizer(s): Firas Khasawneh	Room 538
JULY 8 **16:30-17:00**	**Pawel Dlotko** (Warsaw University, Poland) Dynamics meets topological data analysis	
JULY 8 **17:00-17:30**	**Firas Khasawneh** (Michigan State University, USA) Detecting Stochasticity in Discrete Signals via Persistent Homology	
JULY 8 **17:30-18:00**	**Michael Small** (University of Western Australia, Australia) Using topology to inform embedding	

SS 126	**Defects, Microstructures, and Failure: Multiscale Variational Models** Organizer(s): Leonard Kreutz , Konstantinos Zemas	Room 445
JULY 8 **16:30-17:00**	**Davide Donati** (SISSA, Trieste, Italy) Homogenisation of free discontinuity problems with cohesive type surface terms	
JULY 8 **17:00-17:30**	**Stefano Almi** (University of Naples Federico II, Italy) Nonlocal aproximation of a Griffith-type energy	

JULY 8 **17:30-18:00**	**Sergio Conti** (University of Bonn, Germany) Variational phase-field models of cohesive fracture

SS 133	**New developments on nonlinear expectations** Organizer(s): Shige Peng , Juan Li	**Room 421**
JULY 8 **16:30-17:00**	**Guomin Liu** (Nankai University, Peoples Rep of China) Anticipated backward stochastic evolution equations and maximum principle for path-dependent systems in infinite dimensions	
JULY 8 **17:00-17:30**	**Hanwu Li** (Shandong University, Peoples Rep of China) Doubly Reflected Backward SDEs Driven by G-Brownian Motion with Quadratic Generator	
JULY 8 **17:30-18:00**	**Wenqiang Li** (Shandong University, Peoples Rep of China) Mean field portfolio games with major-minor agents and random horizon	

SS 138	**Differential Equations and Applications to Biology** Organizer(s): Hao Kang , Ran Zhang , Xue Ren	**Room 738**
JULY 8 **16:30-17:00**	**Di Liu** (Nankai University, Peoples Rep of China) Dynamics of a coupled nonlocal PDE-ODE system with spatial memory: well-posedness, stability, and bifurcation analysis	
JULY 8 **17:00-17:30**	**Xiaodan Chen** (Heilongjiang University, Peoples Rep of China) A Periodic Reaction-Diffusion-Advection SIS Epidemic Model with a Saturated Incidence Function	

SS 143	**Nonlinear dynamics for kinetic, fluids and mathematical physics** Organizer(s): Hyeong-Ohk Bae , Jongmin Han , Jeongho Kim	**Room 316**
JULY 8 **16:30-17:00**	**Jin Woo Jang** (POSTECH (Pohang University of Science and Technology), Korea) Optimal Convergence Estimate of the Limit from Inverse Power Potential to Hard Sphere Boltzmann Equation	
JULY 8 **17:00-17:30**	**Hantaek Bae** (UNIST, Korea) Decay Rates of Solutions to Some Dissipative Equations	

JULY 8 **17:30-18:00**	**Ho Lee** (Kyung Hee University, Korea) Homogeneous solutions to the Einstein--Boltzmann system with a conformal gauge singularity

SS 145	**Dynamic Models under Uncertainty in Economics and Finance** Organizer(s): Salvatore Federico , Giorgio Ferrari , Neofytos Rodosthenous	**Room 740**
JULY 8 **16:30-17:00**	**Anna Pajola** (Bielefeld University, Germany) Existence of Strong Randomized Equilibria in Mean-Field Games of Optimal Stopping with Common Noise	
JULY 8 **17:00-17:30**	**Alessandro Bondi** (Luiss University Rome, Italy) Regular stochastic flow and Dynamic Programming Principle for jump diffusions	
JULY 8 **17:30-18:00**	**Ioannis Tzouanas** (Bielefeld University, Germany) Learning Algorithm for Mean-Field Coarse Correlated Equilibrium: A Linear Programming Approach	

SS 150	**Water Waves and Beyond** Organizer(s): Jörg Weber , Dag Nilsson	**Room 639**
JULY 8 **16:30-17:00**	**Anna Geyer** (TU Delft, Netherlands) Ocean currents with constant vorticity	
JULY 8 **17:00-17:30**	**Luigi Roberti** (Leibniz University Hannover, Germany) On large-scale oceanic wind-drift currents	
JULY 8 **17:30-18:00**	**Christian Puntini** (University of. Vienna, Austria) Instability of the halocline at the North Pole	

SS 151	**Encounter and Merging of Mesh-based Methods and Meshless Methods in the Era of Machine Learning** Organizer(s): Shuo Zhang , Haijun Yu , Chensong Zhang	**Room 826**

JULY 8 **16:30-17:00**	**Tianqi Zhu** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) Efficient simulation under a population genetics model of carcinogenesis
JULY 8 **17:00-17:30**	**Jie Xu** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) Quasi-entropy: in free energies and closure approximations
JULY 8 **17:30-18:00**	**Shuo Zhang** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) Some trainer friendly meshless methods

SS 152	**Recent advances in kinetic theory** Organizer(s): Mirco Piccinini , Francesca Anceschi	**Room 432**
JULY 8 **16:30-17:00**	**Ioakeim Ampatzoglou** (CUNY Baruch College & Graduate Center, USA) Moment preserving Young`s inequality for the Botzmann gain operator with hard-spheres	
JULY 8 **17:00-17:30**	**Laura Kanzler** (CNRS, LJLL Sorbonne Universite, France) (Fractional) Hydrodynamic Limit of Linear Kinetic Equations with Multiple Conserved Quantities	
JULY 8 **17:30-18:00**	**Alessia Kogoj** (University of Urbino, Italy) A rigidity theorem for Kolmogorov-type operators	

SS 157	**Advances in PDE-Based and Data-Driven Approaches for Applied Sciences** Organizer(s): Matteo Fornoni , Andrea Aspri , Cecilia Cavaterra	**Room 434**
JULY 8 **16:30-17:00**	**Anna Mazzucato** (Penn State University, USA) Enhanced dissipation and applications to non-linear PDEs	
JULY 8 **17:00-17:30**	**Dennis Trautwein** (University of Regensburg, Germany) Curvature-driven pattern formation in biomembranes: A gradient flow approach	
JULY 8 **17:30-18:00**	**Claudia Bucur** (University of Milan, Italy) Complete stickiness for nonlocal minimal graphs with obstacles in highly nonlocal regimes	

SS 158	**From PDE control to the qualitative study of (random) dynamical systems** Organizer(s): Manuel Rissel , Vahagn Nersesyan , Marius Tucsnak	**Room 812**
JULY 8 **16:30-17:00**	**Franck Sueur** (University of Luxembourg, France) On the controllability of the semi-geostrophic equation. Part I	
JULY 8 **17:00-17:30**	**Vincent Laheurte** (Universit\`e du Luxembourg, Luxembourg) On the controllability of the semi-geostrophic equation. Part II	
JULY 8 **17:30-18:00**	**Zhuo XU** (University of Bordeaux, France) Global Exponential Stabilization for a Simplified Fluid-Particle Interaction System	

SS 160	**Recent progress on stochastic analysis and stochastic control with applications** Organizer(s): Chao Zhu	**Room 436**
JULY 8 **16:30-17:00**	**Harry Zheng** (Imperial College, England) Convergence of Proximal Policy Gradient Method for Problems with Control Dependent Diffusion Coefficients	
JULY 8 **17:00-17:30**	**Kurt L Helmes** (Humboldt Universitaet zu Berlin, Germany) An Asymptotic Expansion of the Profit Function of a Class of Impulse Control Problems	
JULY 8 **17:30-18:00**	**Chao Zhu** (University of Wisconsin-Milwaukee, USA) Ergodic McKean-Vlasov Games: Verification Theorems and Linear-Quadratic Applications	

SS 161	**DYNAMICS AND SPECTRUM OF QUASIPERIODIC SCHRODINGER OPERATORS** Organizer(s): Qi Zhou , Wencai Liu , Zhenghe Zhang	**Room 620**
JULY 8 **16:30-17:00**	**Fernando Argentieri** (IMPA, Brazil) Effective parameters and exceptional integrability	
JULY 8 **17:00-17:30**	**Matthew Faust** (Michigan State University, USA) On Floquet and Fermi Isospectrality	

JULY 8 **17:30-18:00**	**Zhenfu Wang** (Nankai University, Peoples Rep of China) Canonical Center Dynamics and Spectral Applications for Long-Range Operators

SS 166	**Numerical methods, viscosity solutions and free boundary problems** Organizer(s): Edgard Pimentel , Ercilia Sousa	**Room 618**
JULY 8 **16:30-17:00**	**F\`elix del Teso** (Universidad Aut\`onoma de Madrid, Spain) A convergent discretization of the porous medium equation with fractional pressure	
JULY 8 **17:00-17:30**	**Elisa Calzola** (University of Ferrara, Italy) A PINN Framework for Identification and Control of Nonlinear PDEs with Incomplete Data	
JULY 8 **17:30-18:00**	**Ercilia Sousa** (University of Coimbra, Portugal) A numerical approach to degenerate fully nonlinear elliptic problems from the pure equation to free boundaries	

SS 167	**Functional spaces and multiphase problems** Organizer(s): Calogero Vetro , Marek Galewski	**Room 827**
JULY 8 **16:30-17:00**	**Anouar Bahrouni** (University of Monastir, Tunisia) A new class of anisotropic double phase problems: exponents depending on solutions and their gradients	
JULY 8 **17:00-17:30**	**Francesca Dalbono** (University of Palermo, Italy) A bifurcation phenomenon for the critical p-Laplace equation in the ball	
JULY 8 **17:30-18:00**	**Asuka Takatsu** (The University of Tokyo, Japan) Curvature obstructions to concavity preservation for the porous medium flows	

SS 168	**Stochastic Analysis and Large Scale Interacting Systems** Organizer(s): Danielle Hilhorst , Perla El Kettani , Bin Xie	**Room 313**
JULY 8 **16:30-17:00**	**Masato Hoshino** (Institute of Science Tokyo, Japan) Fernique-type bounds for BPHZ models and their applications	

JULY 8 **17:00-17:30**	**Antoine Moneyron** (Inria Rennes, France) Interpretation of stochastic primitive equations with relaxed hydrostatic assumption as a higher order approximation of 3D stochastic Navier-Stokes
JULY 8 **17:30-18:00**	**Vincent R Martinez** (CUNY Hunter College & Graduate Center, USA) On the short memory limit in a stochastic Coleman-Gurtin model of heat conduction

SS 176	**Non-local Stochastic Evolutionary Systems: Theory and Applications** Organizer(s): Hao Tang , Kenneth Karlsen , Feng-Yu Wang	**Room 619**
JULY 8 **16:30-17:00**	**Nikolai V. Chemetov** (University of Sao Paulo, Brazil) Global Solvability for Stochastic Superconducting Model	
JULY 8 **17:00-17:30**	**Hao Tang** (Tianjin University, Peoples Rep of China) Stochastic Euler Equations with Pseudo-differential Noise	
JULY 8 **17:30-18:00**	**Vahagn Nersesyan** (NYU Shanghai, Peoples Rep of China) Ergodicity of stochastic PDEs on unbounded domains	

SS 180	**Individual and Collective Cells Dynamics in Medicine and Biology** Organizer(s): Dumitru Trucu , Raluca Eftimie , Yangjin Kim	**Room 433**
JULY 8 **16:30-17:00**	**Fred Vermolen** (University of Hasselt, Belgium) Mathematical Issues in Mechanical Models for Cells and TIssues	
JULY 8 **17:00-17:30**	**Seunggyu Lee** (Korea University, Korea) Beyond homogeneity: Assessing the validity of the Michaelis-Menten rate law in spatially heterogeneous environments	
JULY 8 **17:30-18:00**	**Raluca EFTIMIE** (University Marie and Louis Pasteur, France) Computational investigation into the formation of nodules and cords during the evolution of the fibroproliferative Dupuytren Disorder	

SS 181	**Dirichlet Forms and Related Topics** Organizer(s): Toshihiro Uemura , Panki Kim , Daniel Lenz	**Room 821**

JULY 8 **16:30-17:00**	**Oleksii Kulyk** (Wroclaw Univercity of Science and Technology, Poland) Intrinsic geometry of multivariate L\`evy measures and weak solutions to L\`evy driven SDEs
JULY 8 **17:00-17:30**	**Adisak Seesanea** (Sirindhorn International Institute of Technology, Thammasat University, Thailand) Dirichlet problem for Lane--Emden type equations with several sublinear terms
JULY 8 **17:30-18:00**	**Peter Stollmann** (TU Chemnitz, Germany) Strongly continuous fields of operators over varying Hilbert spaces

SS 184	**Mean-Field Games: From Partial Differential Equations to Numerical Methods** Organizer(s): Diogo Gomes , Alpar Meszaros , Marco Cirant	**Room 825**
JULY 8 **16:30-17:00**	**Annette Dumas** (Universit\`e de Limoges, XLIM, France) Lipschitz regularity of the trajectories minimizing the total variation in a congested setting	
JULY 8 **17:00-17:30**	**Wenbin YAN** (University Paris Dauphine-PSL, France) Long-Time Behavior of Mean Field Game Systems with Common White Noise	

SS 185	**Multiscale Analysis: Geometry and Evolution Problems (mSPACE)** Organizer(s): Delio Mugnolo , Leonard Monsaingeon , Matthias Neumann	**Room 311**
JULY 8 **16:30-17:00**	**Eugenia Franco** (University of Bonn, Germany) Critical lack of detailed balance in stochastic kinetic proofreading models	
JULY 8 **17:00-17:30**	**Maria Rosaria Lancia** (Sapienza Universit\`a di Roma, Italy) Fractal Inverse Problems: The Crucial Role of Scaling	
JULY 8 **17:30-18:00**	**Pier Domenico Lamberti** (University of Padova, Italy) Asymptotic Analysis of a Biharmonic Steklov Problem on Thin Domains	

SS 190	**Amplitude equations for continuous, discrete, non-local, and stochastic nonlinear dispersive and dissipative dynamical systems** Organizer(s): Ioannis Giannoulis , Anna Logioti , Guido Schneider	Room 628
JULY 8 **16:30-17:00**	**Nils Thorin** (Universit\"at Stuttgart, Germany) The NLS approximation for the Peregrine soliton and fractional dispersion	
JULY 8 **17:00-17:30**	**Espen Xylander** (Institute for analysis, dynamics and modeling, University of Stuttgart, Germany) A variational reduction for the full-dispersion Davey--Stewartson equation	
JULY 8 **17:30-18:00**	**Ioannis Giannoulis** (University of Ioannina, Greece) Modulation equations for scalar Fermi-Pasta-Ulam-Tsingou systems on 2D square lattices	

SS 197	**Intelligent Control and Game Theory** Organizer(s): Shujun Wang , Guangchen Wang , Tianyang Nie	Room 822
JULY 8 **16:30-17:00**	**Na Li** (Dalian University of Technology, Peoples Rep of China) Linear-Quadratic Stochastic Stackelberg Games of N Players for Time-Delay Systems and Related FBSDEs	
JULY 8 **17:00-17:30**	**Yunzhang Li** (Fudan University, Peoples Rep of China) The Deep Truncated FBSDE Method: A Robust Solver for High-dimensional PDEs	
JULY 8 **17:30-18:00**	**Ruyi Liu** (University of New South Wales, Australia) Optimal Information Disclosure In A Stackelberg Game	

CS 2	**PDEs and Applications**	Room 635
JULY 8 **16:30-16:50**	**Imen BENABBAS** (University of Science and Technology Houari Boumediene, Algeria) Global Well-posedness and decay of the Westervelt-hyperbolic Pennes system	
JULY 8 **16:50-17:10**	**Jorge Duarte** (Instituto Superior de Engenharia de Lisboa, Portugal) On chaos, transient chaos and ghosts in single population models with Allee effects	
JULY 8 **16:50-17:10**	**Sagar Gautam** (Indian Institute of Technology Roorkee, India) Kolmogorov equations for stochastic convective Brinkman-Forchheimer equations forced by L\\\`evy Noise and its application to infinite horizon problems	

JULY 8 **17:10-17:30**	**Nurbol Koshkarbayev** (Institute of Mathematics and Mathematical Modeling, Kazakhstan) Numerical solution of Korteweg-de Vries equation with moving boundaries
JULY 8 **17:30-17:50**	**Asmita Rai** (Indian Institute of Technology (BHU), Varanasi, India) Normalized solutions for fractional Choquard equation with critical growth on bounded domain

CS 3	**Modeling, Math Biology and Math Finance**	**Room 634**
JULY 8 **16:30-16:50**	**Katarina Bodova** (Comenius University, Slovak Rep) A Systematic Framework for Inferring Stochastic Dynamics from Data	
JULY 8 **16:50-17:10**	**Rajesh Das** (Indian Institute of Technology Roorkee, India) Fear induced coexistence in eco-epidemiological systems with infected prey	
JULY 8 **17:10-17:30**	**Ahmed Kebaier** (Universite Evry Paris-Saclay, France) FINANCIAL STOCHASTIC MODELS DIFFUSION: FROM RISK-NEUTRAL TO REAL-WORLD MEASURE	
JULY 8 **17:30-17:50**	**Carlos Mas Arabi** (Institut Universitari de Matem\`{a}tica Pura i Aplicada, Universitat Polit\`{e}cnica de Val\`{e}ncia, 46022 (Val\`{e}ncia), Spain, Spain) Modeling of integrated Fabry-Perot resonators	

Parallel Session 9 :: Thursday, 07/09, 8:00-10:00

SS 8	**Differential, Difference, and Integral Equations: Techniques and Applications** Organizer(s): Jeffrey Lyons , Wenying Feng	**Room 440**
JULY 9 **8:00-8:30**	**Youssef N Raffoul** (University of Dayton, USA) NONSTANDARD DISCRETIZATION SCHEME IN VOLTERRA INTEGRO-DIFFERENTIAL EQUATIONS THAT PRESERVES UNIFORM ASYMPTOTIC STABILITY	
JULY 9 **8:30-9:00**	**Annamaria Barbagallo** (University of Naples Federico II, Italy) On the existence of solutions to the Cauchy-Dirichlet problem for a class of third-order hyperbolic operators	

JULY 9 **9:00-9:30**	**Sougata Dhar** (Fairfield University, USA) Quasilinear eigenvalue estimate for coupled differential equations
JULY 9 **9:30-10:00**	**Pavel Dubovski** (Stevens Institute of Technology, USA) On BVP for linear fractional differential equations

SS 10	**Recent Developments in Regularity Theory for PDEs** Organizer(s): Zongyuan Li , Hongjie Dong	**Room 620**
JULY 9 **8:00-8:30**	**Jongkeun Choi** (Pusan National University, Korea) Stationary Stokes systems in non-divergence and double divergence form	
JULY 9 **8:30-9:00**	**Seongmin Jeon** (Hanyang University, Korea) The free boundary for a superlinear system	
JULY 9 **9:00-9:30**	**Dong-ha Kim** (Research Institute of Mathematics, Seoul National University., Korea) Dirichlet problem and regular boundary points for elliptic equations in non-divergence and double divergence form	
JULY 9 **9:30-10:00**	**Doyoon Kim** (Korea Unversity, Korea) Improving Physics-Informed Neural Networks via Sobolev Trace Regularization	

SS 11	**Stochastic Partial Differential Equations** Organizer(s): Benjamin Gess , Michael Röckner	**Room 438**
JULY 9 **8:00-8:30**	**Max Sauerbrey** (MPI MiS, Leipzig, Germany) The incompressible Navier--Stokes--Fourier system with thermal noise	
JULY 9 **8:30-9:00**	**Dejun Luo** (Academy of Mathematics and Systems Science, Chinese Academy of Sciehces, Peoples Rep of China) Strong uniqueness by Kraichnan transport noise for the inviscid 2D Boussinesq system	
JULY 9 **9:00-9:30**	**Ben Goldys** (Sydney University, Australia) Pathwise Solvability and Bubbling in 2D Stochastic Landau-Lifshitz-Gilbert Equations	
JULY 9 **9:30-10:00**	**Barbara Ruediger** (University Wuppertal, Germany) Boltzmann processes	

SS 20	**Lie Symmetries, Conservation Laws, and Other Approaches in Solving Nonlinear Differential Equations** Organizer(s): Chaudry Masood Khalique , Wen-Xiu Ma , Maria Luz Gandarias	**Room 641**
JULY 9 **8:00-8:30**	**Chaudry M Khalique** (North-West University, So Africa) A study of a fourth-order nonlinear generalized Ablowitz-Kaup-Newell-Segur water wave equation in fluid dynamics	
JULY 9 **8:30-9:00**	**Letlhogonolo Moleleki** (North-West University, So Africa) Solutions and conservation laws of a (3+1)-dimensional Zakharov-Kuznetsov equation	
JULY 9 **9:00-9:30**	**Ali Raza** (Stellenbosch University, So Africa) The Invariance, Conserwation Laws and Integeration of Differential Equations	
JULY 9 **9:30-10:00**	**Noor Muhammad** (King Fahd University of Petroleum and Minerals, Saudi Arabia) Role of OpenFOAM in Computatonal Fog Dynamics	

SS 50	**Dynamical systems: Oseledets decomposition, ordered spaces, Lyapunov exponents, and applications** Organizer(s): Janusz Mierczyński , Marek Kryspin	**Room 301**
JULY 9 **8:00-8:30**	**Christian Poetzsche** (University of Klagenfurt, Austria) On linearized stability	
JULY 9 **8:30-9:00**	**Cecilia Gonzalez-Tokman** (University of Queensland, Australia) Lyapunov--Oseledets spectrum for transfer operator cocycles under perturbations	
JULY 9 **9:00-9:30**	**Gary Froyland** (UNSW Sydney, Australia) Quenched extreme value theory and hitting-time distributions for random dynamical systems via spectral perturbation of transfer operator cocycles	
JULY 9 **9:30-10:00**	**Sebastian Riedel** (FernUniversitaet Hagen, Germany) Invariant manifolds induced by stochastic delay differential equations	

SS 56	**Dynamical properties of nonlinear partial differential equations** Organizer(s): Runzhang Xu , Andreas Chatziafratis , Wei Lian	**Room 640**

JULY 9 **8:00-8:30**	**Ramon G. Plaza** (Universidad Nacional Autonoma de Mexico, Mexico) Decay structure of an inviscid non-equilibrium radiation hydrodynamics system
JULY 9 **8:30-9:00**	**Mats Ehrnstrom** (NTNU Norwegian University of Science and Technology, Norway) A plethora of fully localised solitary waves for the full-dispersion Kadomtsev-Petviashvili equation
JULY 9 **9:00-9:30**	**Stefano Boehmer** (Lund University, Sweden) Steady pattern formation and film rupture in a two-dimensional thermocapillary thin-film model of the B\`enard--Marangoni problem
JULY 9 **9:30-10:00**	**Bastian Hilder** (Technical University of Munich, Germany) Convective Stability of Front Superpositions: The Role of Unstable Connecting States

SS 64	**Reaction-diffusion equations and applications** Organizer(s): Wan-Tong Li , Zhi-Cheng Wang , Shi-Liang Wu	**Room 637**
JULY 9 **8:00-8:30**	**Jiabing Wang** (China University of Geosciences (Wuhan), Peoples Rep of China) Persistence and Spatial Propagation of an Impulsive Integro-differential System with Non-local Pulse	
JULY 9 **8:30-9:00**	**Min Zhu** (Anhui Normal University, Peoples Rep of China) An impulsive reaction-diffusion model with asymptotically bounded domain	
JULY 9 **9:00-9:30**	**Xiufang Cui** (Lanzhou University, Peoples Rep of China) Uniform regularity estimates and inviscid limit for the compressible non-resistive magetohydrodynamics system	
JULY 9 **9:30-10:00**	**Wan-Tong Li** (Lanzhou University, Peoples Rep of China) Accelerating propagation in diffusion phenomena	

SS 69	**Mathematical Models and Analysis of (Partial) Differential Equations in the Applied Sciences** Organizer(s): Alain Miranville , Andreas Chatziafratis , Georgia Karali	**Room 618**
JULY 9 **8:00-8:30**	**Efstathios Charalampidis** (San Diego State University, USA) Analytical and Computational Methods for Bifurcation Analysis of Collapsing Solutions to Nonlinear Dispersive PDEs	

JULY 9 **8:30-9:00**	**Aseel AlNajjar** (King Abdullah University of Science and Technology(KAUST), Saudi Arabia) Nonlinear gradient effects in viscoelasticity
JULY 9 **9:00-9:30**	**Rawan Tarabeh** (Technion - Israel Institute of Technology, Israel) Mullins` nonlinear grooving solutions
JULY 9 **9:30-10:00**	**Andreas Vikelis** (University of Vienna, Austria) Conservation Laws Constrained by Linear PDEs

SS 70	**Progress and Challenges in Nonlocal and Nonhomogeneous PDEs** Organizer(s): Anouar Bahrouni , Ariel Salort	**Room 421**
JULY 9 **8:00-8:30**	**Alessio Fiscella** (Universidade Estadual de Campinas, Brazil) No pain, no gain on critical logarithmic double phase equations	
JULY 9 **8:30-9:00**	**Alberico Angela** (Italian National Research Council - Institute for Applied Calculus (Napoli), Italy) Fractional Orlicz-Sobolev Spaces: Embeddings \& Continuity properties	
JULY 9 **9:00-9:30**	**simone ciani** (University of Bologna Alma Mater, Italy) On the weak Harnack inequality for a generalized Orlicz De Giorgi class	
JULY 9 **9:30-10:00**	**Eugenio Vecchi** (ALMA MATER STUDIORUM - Universita' di Bologna, Italy) On a Sobolev critical problemfor the superposition of a local and nonlocal operator with the wrong sign	

SS 72	**Fluid-structure interaction and free boundary problems** Organizer(s): Igor Kukavica , Arnab Roy , Boris Muha	**Room 642**
JULY 9 **8:00-8:30**	**Eduard Feireisl** (Institute of Mathematics, Czech Academy of Sciences, Czech Rep) On the long time behavior of a family of several rigid bodies immersed in a viscous fluid	
JULY 9 **8:30-9:00**	**Francisco Gancedo** (Universidad de Sevilla, Spain) On 3D Navier-Stokes helical vortex filament	

JULY 9 **9:00-9:30**	**Felix Brandt** (University of California, Berkeley, USA) Analysis and numerics of a fully averaged poroelastic plate model and its interaction with a fluid
JULY 9 **9:30-10:00**	**Franck Sueur** (University of Luxembourg, France) The 3D Kutta-Joukowski effect

SS 80	**Functional inequalities and PDEs** Organizer(s): Gerassimos Barbatis , Lorenzo Brasco	**Room 428**
JULY 9 **8:30-9:00**	**Pier Domenico Lamberti** (University of Padova, Italy) On the superposition and the Phragm\`{e}n-Lindel\{o}f principles for the p-Laplacian	
JULY 9 **9:00-9:30**	**Nurgissa Yessirkegenov** (KIMEP University and Institute of Mathematics and Mathematical Modeling, Kazakhstan) Sharp remainder terms and stability of Lp-Poincare and Heisenberg-Pauli-Weyl inequalities with applications to spectral gaps	
JULY 9 **9:30-10:00**	**Alessia Kogoj** (University of Urbino, Italy) Liouville theorems for left-invariant PDEs via right-invariant derivatives	

SS 84	**Mathematical modeling and analysis in spatial ecology and epidemiology** Organizer(s): Yu Jin , Yijun Lou , Xiaoqiang Zhao	**Room 430**
JULY 9 **8:00-8:30**	**Yanni Xiao** (Xi`an Jiaotong University, Peoples Rep of China) Modelling heterogeneity and its impact on disease transmission dynamics	
JULY 9 **8:30-9:00**	**Sha He** (Shaanxi Normal University, Peoples Rep of China) Modeling and Data Analysis of Emerging Infectious Disease Transmission Using Stochastic Difference Equations	
JULY 9 **9:00-9:30**	**Ruiwen Wu** (Jinan University, Peoples Rep of China) A nonlocal reaction-diffusion pest model with impulsive larvicidal treatments	

SS 85	**Phase-field models and their singular limits** Organizer(s): Andrea Poiatti , Helmut Abels , Harald Garcke	**Room 437**

JULY 9 **8:30-9:00**	**Kerrek Stinson** (University of Utah, USA) Convergence Rates for Adversarial Training
JULY 9 **8:30-9:00**	**Yutaka Terasawa** (Nagoya University, Japan) Existence and Nonlocal-to-Local Convergence for Singular, Anisotropic Nonlocal Cahn-Hilliard Equations
JULY 9 **9:00-9:30**	**Charles Elbar** (Universite Claude Bernard Lyon 1, France) Deterministic particle approximation of a fourth-order PDE
JULY 9 **9:30-10:00**	**Alice Marveggio** (University of Bonn, Germany) The Verigin problem with phase transition as Wasserstein flow

SS 109	**Cluster Algebras, Hall Algebras and Their Applications** Organizer(s): Xueqing Chen , Fang Li , Min Huang	**Room 204**
JULY 9 **8:30-9:00**	**Linhui Shen** (Michigan State University, USA) Skein algebras on punctured surfaces	
JULY 9 **9:00-9:30**	**Daping Weng** (University of North Carolina at Chapel Hill, USA) Boundary Measurement Maps on Legendrian Weaves	
JULY 9 **9:30-10:00**	**Lang Mou** (UC Davis, USA) Modulated graphs with potentials and skew-symmetrizable cluster algebras	

SS 122	**Topological Data Analysis Theory, Algorithms, and Applications** Organizer(s): Firas Khasawneh	**Room 538**
JULY 9 **8:30-9:00**	**Woojin Kim** (KAIST, Korea) Interleaving distance as a Galois-edit distance	
JULY 9 **9:00-9:30**	**Fernando Galaz-Garcia** (Durham University, England) Generalised Wasserstein Metrics on Persistence Diagrams via Banach Sequence Ideals	
JULY 9 **9:30-10:00**	**Henry Adams** (University of Florida, USA) Hausdorff vs Gromov-Hausdorff distances	

SS 124	**Mathematical methods for heterogeneous media** Organizer(s): José Matias , Ana Cristina Barroso , Elvira Zappale	Room 434
JULY 9 **8:30-9:00**	**Stefano Almi** (University of Naples Federico II, Italy) Riesz fractional gradient functionals defined on partitions: Nonlocal-to-local variational limits	
JULY 9 **9:00-9:30**	**Riccardo Cristoferi** (Radboud University, Netherlands) The effect of almost-periodic microstructures in phase separation	
JULY 9 **9:30-10:00**	**Lorenza D`Elia** (TU Wien, Austria) Homogenization in magnetoelasticity under small elastic response	

SS 125	**Models of Fluid Motion** Organizer(s): John Carter , Mats Ehrnstrom , Panayiotis Panayotaros	Room 436
JULY 9 **8:00-8:30**	**Christian Klein** (University Burgundy Europe/IMB, France) Numerical Study of Boussinesq systems	
JULY 9 **8:30-9:00**	**Jose Galaz** (Pontificia Universidad Catolica de Chile, Chile) Spectral Evidence of Integrability Breakdown in Shallow-Water Multisoliton Fission: A pIST Benchmark of Wave Models	
JULY 9 **9:00-9:30**	**Marcelo V. Flamarion** (Pontificia Universidad Catolica del Peru, Peru) Soliton Turbulence in Non-integrable Systems	
JULY 9 **9:30-10:00**	**Christos Papoutsellis** (ECOLE NATIONALE DES PONTS ET CHAUSSEES, France) A new high-order shallow-water modeling approach: variational derivation and numerical simulations	

SS 127	**Nonlocal models arising in biology and ecology** Organizer(s): Nikos Kavallaris , Marvin Fritz , Runzhang Xu	Room 425
JULY 9 **9:00-9:30**	**Rafael Granero Belinchon** (Universidad de Cantabria, Spain) Asymptotic models for tumor growth	
JULY 9 **9:30-10:00**	**Christoph Hurm** (University of Regensburg, Germany) Nonlocal-to-Local Convergence for a Diffuse Interface Model for Two Phase Flow with Matched Densities	

SS 129	**Mathematics of Data Science and Applications** Organizer(s): Ding-xuan ZHOU , Xiang ZHOU	**Room 628**
JULY 9 **8:00-8:30**	**JIA CAI** (Guangdong University of Finance & Economics, Peoples Rep of China) Graph Neural Networks: Principles and Applications	
JULY 9 **8:30-9:00**	**Xuemei Chen** (University of North Carolina Wilmington, USA) Decomposition of Electrodermal Activity Signals Using Matrix Separation	
JULY 9 **9:00-9:30**	**Weiguo Gao** (Fudan University, Peoples Rep of China) Toward Theoretical Insights into Diffusion Trajectory Distillation via Operator Merging	
JULY 9 **9:30-10:00**	**Qingtang Jiang** (Zhejiang Normal University, Peoples Rep of China) Separation of Non-Stationary Multi-Component Signals: Enhanced SST/Chirplet Methods and Their Engineering & Data Science Applications	

SS 134	**Mean field stochastic control problems and related topics** Organizer(s): Juan Li , Rainer Buckdahn	**Room 619**
JULY 9 **8:00-8:30**	**Rainer RB Buckdahn** (Universite de Bretagne Occidentale, France) Path-depending controlled mean-field coupled forward-backward SDEs. The associated stochastic maximum principle	
JULY 9 **8:30-9:00**	**Laurent Denis** (Le Mans University, France) Continuity problems for Backward Stochastic Differential Equations with singular terminal condition.	
JULY 9 **9:00-9:30**	**Juan Li** (Shandong University, Peoples Rep of China) A global stochastic maximum principle for mean-field forward-backward stochastic control systems with quadratic generators	
JULY 9 **9:30-10:00**	**Dan Goreac** (Laval University, Canada) Cramer-Lundberg Models with Mean-Field Claims and Premia	

SS 135	**Dynamical Systems in Mathematical Biology: Epidemiology, Population Dynamics, and Reaction Networks** Organizer(s): Burcu Gürbüz , Eugenia Franco , Nicola Vassena	Room 426
JULY 9 **8:00-8:30**	**Joseph Paez Chavez** (Escuela Superior Politecnica del Litoral, Ecuador) An epidemiological model describing co-infection of HIV/AIDS and COVID-19 considering public awareness and prevention	
JULY 9 **8:30-9:00**	**Fatihcan M. Atay** (Bilkent University, Turkey) Compartmental disease models with time-dependent transmission parameters	
JULY 9 **9:00-9:30**	**Calvin Tadmon** (University of Dschang, Cameroon) The Influence of Climate Variability on Ebola Spread: A Dynamical Systems Approach with Environmental Reservoir and Viral Ecology	
JULY 9 **9:30-10:00**	**Eymard Hernandez-Lopez** (University of Tennessee at Chattanooga, USA) Allee-Driven Thresholds and Bifurcation Structure in Cancer Immunoediting.	

SS 137	**Nonlinear Dynamics, Chaos, and Applications: From Fractional Systems to Astrophysical Models** Organizer(s): Mattia Coccolo , Juan Carlos Vallejo	Room 315
JULY 9 **8:00-8:30**	**Jesus Seoane** (Universidad Rey Juan Carlos, Spain) Forced chaotic scattering	
JULY 9 **8:30-9:00**	**GUSTAVO A Munoz-Fernandez** (Universidad Complutense de Madrid, Spain) Modeling Pandemics in an Age-Structured Population	
JULY 9 **9:00-9:30**	**Mattia Coccolo** (Universidad rey Juan Carlos, Spain) Fractional damping term in nonlinear oscillators.	

SS 140	**Recent advances in wavelet analysis, PDEs and dynamical systems – part III** Organizer(s): Emanuel Guariglia	Room 445
JULY 9 **8:00-8:30**	**Raffaela Capitanelli** (Sapienza University ROMA, Italy) Non local dynamical boundary condition on irregular structures	

JULY 9 **8:30-9:00**	**Emanuel Guariglia** (Kean University, Italy) Prime subsets, chaoticity and IFSs
JULY 9 **9:00-9:30**	**Tsvetan Hristov** (Sofia University "St. Kliment Ohridski", Bulgaria) Ill-Posed Boundary Value Problems for Multidimensional PDEs of Keldysh Type
JULY 9 **9:30-10:00**	**Alibek Yeskermessuly** (Altynsarin University, Kazakhstan) On Parabolic Equations with Singular Coefficients and Initial-Boundary Data

SS 141	**New trends and methods for differential problems** Organizer(s): Simone Creo , Ida De Bonis	**Room 638**
JULY 9 **8:00-8:30**	**Giorgio Saracco** (Universita` di Ferrara, Italy) Spectral clusters	
JULY 9 **8:30-9:00**	**Giulio Tralli** (University of Ferrara, Italy) Boundary regularity at characteristic points in the Heisenberg group	
JULY 9 **9:00-9:30**	**Domenico Angelo Angelo** (Universit\`a degli studi di Napoli Federico II, Italy) The motion of a liquid drop	
JULY 9 **9:30-10:00**	**Valentina Taddei** (University of Modena and Reggio Emilia, Italy) On a new concept of controllability of second-order semilinear differential equations in Banach spaces	

SS 143	**Nonlinear dynamics for kinetic, fluids and mathematical physics** Organizer(s): Hyeong-Ohk Bae , Jongmin Han , Jeongho Kim	**Room 316**
JULY 9 **8:00-8:30**	**Byungjoon Lee** (The Catholic University of Korea, Korea) On the Role of Energy Stability in Numerical Methods for Incompressible Fluid Equations	
JULY 9 **8:30-9:00**	**DONGHYUN LEE** (POSTECH, Korea) L\infty theory with stretched exponential weight for the Boltzmann equation	
JULY 9 **9:00-9:30**	**Moon-Jin Kang** (Korea Advanced Institute of Science and Technology, Korea) Stability of compressible flows with boundary in one space dimension	

JULY 9 **9:30-10:00**	**Hermenegildo B de Oliveira** (University of the Algarve, Portugal) Analysis of Voigt-type fluid models: existence, regularity and long-time behavior

SS 146	**Nonlinear differential equations: control, delay, and boundary value problems** Organizer(s): Irene Benedetti , Francesca Dalbono , Elisa Sovrano , Valentina Taddei	**Room 427**
JULY 9 **8:00-8:30**	**Elisa Affili** (Universite de Rouen Normandie, France) Which diffusion strategy is best for a prey and a predator moving with Fractional Laplacians?	
JULY 9 **8:30-9:00**	**Paulo Amorim** (FGV - EMAp, Brazil) A structured model of vector-borne disease with within-host viral load and antibody dynamics	
JULY 9 **9:00-9:30**	**Mauro Garavello** (University of Milano-Bicocca, Italy) Structure of Optimal Solutions for Traffic Flow	
JULY 9 **9:30-10:00**	**Eduardo Mu\~noz-Hern\`andez** (Complutense University of Madrid, Spain) Some uniqueness and multiplicity results in predator-prey models with saturation	

SS 153	**Stochastic computing and structure preserving methods** Organizer(s): Yanzhao Cao , Chuchu Chen , Jialin Hong	**Room 433**
JULY 9 **8:00-8:30**	**Cristina Anton** (MacEwan University, Canada) Symplectic Integrators from B-Series and Generating Functions for Stochastic Hamiltonian Systems	
JULY 9 **8:30-9:00**	**Wanrong Cao** (Southeast University, Peoples Rep of China) Approximation of invariant measure via an explicit scheme for the stochastic Cahn-Hilliard equation	
JULY 9 **9:00-9:30**	**Xinyu Chen** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) The law of iterated logarithm for numerical approximation of time-homogeneous Markov process	

JULY 9 **9:30-10:00**	**Jianbo Cui** (The Hong Kong Polytechnic University, Hong Kong) A supervised learning scheme for computing Hamilton-Jacobi equation via density coupling

SS 155	**Advances in mathematical modelling and numerical simulation of superfluids** Organizer(s): Ionut Danaila , Weizhu Bao	**Room 738**
JULY 9 **8:00-8:30**	**Blair Blakie** (University of Otago, New Zealand) Supersolidity in Dipolar Bose-Einstein condensates	
JULY 9 **8:30-9:00**	**Han Pu** (Rice University, USA) Floquet geometric squeezing in fast-rotating condensates	
JULY 9 **9:00-9:30**	**Dmitry Pelinovsky** (McMaster University, Canada) NLS equation with competing nonlinearities: orbital stability of kinks and solitons	
JULY 9 **9:30-10:00**	**Weizhu Bao** (National University of Singapore, Singapore) Computational methods for the nonlinear Schroedinger equation with low regularity potential and nonlinearity	

SS 156	**Structure and dynamics of solutions for nonlinear elliptic and parabolic equations** Organizer(s): Satoshi Tanaka , Raul Manasevich , Marta Garcia-Huidobro	**Room 312**
JULY 9 **8:00-8:30**	**Kentaro NAGAHARA** (Institute of Science Tokyo, Japan) Optimal Resource Allocation in Multi-Patch Models with Sign-Changing Environments	
JULY 9 **8:30-9:00**	**Masahiro Sakoda** (Tohoku University, Japan) Gradient trajectories from elastica to heterogeneous elastic curves with non-classical shapes	
JULY 9 **9:00-9:30**	**Ryuji Kajikiya** (Osaka Electro-Communication University, Japan) Asymmetry of positive solutions for the H\`{e}non equation in unbounded domains	
JULY 9 **9:30-10:00**	**Shin-Hwa Wang** (National Tsing Hua University, TAIWAN, Taiwan) Classification and evolution of bifurcation curves for the one-dimensional perturbed Gelfand problem with the Minkowski-curvature operator	

SS 158	**From PDE control to the qualitative study of (random) dynamical systems** Organizer(s): Manuel Rissel , Vahagn Nersesyan , Marius Tucsnak	**Room 812**
JULY 9 **8:00-8:30**	**Manuel Rissel** (ShanghaiTech University, Peoples Rep of China) Controllability of incompressible fluids and related systems driven by degenerate forcing	
JULY 9 **8:30-9:00**	**Jingrui Niu** (Institute for Advanced Study in Mathematics, Harbin Institute of Technology, Peoples Rep of China) Stability of a KdV equation close to critical lengths	
JULY 9 **9:00-9:30**	**Pierre Lissy** (CERMICS, Ecole nationales des ponts et chausses, France) Robust control of linear systems under small parameter variation	
JULY 9 **9:30-10:00**	**Nicola De Nitti** (University of Pisa, Italy) Feedback stabilization of entropy solutions to the p-system at a junction	

SS 159	**New Developments in Open-Source Software for Inverse Problems** Organizer(s): Evangelos Papoutsellis , Ander Biguri	**Room 823**
JULY 9 **8:30-9:00**	**Ander Biguri** (University of Cambridge, England) The TIGRE and LION toolboxes for algorithms in applied tomographic reconstruction	
JULY 9 **9:00-9:30**	**Dimitris Karkalousos** (Amsterdam University Medical Centers, Netherlands) An Advanced Toolbox for Multitask Medical Imaging Consistency (ATOMMIC)	
JULY 9 **9:30-10:00**	**Andreas Kofler** (Physikalisch-Technische Bundesanstalt (PTB), Braunschweig and Berlin, Germany) MRpro-An open PyTorch-based MR reconstruction and processing package	

SS 163	**Mathematical Modeling of Multiphysics Coupled Systems—Models, Algorithms, and Scalable Computing** Organizer(s): Yifan Wang , Haibiao Zheng , Yizhong Sun	**Room 314**
JULY 9 **8:30-9:00**	**Ping Lin** (University of Dundee, Scotland) Novel unconditionally stable regularization schemes for the Navier-Stokes equations	

JULY 9 **9:00-9:30**	**Giorgio Bornia** (Alma Mater Studiorum University of Bologna, Italy) Mixed Finite Element Methods for Boundary Control Problems Constrained by the Biharmonic Equation
JULY 9 **9:30-10:00**	**Yifan Wang** (Texas Tech University, USA) Explicit Splitting Scheme for Fluid-Poroelastic Structure Interaction Problems and its Error Analysis

SS 164	**Periodic and Ergodic Schrodinger Operators** Organizer(s): Matthew Faust , Ilya Kachkovskiy , Omar Hurtado	**Room 740**
JULY 9 **8:30-9:00**	**Gilad Sofer** (Technion - Israel Institute of Technology, Israel) The Dry Ten Martini Problem for Sturmian graphs	
JULY 9 **9:00-9:30**	**Hongyi Cao** (Peking University, Peoples Rep of China) Anderson localization for analytic quasi-periodic Schr\odinger operators	
JULY 9 **9:30-10:00**	**Dan Borgnia** (University of California, Berkeley, USA) Hidden Criticality and the Critical Dry Ten Martini Problem	

SS 167	**Functional spaces and multiphase problems** Organizer(s): Calogero Vetro , Marek Galewski	**Room 827**
JULY 9 **8:30-9:00**	**Marcello DAbbicco** (University of Bari, Italy) Global small data solutions for some nonlocal semilinear evolution equations	
JULY 9 **9:00-9:30**	**Ki-Ahm Lee** (Seoul National University, Korea) Nonlinear Partial Differential Equations and Their Applications	
JULY 9 **9:30-10:00**	**Valeria Marraffa** (Dipartimento di Matematica e Informatica, Italy) Vitali theorems for varying measures	

SS 168	**Stochastic Analysis and Large Scale Interacting Systems** Organizer(s): Danielle Hilhorst , Perla El Kettani , Bin Xie	**Room 313**

JULY 9 **8:00-8:30**	**Hakima Bessaih** (Florida Internaational University, USA) Existence and Uniqueness of a 3D Nonlinear Stochastic Thermolastic Model with Nonlinear Damping
JULY 9 **8:30-9:00**	**Foivos F Evangelopoulos-Ntemiris** (TU DELFT, Netherlands) Optimal Regularity and Stability for Numerical Schemes of SPDEs via functional calculus
JULY 9 **9:00-9:30**	**Lubomir Banas** (Bielefeld University, Germany) Numerical Approximation of the stochastic Cahn-Hilliard equation with singular potential
JULY 9 **9:30-10:00**	**Chengcheng Ling** (University of Augsburg, Germany) Stroock-Varadhan martingale problem of Young stochastic differential equations

SS 172	**Stochastic and geometric analysis on manifolds and metric measure spaces** Organizer(s): Kazuhiro Kuwae , Xiangdong Li , Asuka Takatsu	**Room 639**
JULY 9 **8:30-9:00**	**Shin-ichi Ohta** (University of Osaka, Japan) Nonlinear heat flow	
JULY 9 **9:00-9:30**	**Yohei Sakurai** (Saitama university, Japan) Stability of weighted minimal hypersurfaces under a lower 1-weighted Ricci curvature bound	
JULY 9 **9:30-10:00**	**Hui-Chun Zhang** (Sun Yat-sen University, Peoples Rep of China) Lipschitz regularity of harmonic map heat flows into CAT(0) spaces	

SS 175	**Modern Trends in Partial Differential Equations and General Relativity** Organizer(s): Anahit Galstyan , Makoto Nakamura , Karen Yagdjian	**Room 739**
JULY 9 **8:00-8:30**	**Halit Sevki Aslan** (University of Sao Paulo, Brazil) Competing time-dependent dissipation mechanisms in wave models: friction vs. viscoelastic damping	
JULY 9 **8:30-9:00**	**Marcelo Ebert** (University of Sao Paulo, Brazil) Dispersive estimates for wave type equations with time-dependent damping	

JULY 9 **9:00-9:30**	**Hiroyuki Takamura** (Tohoku University, Japan) Spatially weighted nonlinear wave equations in 1D and Li-Zhou theorem
JULY 9 **9:30-10:00**	**Alessandro Palmieri** (University of Bari, Italy) The critical case for the EPDT equation

SS 184	**Mean-Field Games: From Partial Differential Equations to Numerical Methods** Organizer(s): Diogo Gomes , Alpar Meszaros , Marco Cirant	**Room 825**
JULY 9 **8:00-8:30**	**Bashayer Majrashi** (KAUST, Saudi Arabia) Weak-Strong Uniqueness for Second-Order Mean-Field Games	
JULY 9 **8:30-9:00**	**Kyle Rosengartner** (Baylor University, USA) Ergodic Mean Field Games of Controls with State Constraints	
JULY 9 **9:00-9:30**	**Lukas Wessels** (Universite Cote d`Azur, France) Mean-Field Games in Hilbert Spaces with Degenerate Noise: A Viscosity Approach	
JULY 9 **9:30-10:00**	**David M. Ambrose** (Drexel University, USA) Nonlocal mean field games with pseudomeasure or negative Sobolev initial distributions	

SS 185	**Multiscale Analysis: Geometry and Evolution Problems (mSPACE)** Organizer(s): Delio Mugnolo , Leonard Monsaingeon , Matthias Neumann	**Room 311**
JULY 9 **8:30-9:00**	**Lorenzo Portinale** (Universita` di Milano statale, Italy) Regularity by duality for minimising movements with nonlinear mobility	
JULY 9 **9:00-9:30**	**Vanja Wagner** (University of Zagreb, Croatia) Censored subordinate Brownian motion	
JULY 9 **9:30-10:00**	**Camilla Brizzi** (Technical University of Munich (TUM), Germany) on the p-Wasserstein barycenter: behaviours and regularity properties	

SS 191	**Stochastic Dynamical Systems Under Levy Noise: Theory and Applications** Organizer(s): Ting Gao , Xiaoli Chen	Room 824
JULY 9 **8:00-8:30**	**Jianyu Chen** (Nanyang Technological University, Singapore) Critical Transitions in Multi-Particle Systems: A Generative Control Framework via Onsager Machlup Functionals	
JULY 9 **8:30-9:00**	**Ting Gao** (Huazhong University of Science and Technology, Peoples Rep of China) How Mathematical Structures Emerge from Uncertainties: Dynamics, Geometry, and Topology	
JULY 9 **9:00-9:30**	**Jianyu Hu** (Nanyang Technological University, Singapore) A kernel method for the learning of Wasserstein geometric flows	

SS 192	**Numerical methods for complex differential equation models** Organizer(s): Yu Feng , Liu Liu , Yanli Wang	Room 826
JULY 9 **8:00-8:30**	**Juan Cheng** (Capital Normal University, Peoples Rep of China) A LAX-WENDROFF TYPE THEOREM OF DOUBLY CONSERVATIVE SCHEMES FOR DEGENERATE CONVECTION-DIFFUSION EQUATIONS	
JULY 9 **8:30-9:00**	**Liu Liu** (The Chinese University of Hong Kong, Hong Kong) Multi-fidelity numerical methods for a class of kinetic models	
JULY 9 **9:00-9:30**	**Yu Feng** (Great Bay University, Peoples Rep of China) A Stabilized Numerical Framework for Necrotic Tumor Growth via Coupled Boundary Integral and Obstacle Solvers	
JULY 9 **9:30-10:00**	**Jinchao Feng** (Great Bay University, Peoples Rep of China) Data-driven Discovery of Asymmetric Interacting Particle Systems	

SS 195	**Calculus of Variations and Hyperbolic PDEs in Solid Mechanics** Organizer(s): Andreas Vikelis , Konstantinos Koumatos , Athanasios Tzavaras	Room 821

JULY 9 **8:00-8:30**	**Dehua Wang** (University of Pittsburgh, USA) Stability effect in elasticity
JULY 9 **8:30-9:00**	**Lennart Machill** (Rheinische Friedrich-Wilhelms-Universit\\"{a}t Bonn, Germany) Frame-indifferent approximation in Nonlinear Thermoviscoelasticity
JULY 9 **9:00-9:30**	**Paolo Piersanti** (The Chinese University of Hong Kong, Shenzhen, Peoples Rep of China) An existence theorem for time-dependent obstacle problems in viscoelasticity
JULY 9 **9:30-10:00**	**Sebastian Schwarzacher** (Uppsala University/Charles University, Sweden) Time-Periodic Solutions for Hyperbolic-Parabolic Systems

SS 197	**Intelligent Control and Game Theory** Organizer(s): Shujun Wang , Guangchen Wang , Tianyang Nie	**Room 822**
JULY 9 **8:00-8:30**	**Huaibin Tang** (Shandong University, Peoples Rep of China) Unknown Input State Observer Based on a Closed-Form Transformation and the Kalman Filter	
JULY 9 **8:30-9:00**	**Hua Xiao** (Shandong University, Peoples Rep of China) Linear Quadratic Optimal Control Problems for Conditional Mean-Field Stochastic Differential Equations Under Partial Information	
JULY 9 **9:00-9:30**	**Detao Zhang** (Shandong University, Peoples Rep of China) Innovation Incentive Game for Key Core Technology Innovation Based on Multi-Dimensional Private Information	
JULY 9 **9:30-10:00**	**Kai DU** (Shandong University, Peoples Rep of China) Indefinite Linear-Quadratic Mean-Field Game of Regime-Switching System	

CS 2	**PDEs and Applications**	**Room 635**
JULY 9 **8:00-8:20**	**Konstantinos Bessas** (University of Pavia, Italy) Generalized BMO-type seminorms and vector-valued Sobolev functions	
JULY 9 **8:20-8:40**	**Dimitris Giannakis** (Dartmouth College, USA) Quantum mechanical closure of partial differential equations with symmetries	

JULY 9 **8:40-9:00**	**Hung-Wen Kuo** (National Cheng Kung University, Taiwan) Initial layer for the Boltzmann equation
JULY 9 **9:00-9:20**	**Gonzalo Romera** (University of Basque Country, Spain) A theoretical analysis on the inversion of matrices via Neural Networks designed with Strassen algorithm
JULY 9 **9:20-9:40**	**Akhilesh Verma** (Indian Institute of Technology Roorkee, India, India) Controllability Criteria for Semilinear Measure Driven Evolution Systems with Impulses and Nonlocal Inclusions
JULY 9 **9:40-10:00**	**Xu Qian** (National University of Defense Technology, Peoples Rep of China) Mixed and augmented HOC schemes for biharmonic equations

CS 3	**Modeling, Math Biology and Math Finance**	**Room 634**
JULY 9 **8:00-8:20**	**Ole Ca\~nadas** (Dublin City University, Ireland) Limit theorems for stochastic Volterra processes	
JULY 9 **8:20-8:40**	**Aili Fan** (Northwestern Polytechnical University, Peoples Rep of China) Prescribed performance projective synchronization for unknown complex networks with mismatched dimensions via event-triggered mechanism	
JULY 9 **8:40-9:00**	**Nazira Murat** (Bilkent University, Turkey) Delayed consensus in discrete time networks	
JULY 9 **9:00-9:20**	**Nitu Kumari** (IIT Mandi, India) THE FIRST MATHEMATICAL MODEL FOR ELK-WOLF INTERACTION IN YELLOWSTONE NATIONAL PARK USING E-SINDY ALGORITHM	

Parallel Session 10 :: Thursday, 07/09, 13:30-16:00

SS 8	**Differential, Difference, and Integral Equations: Techniques and Applications** Organizer(s): Jeffrey Lyons , Wenying Feng	**Room 440**
JULY 9 **14:00-14:30**	**Marlene Frigon** (University of Montreal, Canada) Prolongation of solutions and Lyapunov stability for Stieltjes dynamical systems	

JULY 9 **14:30-15:00**	**Jessica Kelly** (Christopher Newport University, USA) Lyapunov-type Inequalities for Even-Order Quasilinear Differential Equations
JULY 9 **15:00-15:30**	**Serena Matucci** (Department of Mathematics and Computer Sciences, Italy) Existence and asymptotics of global positive solutions to a nonlinear differential system of fractional order via extension of Karamata theory
JULY 9 **15:30-16:00**	**Paola Rubbioni** (University of Perugia, Italy) Asymptotic stability of differential equations with impulses and distributed delay

SS 10	**Recent Developments in Regularity Theory for PDEs** Organizer(s): Zongyuan Li , Hongjie Dong	**Room 620**
JULY 9 **13:30-14:00**	**Junhee Ryu** (KIAS, Korea) A regularity theory for fractional parabolic equations	
JULY 9 **14:00-14:30**	**Jiangwen Wang** (School of Mathematics, Southeast University, Peoples Rep of China) Some studies on the regularity of solutions to degenerate or singular equations with gradient terms	
JULY 9 **14:30-15:00**	**Shuhei Kitano** (Waseda University, Japan) On the Aleksandrov-Bakelman-Pucci estimate for 1-Laplace-type equations	
JULY 9 **15:00-15:30**	**Ning Cao** (Southeast University, Peoples Rep of China) Entire solutions and asymptotic behavior to a class of parabolic k-Hessian equations	
JULY 9 **15:30-16:00**	**Chuanlong Sun** (Southeast University, Peoples Rep of China) The Isometric Study of Wasserstein Spaces- Bounded Intervals	

SS 11	**Stochastic Partial Differential Equations** Organizer(s): Benjamin Gess , Michael Röckner	**Room 438**
JULY 9 **13:30-14:00**	**Ilya Chevyrev** (SISSA (International School for Advanced Studies), Italy) Large field problem in coercive SPDE via scaling	
JULY 9 **14:00-14:30**	**Konstantinos Dareiotis** (University of Leeds, England) It\^o perspective on variance renormalisation	

JULY 9 **14:30-15:00**	**Markus Tempelmayr** (EPFL, Switzerland) A priori bounds for stochastic porous media equations
JULY 9 **15:00-15:30**	**Sarah-Jean SJM Meyer** (University of Oxford, England) The FBSDE approach to EQFTs
JULY 9 **15:30-16:00**	**Deng Zhang** (Shanghai Jiao Tong University, Peoples Rep of China) Recent progress on stochastic Zakharov system: well-posedness theory and noise-regularization effect

SS 20	**Lie Symmetries, Conservation Laws, and Other Approaches in Solving Nonlinear Differential Equations** Organizer(s): Chaudry Masood Khalique , Wen-Xiu Ma , Maria Luz Gandarias	**Room 641**
JULY 9 **13:30-14:00**	**Gabriel G Magalakwe** (North-West University, So Africa) Lie Symmetry Analysis of Pressure-Driven 3D Filtration Flow	
JULY 9 **14:00-14:30**	**Modisawatsona Lucas Lekoko** (North West University, So Africa) Unsteady analysis of heat transfer and injection--driven flow in a vertical filter chamber	

SS 25	**Recent Progress on Mathematical Analysis of PDEs Arising in Fluid Dynamics** Organizer(s): Huanyao Wen , Changjiang Zhu , Huijiang Zhao	**Room 812**
JULY 9 **14:00-14:30**	**Cheng Yu** (University of Florida, USA) Universality in the Low Mach Number Limit via a Convex Integration Framework	
JULY 9 **14:30-15:00**	**Yong Lyu** (Nanjing University, Peoples Rep of China) Qualitative and quantitative homogenization of some non-Newtonian flows in perforated domains	
JULY 9 **15:00-15:30**	**Bangwei She** (Capital Normal University, Peoples Rep of China) Convergence of a finite volume method to weak solutions for the compressible Navier-Stokes-Fourier system	

JULY 9 **15:30-16:00**	**Tuowei Chen** (School of Mathematics, South China University of Technology, Peoples Rep of China) The global existence and low Mach number limit for full Navier-Stokes equations around the Couette flow in channels

SS 50	**Dynamical systems: Oseledets decomposition, ordered spaces, Lyapunov exponents, and applications** Organizer(s): Janusz Mierczyński , Marek Kryspin	**Room 301**
JULY 9 **13:30-14:00**	**Wenxian Shen** (Auburn University, USA) Existence, uniqueness, and stability of monotone traveling waves for repulsion chemotaxis systems with logistic type source	
JULY 9 **14:00-14:30**	**Caibin Zeng** (South China University of Technology, Peoples Rep of China) Measurably dominated splitting of fields of Banach spaces	
JULY 9 **14:30-15:00**	**Marek Kryspin** (Wroclaw University of Science and Technology, Poland) On the Invariance of Dynamics under Continuous Embeddings	
JULY 9 **15:00-15:30**	**Janusz Mierczy\`nski** (Wroc{\l}aw University of Science and Technology, Poland) Oseledets decomposition and monotone dynamical systems	

SS 56	**Dynamical properties of nonlinear partial differential equations** Organizer(s): Runzhang Xu , Andreas Chatziafratis , Wei Lian	**Room 640**
JULY 9 **13:30-14:00**	**Ting-Yang Hsiao** (SISSA, Taiwan) Full Benjamin-Feir instability of capillary-gravity Stokes waves	
JULY 9 **14:00-14:30**	**Erik Wahl\`en** (Lund University, Sweden) Three-dimensional doubly periodic gravity water waves on Beltrami flows	
JULY 9 **14:30-15:00**	**Giuseppe La Scala** (Scuola Superiore Meridionale, Italy) Capillary drops with constant vorticity	
JULY 9 **15:00-15:30**	**JOHANNA MARSTRANDER** (NTNU - Norwegian University of Science and Technology, Norway) The Fourier spectral approach to the spatial discretization of quasilinear hyperbolic systems	

JULY 9 **15:30-16:00**	**Douglas Svensson Seth** (Norwegian University of Science and Technology, Sweden) Rediscovering shallow-water equations from experimental data

SS 69	**Mathematical Models and Analysis of (Partial) Differential Equations in the Applied Sciences** Organizer(s): Alain Miranville , Andreas Chatziafratis , Georgia Karali	**Room 618**
JULY 9 **13:30-14:00**	**Robert Pego** (Carnegie Mellon University, USA) Convergence to self-similarity for the additive Smoluchowski coagulation equation with source	
JULY 9 **14:00-14:30**	**Amy Novick-Cohen** (Technion - Israel Institute of Technology, Israel) Constructing Steady States Using Delaunay Surfaces	
JULY 9 **14:30-15:00**	**Laurence L. Cherfils** (La Rochelle University, France) Mathematical model for tumor growth and lactate kinetics in glioma	
JULY 9 **15:00-15:30**	**Alexandra Stavrianidi** (University of Munster, Germany) Sharp front asymptotics in cascading Fisher KPP systems and multitype Branching Brownian Motion	
JULY 9 **15:30-16:00**	**Pavlos Zouboulоglou** (University of Muenster, Germany) On the density of the supremum of nonlinear SPDEs	

SS 70	**Progress and Challenges in Nonlocal and Nonhomogeneous PDEs** Organizer(s): Anouar Bahrouni , Ariel Salort	**Room 421**
JULY 9 **13:30-14:00**	**Tuhina Mukherjee** (Indian Institute of Technology Jodhpur, India) On polyharmonic double phase problems	
JULY 9 **14:30-15:00**	**Anouar Bahrouni** (University of Monastir, Tunisia) DOUBLE PHASE PROBLEMS WITH EXPONENTS DEPENDING ON SOLUTIONS AND THEIR GRADIENTS	

SS 72	**Fluid-structure interaction and free boundary problems** Organizer(s): Igor Kukavica , Arnab Roy , Boris Muha	**Room 642**

JULY 9 **13:30-14:00**	**Matthias Hieber** (TU Darmstadt, Germany) Analysis of a Fluid-Poroviscoelastic Interaction Problem
JULY 9 **14:00-14:30**	**Helmut Abels** (University of Regensburg, Germany) Local well-posedness of a model for fluidic elastic membranes
JULY 9 **14:30-15:00**	**Rafael Granero Belinchon** (Universidad de Cantabria, Spain) On the dynamics of a fluid-structure interaction problem
JULY 9 **15:00-15:30**	**Sarka Necasova** (Czech Academy of Sciences, Czech Rep) On the problem of compressible fluid-structure interaction with Navier boundary conditions

SS 80	**Functional inequalities and PDEs** Organizer(s): Gerassimos Barbatis , Lorenzo Brasco	**Room 428**
JULY 9 **13:30-14:00**	**Durvudkhan Suragan** (Nazarbayev University, Kazakhstan) Davies-type Hardy inequalities on the Heisenberg group	
JULY 9 **14:00-14:30**	**Michal Kijaczko** (Wroclaw University of Science and Technology, Poland) Functional inequalities in weighted fractional Sobolev spaces	
JULY 9 **14:30-15:00**	**Marianna Chatzakou** (Ghent University, Belgium) Fujita exponent for Hormander`s vector fields	
JULY 9 **15:00-15:30**	**Miltiadis Paschalis** (National and Kapodistrian University of Athens, Greece) Semilinear Schr\\odinger equations with critical Hardy potentials	
JULY 9 **15:30-16:00**	**Katarzyna Mazowiecka** (University of Warsaw, Poland) Vectorial Kato inequality for p-harmonic maps	

SS 84	**Mathematical modeling and analysis in spatial ecology and epidemiology** Organizer(s): Yu Jin , Yijun Lou , Xiaoqiang Zhao	**Room 430**
JULY 9 **13:30-14:00**	**King Yeung Lam** (The Ohio State University, USA) How Should Species Move? Ideal Free Dispersal in Changing Environments	

JULY 9 **14:00-14:30**	**Xiao Yu** (South China Normal University, Peoples Rep of China) Convergence to forced waves of integro-difference equations in a shifting environment
JULY 9 **14:30-15:00**	**Hailong Ye** (Shenzhen University, Peoples Rep of China) Global Dynamics of Nonlocal Dispersal Systems with Time-Varying Domains
JULY 9 **15:00-15:30**	**Ziqi Zhen** (School of Mathematical Sciences, University of Science and Technology of China, Hefei, Anhui 230026, People's Republic of China, Peoples Rep of China) Well-posedness and propagation dynamics of reaction-diffusion equations with Borel-measure coefficients
JULY 9 **15:30-16:00**	**Leyi Jiang** (School of Mathematics, Harbin Institute of Technology, Peoples Rep of China) Propagation dynamics for a stage-structured population model in a shifting environment

SS 109	**Cluster Algebras, Hall Algebras and Their Applications** Organizer(s): Xueqing Chen , Fang Li , Min Huang	**Room 204**
JULY 9 **13:30-14:00**	**Wataru Yuasa** (Hiroshima University, Japan) Skein and cluster algebras of unpunctured surfaces for rank 2 simple Lie algebras	
JULY 9 **14:00-14:30**	**wen Chang** (Shaanxi Normal University, Peoples Rep of China) Discreteness for the derived category of a graded skew-gentle algebra	
JULY 9 **14:30-15:00**	**Zhe Sun** (University of Science and Technology of China, Peoples Rep of China) Webs and their intersections	
JULY 9 **15:00-15:30**	**Zhichao Chen** (University of Science and Technology of China, Peoples Rep of China) Sign-coherence and tropical sign pattern for rank 3 real cluster-cyclic exchange matrices	

SS 118	**Nonlinear Wave systems: Analysis and Computation** Organizer(s): Vahagn Manukian , Stathis Charalampidis , Stéphane Lafortune	**Room 825**
JULY 9 **13:30-14:00**	**Panayotis Kevrekidis** (University of Massachusetts, Amherst, USA) Nonlinear Waves Beyond the Laplacian Klein-Gordon and Nonlinear Schrodinger Settings	

JULY 9 **14:30-15:00**	**Svetlana Roudenko** (Florida International University, USA) Solitons in the 4th order NLS
JULY 9 **15:00-15:30**	**Ramon G. Plaza** (Universidad Nacional Autonoma de Mexico, Mexico) Existence and instability of periodic waves for KdV-Burgers equations with a source

SS 122	**Topological Data Analysis Theory, Algorithms, and Applications** Organizer(s): Firas Khasawneh	**Room 538**
JULY 9 **13:30-14:00**	**Bastian Grossenbacher-Rieck** (University of Fribourg, Switzerland) Shapes, Spaces, Simplices, and Structure: Geometry, Topology, and Machine Learning	
JULY 9 **14:00-14:30**	**Baris Coskunuzer** (University of Texas at Dallas, USA) TopoFormer: Topology Meets Attention for Graph Learning	
JULY 9 **14:30-15:00**	**Farzana Nasrin** (University of Tennessee Knoxville, USA) Learning Generative Models on Persistence Diagram Space via Policy-Induced Markov Processes	
JULY 9 **15:00-15:30**	**James Murphy** (Tufts University, USA) Balancing Geometry and Density with Fermat Metrics: Graphs, Clustering, and Applications	

SS 124	**Mathematical methods for heterogeneous media** Organizer(s): José Matias , Ana Cristina Barroso , Elvira Zappale	**Room 434**
JULY 9 **13:30-14:00**	**Lucia De Luca** (IAC-CNR Roma, Italy) Variational analysis for the nonlinear elastic energy induced by edge dislocations: the dilute regime	
JULY 9 **14:00-14:30**	**Lucas Fix** (University of Augsburg, Germany) Effective transmission through an interface with evolving microstructure	
JULY 9 **14:30-15:00**	**Manuel Friedrich** (JKU Linz, Austria) Variational models for material voids	

JULY 9 **15:00-15:30**	**Carolin Kreisbeck** (KU Eichst\"att-Ingolstadt, Germany) Relaxation of variational models for multiphase elastoplastic materials
JULY 9 **15:30-16:00**	**Anastasia Molchanova** (TU Wien, Austria) Membranes in nonlocal hyperelasticity

SS 125	**Models of Fluid Motion** Organizer(s): John Carter , Mats Ehrnstrom , Panayiotis Panayotaros	**Room 436**
JULY 9 **13:30-14:00**	**John Carter** (Seattle University, USA) Modeling Broadband Water-Wave Experiments with Generalizations of NLS	
JULY 9 **14:00-14:30**	**Panayiotis Panayotaros** (IIMAS, Universidad Nacional Autonoma de Mexico, Mexico) Mode interactions of surface gravity waves in triangular domains	
JULY 9 **14:30-15:00**	**Runzhang Xu** (Harbin Engineering University, Peoples Rep of China) Stability of damped wave equation	
JULY 9 **15:00-15:30**	**DANIEL J RATLIFF** (Northumbria University, England) (Down)shifting Paradigms in Water Waves: What Processes Drive the Spectral Shifts?	
JULY 9 **15:30-16:00**	**Paivo Simson** (Tallinn University of Technology, Estonia) Physical-Space Models for Unidirectional Deep-Water Waves	

SS 127	**Nonlocal models arising in biology and ecology** Organizer(s): Nikos Kavallaris , Marvin Fritz , Runzhang Xu	**Room 425**
JULY 9 **13:30-14:00**	**Yoshihisa Morita** (Ryukoku University, Japan) Traveling waves in a virus infection model of cell-to-cell transition	
JULY 9 **14:00-14:30**	**Hiroshi Ishii** (Hokkaido University, Japan) Traveling wave-like solutions to a time-fractional Fisher-KPP type equation	
JULY 9 **14:30-15:00**	**Chao Yang** (AGH University of Krakow, Poland) Well-posedness for damped hyperbolic equation with critical Hartree type nonlinearity	
JULY 9 **15:00-15:30**	**Matteo Fornoni** (Università degli Studi di Milano, Italy) Elliptic relaxation of a degenerate Cahn-Hilliard tumour growth model	

SS 129	**Mathematics of Data Science and Applications** Organizer(s): Ding-xuan ZHOU , Xiang ZHOU	**Room 628**
JULY 9 **13:30-14:00**	**Ting HU** (Xi`an Jiaotong University, Peoples Rep of China) Convergence of zeroth-order optimization with stochastic mirror descent	
JULY 9 **14:00-14:30**	**Daohong Xiang** (Zhejiang Normal University, Peoples Rep of China) Convolution smoothed outcome weighted learning	
JULY 9 **14:30-15:00**	**Lei Shi** (Fudan University, Peoples Rep of China) Resolution Invariant Operator Learning via Encoder Decoder Representations: Limiting Kernels and Convergence Analysis	
JULY 9 **15:00-15:30**	**Li-Lian Wang** (Division of Mathematical Sciences, Singapore) Kolmogorov Superposition Theorem: Construction, Approximation and Networks	
JULY 9 **15:30-16:00**	**Zhengchu Guo** (Zhejiang University, Peoples Rep of China) Unbounded Density Ratio Estimation and Its Application to Covariate Shift Adaptation	

SS 134	**Mean field stochastic control problems and related topics** Organizer(s): Juan Li , Rainer Buckdahn	**Room 619**
JULY 9 **13:30-14:00**	**Ioana Ciotir** (INSA Rouen Normanie, France) A stochastic porous media Schrodinger equation: Feynman-type motivation, well-posedness and control interpretation	
JULY 9 **14:00-14:30**	**Johan Benedikt Spille** (Technical University Berlin, Germany) A Novel Approach to Pengs Maximum Principle for Mean Field SDE	
JULY 9 **14:30-15:00**	**Qi Zhang** (Fudan University, Peoples Rep of China) The Ergodic Linear-Quadratic Optimal Control Problems with Random Periodic Coefficients	
JULY 9 **15:00-15:30**	**Jing Zhang** (Fudan University, Peoples Rep of China) Maximum Principle for Partially Observed with Jump Observations and Controlled by $ \alpha$-Stable L\`evy Processes	

JULY 9 **15:30-16:00**	**Qingmeng Wei** (Northeast Normal University, Peoples Rep of China) OPTIMAL CONTROL OF SDES WITH MERELY MEASURABLE DRIFT: AN HJB APPROACH

SS 135	**Dynamical Systems in Mathematical Biology: Epidemiology, Population Dynamics, and Reaction Networks** Organizer(s): Burcu Gürbüz , Eugenia Franco , Nicola Vassena	**Room 426**
JULY 9 **13:30-14:00**	**Atsushi Mochizuki** (Institute for Life and Medical Sciences, Kyoto University, Japan) Controlling dynamics of complex biological systems based on network topology	
JULY 9 **14:00-14:30**	**Polly Y. Yu** (University of Illinois Urbana-Champaign, USA) Non-monotonic dose-response curves in biochemical systems	
JULY 9 **14:30-15:00**	**Florin Avram** (UPPA (retired), France) Computing the competitive exclusion partition along the minimal siphons lattice, for multi-strain mathematical epidemiology models	
JULY 9 **15:00-15:30**	**Aytul Gokce** (Ordu University, Turkey) On the Dynamics of a Two-Strain Dengue System with Secondary Infection-Induced Mortality	
JULY 9 **15:30-16:00**	**Marina Ferreira** (CNRS, University of Toulouse, France) Smoluchowski coagulation equation with a flux of dust particles	

SS 136	**Collective Dynamics in Large Networks: From Kuramoto to Spin Models** Organizer(s): Georgi Medvedev , Nils Berglund , Matthew Mizuhara	**Room 437**
JULY 9 **13:30-14:00**	**Matthew Mizuhara** (The College of New Jersey, USA) Twisted states of Kuramoto oscillators on self-similar sets	
JULY 9 **14:00-14:30**	**Grigorios Pavliotis** (Imperial College London, England) Formation of clusters and coarsening in weakly interacting diffusions	
JULY 9 **14:30-15:00**	**Nathalie Ayi** (Sorbonne Universite, France) Mean-field limits for interacting particle systems on adaptive dynamical networks	

JULY 9 **15:00-15:30**	**Artem Alexandrov** (Steklov Institute of Mathematics, Russia) XY-model meets graphons

SS 137	**Nonlinear Dynamics, Chaos, and Applications: From Fractional Systems to Astrophysical Models** Organizer(s): Mattia Coccolo , Juan Carlos Vallejo	**Room 315**
JULY 9 **13:30-14:00**	**Christian Fernandez Perez** (I2SYSBIO-CSIC, Spain) Predictive-Switching Control of Stochastic Biochemical Oscillators and Toggle Switches with Contractivity Analysis	
JULY 9 **14:00-14:30**	**Matteo Franca** (University of Florence, Italy) Some remarks on Melnikov chaos for smooth and piecewise smooth systems	
JULY 9 **14:30-15:00**	**Juan Vallejo** (Universidad Rey Juan Carlos, Spain) Escaping dynamics of relativistic protons in the Earth`s magnetosphere	

SS 140	**Recent advances in wavelet analysis, PDEs and dynamical systems – part III** Organizer(s): Emanuel Guariglia	**Room 445**
JULY 9 **13:30-14:00**	**Wenying Feng** (Trent University, Canada) Fixed-point theorems for semilinear operator equations and applications	
JULY 9 **14:00-14:30**	**Soyeun Jung** (Kongju National University, Korea) Nonlinear instability of rolls in the 2-dimensional generalized Swift-Hohenberg equation	
JULY 9 **14:30-15:00**	**Wen-Xiu Ma** (University of South Florida, USA) From bilinear forms to nonlinear PDEs: Soliton theory	
JULY 9 **15:00-15:30**	**Sema Yayla** (Hacettepe University, Turkey) Hyperbolic Cahn-Hilliard Equations with Dynamic Boundary Conditions	
JULY 9 **15:30-16:00**	**Haijun Yu** (Academy of Mathematics and Systems Science, Peoples Rep of China) An Efficient Laguerre Minimum Action Method for Quasi-Potential and Transition Path Computing	

SS 141	**New trends and methods for differential problems** Organizer(s): Simone Creo , Ida De Bonis	Room 638
JULY 9 **13:30-14:00**	**Isabella Ianni** (Sapienza University, Italy) Uniqueness results for fractional Dirichlet problems in symmetruc domains	
JULY 9 **14:00-14:30**	**Maria Rosaria MR Posteraro** (University of Naples Federico II, Italy) Uniqueness for Neumann problems for nonlinear elliptic equations with lower order terms	
JULY 9 **14:30-15:00**	**Gabriele Mancini** (University of Bari Aldo Moro, Italy) A priori bounds for planar elliptic equations and systems	
JULY 9 **15:00-15:30**	**Irene Benedetti** (Department of Mathematics and Computer Science, University of Perugia, Italy) Nonlocal semilinear differential equations with superlinear growth	
JULY 9 **15:30-16:00**	**Nicklas J\"averg\aard** (Karlstad University, Sweden) Numerical analysis of a coupled system of parabolic equations with nonlinear and nonlocal drift	

SS 143	**Nonlinear dynamics for kinetic, fluids and mathematical physics** Organizer(s): Hyeong-Ohk Bae , Jongmin Han , Jeongho Kim	Room 316
JULY 9 **13:30-14:00**	**Bora Moon** (Yonsei University, Korea) Quantitative hydrodynamic limit of the Chern--Simons--Higgs system	
JULY 9 **14:00-14:30**	**Myeong-Su Lee** (Seoul National University, Korea) A Theory-guided Weighted L2 Loss for solving the BGK model via Physics-informed Neural Networks	
JULY 9 **14:30-15:00**	**Bum Ja Jin** (Mokpo National University, Korea) Maximal L^p Regularity for Nonhomogeneous Neumann Problems and Its Applications to Fluid Dynamics	
JULY 9 **15:00-15:30**	**Younghun Hong** (Chung-Ang university, Korea) Modified scattering for the Vlasov-Riesz system with long-range interactions	

JULY 9 **15:30-16:00**	**Hyeong-Ohk Bae** (Ajou University, Korea) Existence for steady-state $p(u)$-Laplacian problems related with Image Processing

SS 146	**Nonlinear differential equations: control, delay, and boundary value problems** Organizer(s): Irene Benedetti , Francesca Dalbono , Elisa Sovrano , Valentina Taddei	**Room 427**
JULY 9 **13:30-14:00**	**Marcia Federson** (Universidade de Sao Paulo, Brazil) Random Dynamical Systems generated by Random Generalized Ordinary Differential Equations	
JULY 9 **14:00-14:30**	**Maria Rosaria Lancia** (Sapienza Universit\`a di Roma, Italy) On semilinear non autonomous nonlocal equations	
JULY 9 **14:30-15:00**	**Valeria Marraffa** (Dipartimento di Matematica e Informatica, Italy) Convergence results for varying measures under convexity conditions and applications	
JULY 9 **15:00-15:30**	**Bianca Satco** (Stefan cel Mare University of Suceava, Romania) Boundary value problems with Stieltjes derivative	
JULY 9 **15:30-16:00**	**Enzo Vitillaro** (Dipartimento di Matematica e Informatica Universit\`a degli Studi di Perugia, Italy) Standing waves for the wave equation with hyperbolic boundary conditions	

SS 152	**Recent advances in kinetic theory** Organizer(s): Mirco Piccinini , Francesca Anceschi	**Room 432**
JULY 9 **13:30-14:00**	**Stefano Biagi** (Politecnico di Milano, Italy) Global Sobolev theory for Kolmogorov-Fokker-Planck operators with coefficients measurable in time and VMO in space	
JULY 9 **14:00-14:30**	**David Bowman** (University of Chicago, USA) New Regularity Results for the Kolmogorov Obstacle Problem	
JULY 9 **14:30-15:00**	**Giacomo Lucertini** (Augsburg Universit\\, Germany) Optimal Schauder estimates for kinetic Kolmogorov equations with time measurable coefficients}	

JULY 9 **15:00-15:30**	**Jessica Guerand** (University of Montpellier, IMAG, France) A Gehring-Type Lemma for Kinetic and Ultraparabolic Equations
JULY 9 **15:30-16:00**	**Marvin Weidner** (University of Bonn, Germany) Optimal regularity for kinetic equations in domains

SS 153	**Stochastic computing and structure preserving methods** Organizer(s): Yanzhao Cao , Chuchu Chen , Jialin Hong	**Room 433**
JULY 9 **13:30-14:00**	**Raffaele D`Ambrosio** (University of L`Aquila, Italy) Structure-preserving numerical methods for stochastic differential equations	
JULY 9 **14:00-14:30**	**Ludovic Goudenege** (CNRS, France) Numerical Approximation of the Invariant Measure for Parabolic SPDEs with Singular Drift	
JULY 9 **14:30-15:00**	**Qian Guo** (Shanghai Normal University, Peoples Rep of China) Strong Convergence of Positivity Preserving Explicit Numerical Approximation for n-Dimensional Superlinear SDEs	
JULY 9 **15:00-15:30**	**Linghua Kong** (Jiangxi Normal University, Peoples Rep of China) Strong Convergence Order of an Operator-Splitting Finite Difference Fully Discrete Scheme for Stochastic Gross-Pitaevskii Equations	
JULY 9 **15:30-16:00**	**Yuqian Miao** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) Symplectic methods for stochastic Hamiltonian systems: asymptotic error distributions and Hamiltonian-specific analysis	

SS 155	**Advances in mathematical modelling and numerical simulation of superfluids** Organizer(s): Ionut Danaila , Weizhu Bao	**Room 738**
JULY 9 **13:30-14:00**	**Ricardo Carretero** (San Diego State University, USA) Dynamical reduction for solitonic filaments	
JULY 9 **14:00-14:30**	**Luminita Danaila** (University of Rouen Normandy, France) Scale-by-scale scalar statistics and extreme events in non-equilibrium multicomponent flows	

JULY 9 **14:30-15:00**	**Michikazu Kobayashi** (Kochi University of Technology, Japan) Superfluidity and phase transition in discrete clock symmetry
JULY 9 **15:00-15:30**	**Chunmei Su** (Tsinghua University, Peoples Rep of China) High-order parametric local discontinuous Galerkin methods for anisotropic curve-shortening flows
JULY 9 **15:30-16:00**	**Bartosz Protas** (McMaster University, Canada) On inviscid instabilities of 2D vortices

SS 156	**Structure and dynamics of solutions for nonlinear elliptic and parabolic equations** Organizer(s): Satoshi Tanaka , Raul Manasevich , Marta Garcia-Huidobro	**Room 312**
JULY 9 **13:30-14:00**	**Raul Manasevich** (University of Chile, Chile) Global continuum of solutions for systems of ODEs with periodic boundary conditions and generalized variable-exponent operators	
JULY 9 **14:00-14:30**	**Kousuke Kuto** (Waseda University, Japan) Bifurcation structure in a prey-predator model with protection zone and directed flux	
JULY 9 **14:30-15:00**	**Marta Garcia Huidobro** (Pontificia Universidad Catolica de Chile, Chile) On ground states to an elliptic problem involving a double phase operator	
JULY 9 **15:00-15:30**	**Takasi Senba** (Kanagawa University, Japan) Properties of radial steady states to flux-limited Keller-Segel systems	
JULY 9 **15:30-16:00**	**Kunquan Lan** (Toronto Metropolitan University, Canada) Sturm-Liouville boundary value problems and applications to logistic type population models	

SS 159	**New Developments in Open-Source Software for Inverse Problems** Organizer(s): Evangelos Papoutsellis , Ander Biguri	**Room 823**
JULY 9 **13:30-14:00**	**Evangelos Papoutsellis** (Finden Ltd, University of Manchester, England) The Core Imaging Library: Modular Optimisation for Imaging Inverse Problems	

JULY 9 **14:00-14:30**	**Justus Sagemueller** (KTH Royal Institute of Technology, Sweden) Inversion of Operator Pipelines with Well-Specified Spaces and Backend Heterogeneity
JULY 9 **14:30-15:00**	**Jeremy Scanvic** (LPENSL, France, France) DeepInverse: A Python package for solving imaging inverse problems with deep learning
JULY 9 **15:00-15:30**	**Benoit Malezieux** (CNRS, France) Benchmarking Large Scale Inverse Problems Resolution Algorithms with Benchopt

SS 163	**Mathematical Modeling of Multiphysics Coupled Systems—Models, Algorithms, and Scalable Computing** Organizer(s): Yifan Wang , Haibiao Zheng , Yizhong Sun	**Room 314**
JULY 9 **14:00-14:30**	**Jia Zhao** (University of Alabama, USA) General numerical framework to derive structure preserving reduced order models for thermodynamically consistent reversible-irreversible PDEs	
JULY 9 **14:30-15:00**	**Xiaojing Dong** (Xiangtan University, Peoples Rep of China) Unconditionally energy-stable, and fully discrete finite element schemes for the Rosensweig model	
JULY 9 **15:00-15:30**	**Lin Mu** (University of Georgia, USA) A Priori and a Posteriori Error Estimate for Pressure Robust Schemes for Incompressible Flow	
JULY 9 **15:30-16:00**	**Yizhong Sun** (Hong Kong Baptist University, Peoples Rep of China) A RBF Meshless Galerkin Method for Elliptic Dirichlet Boundary Control on Curved Domains	

SS 164	**Periodic and Ergodic Schrodinger Operators** Organizer(s): Matthew Faust , Ilya Kachkovskiy , Omar Hurtado	**Room 740**
JULY 9 **13:30-14:00**	**Mostafa Sabri** (New York University Abu Dhabi, United Arab Emirates) Eigenvalues of Maximal Abelian Covers	
JULY 9 **14:00-14:30**	**Christoph Fischbacher** (Baylor University, USA) Sharp Polynomial Decay Bounds for Multidimensional Periodic Schroedinger Operators	

JULY 9 **14:30-15:00**	**Jifeng Chu** (Hangzhou Normal University, Peoples Rep of China) Weak separability and partial Fermi isospectrality of discrete periodic Schr\\\\odinger operators
JULY 9 **15:00-15:30**	**Andreas Kretschmer** (HU Berlin, Germany) Inverse Eigenvalue Problems, Floquet Isospectrality and the Hilbert--Chow Morphism
JULY 9 **15:30-16:00**	**Giovanni Garza** (University of Delaware, USA) The Fourier Ratio and Chang`s Lemma

SS 167	**Functional spaces and multiphase problems** Organizer(s): Calogero Vetro , Marek Galewski	**Room 827**
JULY 9 **14:00-14:30**	**Bartosz Bieganowski** (University of Warsaw, Poland) Nonlinear scalar field equations with a critical Hardy potential	
JULY 9 **14:30-15:00**	**Iwona Chlebicka** (University of Warsaw, Poland) Lavrentiev`s phenomenon and density of regular functions	
JULY 9 **15:00-15:30**	**Xuan Mao** (Hohai University, Peoples Rep of China) Finite-time blow-up in a Keller-Segel model with indirect signal production	

SS 168	**Stochastic Analysis and Large Scale Interacting Systems** Organizer(s): Danielle Hilhorst , Perla El Kettani , Bin Xie	**Room 313**
JULY 9 **13:30-14:00**	**Benjamin Gess** (TU Berlin, MPI MiS Leipzig, Germany) Large Deviations for the Porous Medium Equation via Multiscale Integrability	
JULY 9 **14:00-14:30**	**Kenkichi Tsunoda** (Kyushu University, Japan) Critical stationary fluctuations in reaction--diffusion processes	
JULY 9 **14:30-15:00**	**Tommaso Rosati** (University of Warwick, England) Invariant measures for the open KPZ equation	
JULY 9 **15:00-15:30**	**Kazuo Yamazaki** (University of Nebraska-Lincoln, USA) Remarks on the three-dimensional Navier-Stokes equations with Lions` exponent forced by space-time white noise	

JULY 9 **15:30-16:00**	**Federico Butori** (Scuola Normale Superiore, Pisa, Italy) Homogenisation of a Passive Scalar Transported by Locally Supported White Noise

SS 172	**Stochastic and geometric analysis on manifolds and metric measure spaces** Organizer(s): Kazuhiro Kuwae , Xiangdong Li , Asuka Takatsu	**Room 639**
JULY 9 **13:30-14:00**	**Mathias Braun** (EPFL, Switzerland) Nonlinear gradient flows in spacetime geometry	
JULY 9 **14:00-14:30**	**Huaiqian Li** (Tianjin University, Peoples Rep of China) Asymptotics of the Nonlocal Perimeter in Grushin Spaces	
JULY 9 **14:30-15:00**	**Robert Neel** (Lehigh University, USA) Non-adapted coupling of sub-Riemannian diffusions	
JULY 9 **15:00-15:30**	**Ana Bela Cruzeiro** (Instituto Superior Tecnico, Portugal) Stochastic perturbation of geodesics on the space of Riemannian metrics	
JULY 9 **15:30-16:00**	**Jean-Claude Zambrini** (GFM, FCUL and IST, Lisbon, Portugal) From Schroedinger to Feynman and back	

SS 175	**Modern Trends in Partial Differential Equations and General Relativity** Organizer(s): Anahit Galstyan , Makoto Nakamura , Karen Yagdjian	**Room 739**
JULY 9 **14:00-14:30**	**Lavi Karp** (Braude College of Engineering, Israel) On the stability of Euler--Norstrom System	
JULY 9 **14:30-15:00**	**Takeshi Wada** (Shimane University, Japan) On initial boundary value problems for the Maxwell-Schrodinger system	
JULY 9 **15:00-15:30**	**Makoto Nakamura** (The University of Osaka, Japan) On the asymptotic behavior of the semilinear Schroedinger equation in the FLRW spacetime	
JULY 9 **15:30-16:00**	**Karen Yagdjian** (University of Texas Rio Grande Valley, USA) Spherical waves in the expanding universe	

SS 185	**Multiscale Analysis: Geometry and Evolution Problems (mSPACE)** Organizer(s): Delio Mugnolo , Leonard Monsaingeon , Matthias Neumann	Room 311
JULY 9 **13:30-14:00**	**Setenay Akduman** (Izmir Democracy University, Turkey) On open book analogs of quantum graphs	
JULY 9 **14:00-14:30**	**Leon Bungert** (University of Wuerzburg, Germany) Concentration phenomena of self-attention dynamics	
JULY 9 **14:30-15:00**	**Antonio Esposito** (University of L'Aquila, Italy) Graph approximation for nonlocal interaction equations	
JULY 9 **15:00-15:30**	**Alpar R. Meszaros** (Durham University, England) Quantitative converge for displacement monotone Mean Field Games of controls	
JULY 9 **15:30-16:00**	**Anna Rozanova-Pierrat** (CentraleSup\`elec, University Paris-Saclay, France) Westervelt Boundary Value Problems on Domains With Non-Lipschitz Boundaries	

SS 191	**Stochastic Dynamical Systems Under Levy Noise: Theory and Applications** Organizer(s): Ting Gao , Xiaoli Chen	Room 824
JULY 9 **13:30-14:00**	**Yang Li** (Nanjing University of Science and Technology, Peoples Rep of China) Nonlocal Kramers-Moyal formulas and data-driven discovery of stochastic dynamical systems with multiplicative Levy noise	
JULY 9 **14:00-14:30**	**Yubin Lu** (South China University of Technology, Peoples Rep of China) Learning Stochastic Dynamical Systems via An Energetic Variational Approach	
JULY 9 **14:30-15:00**	**Yingting Miao** (Xi'an Jiaotong-Liverpool University, Peoples Rep of China) Local and Global Solutions for Stochastic Transport-Type Equations with Nonlocal Noise	
JULY 9 **15:00-15:30**	**Nicolas Privault** (Nanyang Technological University, Singapore) Anomalous branching processes: probabilistic behavior and connection to nonlinear time-fractional PDEs	

SS 195	**Calculus of Variations and Hyperbolic PDEs in Solid Mechanics** Organizer(s): Andreas Vikelis , Konstantinos Koumatos , Athanasios Tzavaras	**Room 821**
JULY 9 **13:30-14:00**	**Malte Kampschulte** (Charles University Prague, Faculty of Mathematics and Physics, Czech Rep) Variational approaches to inertia, contact and limits	
JULY 9 **14:00-14:30**	**Konstantinos Zemas** (University of Bonn, Germany) Energy barriers for boundary nucleation in solid-solid phase transitions	
JULY 9 **14:30-15:00**	**Jakob Deutsch** (TU Wien, Austria) Low Regularity Potentials in Heterogeneous Cahn--Hilliard Functionals	
JULY 9 **15:00-15:30**	**Anastasija Pe\v{s} i\`{c}** (WIAS Berlin, Germany) Curvature-driven pattern formation in biomembranes: A gradient flow approach	
JULY 9 **15:30-16:00**	**Anton\`in \v Ce\v s\`ik** (University of Warwick, England) Rate dependent dislocation dynamics and gradient flows of currents	

SS 197	**Intelligent Control and Game Theory** Organizer(s): Shujun Wang , Guangchen Wang , Tianyang Nie	**Room 822**
JULY 9 **13:30-14:00**	**Yinggu Chen** (Ocean University of China, Peoples Rep of China) Numerical Methods for Mean-Field Forward-Backward Stochastic Differential Equations	
JULY 9 **14:00-14:30**	**Yuanzhuo Song** (Shenzhen University, Peoples Rep of China) Partial stabilizability of forward-backward systems and stabilizability of game-based control systems	
JULY 9 **14:30-15:00**	**Shupeng Wang** (Shandong University, Peoples Rep of China) A new PINNs algorithm for solving MFGs	

CS 1	**ODEs and Applications**	**Room 634**
JULY 9 **13:30-13:50**	**Ozkan Ozturk** (Giresun University, Turkey) Conformable Control of Unmanned Ground Vehicles	

JULY 9 **13:50-14:10**	**Weifang Hu** (School of Mathematics, Southeast University, Peoples Rep of China) The formal ultra-differential normalization for random dynamical systems
JULY 9 **14:10-14:30**	**Joao Lopes Dias** (Universidade de Lisboa, Portugal) Generic symplectic homeomorphisms
JULY 9 **14:30-14:50**	**David Rackl** (University of Klagenfurt, Austria) Transcritical and Pitchfork Bifurcations in Scalar Nonautonomous Difference Equations
JULY 9 **14:50-15:10**	**Roberto R Trinidad-Forte** (Universitat de les Illes Balears, Spain) Finitude of Limit Cycles of Linear Piecewise Odes in the Cylinder
JULY 9 **15:10-15:30**	**Yu-Qing Wang** (University of L`Aquila, Italy) Emergent Dynamics of the Kuramoto Model with Adaptive and Time-delay Couplings

CS 2	**PDEs and Applications**	**Room 635**
JULY 9 **13:30-13:50**	**Suleyman Cengizci** (Antalya Bilim University, Turkey) Bridging machine learning and stabilized FEM: a hybrid PINN-SUPG framework for 3D transport equations	
JULY 9 **13:50-14:10**	**xinping gui** (Scuola Internazionale Superiore di Studi Avanzati (SISSA), Italy) A space-time discontinuous Galerkin method for parabolic problems on moving domains with agglomerated polytopic meshes	
JULY 9 **14:10-14:30**	**Shunsuke Kurima** (Kanagawa University, Japan) Global existence for a nonisothermal and conserved phase field system with inertial term	
JULY 9 **14:30-14:50**	**Daurenbek Serikbaev** (Institute of Mathematics and Mathematical Modeling, Almaty, Kazakhstan) Reconstruction of a Source Term in a Hyperbolic Equation	
JULY 9 **14:50-15:10**	**Ruba Murhaf** (Khalifa University, United Arab Emirates) Nonlinear Schr\\{o}dinger Equation for Electron Plasma (Langmuir) Waves in a Two--Electron-Fluid Plasma Model	
JULY 9 **15:10-15:30**	**Linfeng Xu** (University of Science and Technology of China, Peoples Rep of China) Spreading speeds of almost periodic KPP equations with slow decay initial values	

Parallel Session 11 :: Thursday, 07/09, 16:30-19:00

SS 8	**Differential, Difference, and Integral Equations: Techniques and Applications** Organizer(s): Jeffrey Lyons , Wenying Feng	**Room 440**
JULY 9 **16:30-17:00**	**Min Wang** (Kennesaw State University, USA) Physics-informed stochastic models for theme park ride waiting times	
JULY 9 **17:00-17:30**	**Jerome Goddard II** (Auburn University Montgomery, USA) Modeling Density-Dependent Emigration Between Two Competing Species of Tribolium: Part I -- Methods	
JULY 9 **17:30-18:00**	**Xiaodong Yan** (University of Connecticut, USA) Structure of polar director for bent-core smectic A liquid crystals in thin planar cells	

SS 10	**Recent Developments in Regularity Theory for PDEs** Organizer(s): Zongyuan Li , Hongjie Dong	**Room 620**
JULY 9 **16:30-17:00**	**Xiaoqian Xu** (Duke Kunshan University, Peoples Rep of China) Mixing flow and advection-diffusion equations	
JULY 9 **17:00-17:30**	**Zhongyang Gu** (Shenzhen University, Peoples Rep of China) The hydrodynamic limit of the discrete-velocity BGK Boltzmann equation	

SS 11	**Stochastic Partial Differential Equations** Organizer(s): Benjamin Gess , Michael Röckner	**Room 438**
JULY 9 **16:30-17:00**	**Mark Veraar** (TU Delft, Netherlands) Stochastic reaction diffusion equations with non-trace class noise	
JULY 9 **17:00-17:30**	**Liangying Chen** (FU Berlin & TU Berlin, Germany) Transposition Approach to Optimal Control of McKean-Vlasov SPDEs	
JULY 9 **17:30-18:00**	**Katharina Klioba** (TU Delft, Netherlands) Milstein-type Schemes for Hyperbolic SPDEs	

JULY 9 **18:00-18:30**	**Oleg Butkovsky** (Weierstrass Institute (WIAS), Germany) Uniqueness for stochastic differential equations in Hilbert spaces with irregular drift
JULY 9 **18:30-19:00**	**Giuseppe Cannizzaro** (University of Warwick, England) A stochastic homogeneization approach to supercritical SPDEs

SS 19	**Topics on singular stochastic equations** Organizer(s): Xicheng Zhang , Jian Wang , Wei Liu	**Room 641**
JULY 9 **16:30-17:00**	**Hui He** (Beijing Normal University, Peoples Rep of China) Wave propagation for 1-dimensional reaction-diffusion equations with nonzero random drift	
JULY 9 **17:00-17:30**	**Lu-Jing Huang** (Fujian Normal University, Peoples Rep of China) Fluctuation of heat kernels on random graphs.	
JULY 9 **17:30-18:00**	**Guopeng Li** (Beijing Institute of Technology, Peoples Rep of China) Regularization by noise phenomena in stochastic nonlinear PDEs with modulated dispersion	
JULY 9 **18:00-18:30**	**Yanyan Liu** (Wuhan University, Peoples Rep of China) Schrodinger-Follmer Sampler	

SS 24	**Mathematical and Computational Modeling of Complex Biological Systems** Organizer(s): Zhisheng Shuai , Michael Li , Samares Pal	**Room 432**
JULY 9 **16:30-17:00**	**Samares Pal** (University of Kalyani, India) Catastrophic changes in coral reef dynamics under macroalgal toxicity, elevated sea surface temperature (SST), overfishing and invasion of predators	
JULY 9 **17:00-17:30**	**Yoichi Enatsu** (Tokyo University of Science, Japan) A nonlocal advection system for two competing species with resources recovering time	
JULY 9 **17:30-18:00**	**Lihong Zhao** (Kennesaw State University, USA) Modeling and Analysis of Legionnaries` Disease	

JULY 9 **18:00-18:30**	**Eunjung Kim** (Korea Institute of Science and Technology, Korea) Modeling tumor evolution, resistance and adaptive therapy
JULY 9 **18:30-19:00**	**Daihai He** (The Hong Kong Polytechnic University, Hong Kong) The transmission of chikungunya in Guangdong China in 2025

SS 25	**Recent Progress on Mathematical Analysis of PDEs Arising in Fluid Dynamics** Organizer(s): Huanyao Wen , Changjiang Zhu , Huijiang Zhao	**Room 812**
JULY 9 **16:30-17:00**	**Lei Yao** (Northwestern Polytechnical University, Peoples Rep of China) Hydrodynamic limit for compressible Navier-Stokes-Vlasov equations	
JULY 9 **17:00-17:30**	**Wenjun Wang** (University of Shanghai for Science and Technology, Peoples Rep of China) Global well-posedness and decay rates of solutions to a P1-approximation model arising from radiation hydrodynamics	
JULY 9 **17:30-18:00**	**Huanyao Wen** (South China University of Technology, Peoples Rep of China) Global existence and uniqueness of strong solution to compressible Navier-Stokes equations with vacuum	

SS 41	**Dynamics and Games** Organizer(s): Alberto Pinto , Michel Benaim , Diogo Gomes	**Room 822**
JULY 9 **16:30-17:00**	**Alberto A \`Alvarez-L\`opez** (UNED - Dep. Economic Theory and Mathematical Economics, Spain) Design of efficient mechanisms for industrial pollution control	
JULY 9 **17:00-17:30**	**Bruno Dupire** (Bloomberg/NYU, USA) The Centipede Game and Financial Bubbles	
JULY 9 **17:30-18:00**	**Penelope Hernandez** (ERI-CES University of Valencia, Spain) Platform-induced coordination by Julian Chitiva and Penelope Hernandez	
JULY 9 **18:00-18:30**	**Alberto Pinto** (LIAAD INESC TEC, DM, FCUP, Portugal, Portugal) Stable coalition formation through bargaining for the preservation of public goods	

JULY 9 **18:30-19:00**	**Jarowit \`Sledzi\`nski** (University of Warsaw, Faculty of Mathematics, Informatics and Mechanics, Poland) Convergence to Nash equilibria in monotone games and their characterization

SS 49	**Nonlinear Waves in Discrete Systems** Organizer(s): Baofeng Feng , Panayotis Kevrekidis , Georgios Theocharis	**Room 425**
JULY 9 **16:30-17:00**	**Nicholas Boechler** (University of California San Diego, USA) Enabling inverse design of mechanical nonlinear waves	
JULY 9 **17:00-17:30**	**Martina Chirilus-Bruckner** (Leiden University, Netherlands) Can Breathers Survive? Instability and Control in Periodic Optical Media	
JULY 9 **17:30-18:00**	**Vassos Achilleos** (CNRS-LAUM, France) Nonlinearity and Nonreciprocity: Edge States, Wave Dynamics, and Solitons	
JULY 9 **18:00-18:30**	**Jimmie Adriazola** (Arizona State University, USA) Spectral Precursors of Rogue-Wave Cascades across the Salerno Deformation	
JULY 9 **18:30-19:00**	**Johanne Hizanidis** (Foundation for Research and Technology, Greece) Superconducting oscillators: From collective behavior to Reservoir Computing	

SS 50	**Dynamical systems: Oseledets decomposition, ordered spaces, Lyapunov exponents, and applications** Organizer(s): Janusz Mierczyński , Marek Kryspin	**Room 301**
JULY 9 **16:30-17:00**	**Ana M. Sanz** (Universidad de Valladolid, Spain) A new class of generalized ordinary differential equations	
JULY 9 **17:00-17:30**	**Jes\`{u}s Due\~{n}as** (Universidad de Valladolid, Spain) Loss of hyperbolicity as a source of critical transitions in d-concave equations: New nonautonomous bifurcation patterns	
JULY 9 **17:30-18:00**	**Iacopo P. Longo** (University of Exeter, England) Nonautonomous saddle-node bifurcations and early warning signals in scalar concave and d-concave differential equations	

JULY 9 **18:00-18:30**	**Yi Wang** (University of Science and Technology of China, Peoples Rep of China) C^1-theory for smooth non-autonomous monotone dynamical systems

SS 56	**Dynamical properties of nonlinear partial differential equations** Organizer(s): Runzhang Xu , Andreas Chatziafratis , Wei Lian	**Room 640**
JULY 9 **16:30-17:00**	**Dehua Wang** (University of Pittsburgh, USA) Mixed type problem and transonic flows	
JULY 9 **17:00-17:30**	**Jörg Weber** (University of Vienna, Austria) Mountain waves: Linear theory	
JULY 9 **17:30-18:00**	**Zibo Zheng** (Okinawa Institute of Science and Technology, Japan) Statistics of long-crested crossing random waves over a varying bottom	

SS 69	**Mathematical Models and Analysis of (Partial) Differential Equations in the Applied Sciences** Organizer(s): Alain Miranville , Andreas Chatziafratis , Georgia Karali	**Room 618**
JULY 9 **16:30-17:00**	**Nikolaos Tsitsas** (Aristotle University of Thessaloniki, Greece) Nonlinear waves in metamaterials: from the left-handed regime to the frequency band gaps	
JULY 9 **17:00-17:30**	**Junsik Bae** (Kyungpook National University, Korea) Nonexistence of multi-dimensional solitary waves for the Euler-Poisson system	
JULY 9 **17:30-18:00**	**Konstantinos Zemas** (University of Bonn, Germany) Stochastic homogenization of a droplet model in liquid-liquid phase transitions	
JULY 9 **18:00-18:30**	**Daniel Goldberg** (Technion - Israel Institute o Technology, Israel) A Coupled Surface Diffusion and Mean Curvature Flow problem - Steady States and Stability	
JULY 9 **18:30-19:00**	**Hoyoun Kim** (King Abdullah University of Science and Technology (KAUST), Korea) Localization of Self-Similar Solutions in Diffusion-Relaxation Systems	

SS 72	**Fluid-structure interaction and free boundary problems** Organizer(s): Igor Kukavica , Arnab Roy , Boris Muha	Room 642
JULY 9 **16:30-17:00**	**Anna Mazzucato** (Penn State University, USA) The vanishing viscosity limit in permeable domains	
JULY 9 **17:00-17:30**	**Sebastian Schwarzacher** (Uppsala University/Charles University, Sweden) Thermal effects in fluid structure interactions	
JULY 9 **17:30-18:00**	**Krutika Tawri** (University of Washington, USA) Finite-time contact in fluid-elastic structure interactions	
JULY 9 **18:00-18:30**	**Srdan Trifunovic** (Faculty of Sciences, University of Novi Sad, Yugoslavia) Contact in fluid-plate interaction: formation and detachment	

SS 80	**Functional inequalities and PDEs** Organizer(s): Gerassimos Barbatis , Lorenzo Brasco	Room 428
JULY 9 **16:30-17:00**	**Enea Parini** (Aix Marseille Universite, France) Symmetry of fractional Neumann eigenfunctions in the ball	
JULY 9 **17:00-17:30**	**Phuoc Tai Nguyen** (Masaryk University, Czech Rep) Lieb-Thirring interpolation inequality and applications to systems of nonlinear Schr\{o}dinger equations	
JULY 9 **17:30-18:00**	**Tobias K\"onig** (Goethe University Frankfurt, Germany) Stability with explicit constants for reverse Sobolev inequalities on the sphere	
JULY 9 **18:00-18:30**	**Konstantinos Tzirakis** (Department of Mathematics and Applied Mathematics, University of Crete, Greece) The FitzHugh-Nagumo System on cylindrical surfaces: symmetrization and effective system	
JULY 9 **18:30-19:00**	**Gerassimos Barbatis** (National and Kapodistrian University of Athens, Greece) Geometric Hardy inequalities on the Heisenberg group	

SS 108	**Regularity in local versus nonlocal problems** Organizer(s): Antonio Iannizzotto , Eurica Henriques , Simone Ciani	Room 430

JULY 9 **16:30-17:00**	**Jose Miguel Urbano** (KAUST, Saudi Arabia) Improved moduli of continuity for degenerate phase transitions
JULY 9 **17:30-18:00**	**Verena Bogelein** (University of Salzburg, Austria) Schauder estimates for parabolic p-Laplace systems
JULY 9 **18:00-18:30**	**Frank Duzaar** (University of Salzburg, Austria) Regularity theory for sub-critical p-parabolic systems with measurable coefficients
JULY 9 **18:30-19:00**	**Marta Macr\`i** (University of L`Aquila, Italy) Different assumptions in vectorial elliptic problems with a focus on the quasilinear case

SS 109	**Cluster Algebras, Hall Algebras and Their Applications** Organizer(s): Xueqing Chen , Fang Li , Min Huang	**Room 204**
JULY 9 **16:30-17:00**	**Hiroaki Karuo** (Gakushuin University, Japan) The quantum necklace Lie algebra and the HOMFLYPT skein algebra	
JULY 9 **17:00-17:30**	**Zhihao Wang** (Korea Institute for Advanced Study, Peoples Rep of China) Quantum cluster realization for projected stated SLn-skein algebras	
JULY 9 **17:30-18:00**	**Xueqing Chen** (University of Wisconsin-Whitewater, USA) Fundamental relations in quantum cluster algebras	

SS 118	**Nonlinear Wave systems: Analysis and Computation** Organizer(s): Vahagn Manukian , Stathis Charalampidis , Stéphane Lafortune	**Room 825**
JULY 9 **17:00-17:30**	**Nikos I Karachalios** (Department of Mathematics, University of Thessaly, Greece) On the proximal dynamics between integrable and non-integrable members of a generalized Korteweg-de Vries family of equations	
JULY 9 **17:30-18:00**	**Joae Castillo** (Computational Science Research Center at San Diego State University, USA) High Order Mimetic Difference Methods and Applications	

SS 122	**Topological Data Analysis Theory, Algorithms, and Applications** Organizer(s): Firas Khasawneh	Room 538
JULY 9 **16:30-17:00**	**Halley Fritze** (University of Michigan, USA) Probabilistic Statements for Mapper Graphs	
JULY 9 **17:00-17:30**	**Robin Belton** (Vassar College, USA) Studying 2-Parameter Persistent Homology via Directed Topology	
JULY 9 **17:30-18:00**	**Elizabeth Munch** (Michigan State University, USA) Building Canopies for the Decomposition of Persistence Bundles	
JULY 9 **18:00-18:30**	**Atish J. Mitra** (Montana Technological University, USA) The shadow of Vietoris-Rips complexes in limits	
JULY 9 **18:30-19:00**	**Anastasios Stefanou** (University of Bremen, Germany) Relative commutative algebra of multigraded modules	

SS 124	**Mathematical methods for heterogeneous media** Organizer(s): José Matias , Ana Cristina Barroso , Elvira Zappale	Room 434
JULY 9 **16:30-17:00**	**Marco Morandotti** (Politecnico di Torino, Italy) Variational formulation of planar linearized elasticity with incompatible kinematic	
JULY 9 **17:00-17:30**	**Marcello Ponsiglione** (Sapienza, University of Roma, Italy) Dynamics of screened particles towards equispaced ground states and applications to misfit dislocations	
JULY 9 **17:30-18:00**	**Ana Margarida Ribeiro** (NOVA School of Science and Technology (NOVA FCT), Portugal) Derivative-free descriptions of smoothness in variable exponent Sobolev spaces and generalized Orlicz-Sobolev spaces	
JULY 9 **18:00-18:30**	**Emanuele Tasso** (TU Wien, Austria) Sharp-interface limit for non-isothermal and nonlocal Modica-Mortola functionals	

JULY 9 **18:30-19:00**	**Igor Velcic** (University of Zagreb, Faculty of Electrical Engineering and Computing, Croatia) Homogenization of elasto-plastic plate equations

SS 125	**Models of Fluid Motion** Organizer(s): John Carter , Mats Ehrnstrom , Panayiotis Panayotaros	**Room 436**
JULY 9 **16:30-17:00**	**Bernard Deconinck** (University of Washington, USA) The Benjamin-Feir instability in KdV-like equations	
JULY 9 **17:00-17:30**	**Benjamin Akers** (The Air Force Institute of Technology, USA) The spectrum of steady, laser-driven convective flows	
JULY 9 **17:30-18:00**	**David M. Ambrose** (Drexel University, USA) Analytical frameworks for spatially quasiperiodic or uniformly local free-surface flows	
JULY 9 **18:00-18:30**	**Dag Nilsson** (Linnaeus University, Sweden) Solitary Waves in a Two-Layer Fluid with a Free Surface	
JULY 9 **18:30-19:00**	**Wei Lian** (NTNU, Norway) Transverse instability of line periodic waves to the KP-I type equations	

SS 129	**Mathematics of Data Science and Applications** Organizer(s): Ding-xuan ZHOU , Xiang ZHOU	**Room 628**
JULY 9 **16:30-17:00**	**Cheng Cheng** (Sun Yat-sen University, Peoples Rep of China) Stable Phase Retrieval for Gaussian Shift-invariant Signals	

SS 134	**Mean field stochastic control problems and related topics** Organizer(s): Juan Li , Rainer Buckdahn	**Room 619**
JULY 9 **16:30-17:00**	**Hanxiao Wang** (Shenzhen University, Peoples Rep of China) BSDEs and BSVIEs with anticipating generators	
JULY 9 **17:00-17:30**	**Jiaqiang Wen** (Southern University of Science and Technology, Peoples Rep of China) Mean-field BSDEs with quadratic growth and related control problems	

JULY 9 **17:30-18:00**	**Yunzhang Li** (Fudan University, Peoples Rep of China) Particle Approximation for Conditional Mean Field SDEs
JULY 9 **18:00-18:30**	**Chuanzhi Xing** (Shandong University, Peoples Rep of China) Comparison theorems for mean-field BSDEs whose generators depend on the law of the solution (Y,Z)

SS 135	**Dynamical Systems in Mathematical Biology: Epidemiology, Population Dynamics, and Reaction Networks** Organizer(s): Burcu Gürbüz , Eugenia Franco , Nicola Vassena	**Room 426**
JULY 9 **16:30-17:00**	**Uwe Tauber** (Physics Department, Virginia Tech, USA) Invading activity fronts stabilize excitable systems against stochastic extinction	
JULY 9 **17:00-17:30**	**Cinzia Soresina** (University of Trento, Italy) Starvation-driven cell patterning: integrating lab experiments and mathematical modelling	
JULY 9 **17:30-18:00**	**Meltem Golgeli** (TOBB University of Economics and Technology, Turkey) Mathematical Modeling of Regulatory Dynamics and Viral Pathogenesis in T-Cell Mediated Immune Responses	
JULY 9 **18:00-18:30**	**Emanuela Penitente** (University of Naples Federico II, Italy) PerTexP: scenario-based exploration of pertussis dynamics under maternal and infant vaccination	
JULY 9 **18:30-19:00**	**Ana Jacinta Soares** (Centre of Mathematics, University of Minho, Portugal) Delayed immune response and therapy in tumor-immune dynamics	

SS 136	**Collective Dynamics in Large Networks: From Kuramoto to Spin Models** Organizer(s): Georgi Medvedev , Nils Berglund , Matthew Mizuhara	**Room 437**
JULY 9 **16:30-17:00**	**Christian Kuehn** (TUM, Germany) Adaptive and Higher-Order Dynamics of Kuramoto-type Models	
JULY 9 **17:00-17:30**	**Oleh Omelchenko** (University of Potsdam, Germany) Mean-field approach to finite-size fluctuations in coupled oscillator systems	

JULY 9 **17:30-18:00**	**Haozhe Shu** (Tohoku university, Japan) Stability analysis of Kuramoto model with time delay via a generalized spectral theory
JULY 9 **18:00-18:30**	**Dohyun Kim** (Sungkyunkwan University, Korea) Critical threshold for synchronizability of high-dimensional Kuramoto oscillators under higher-order interactions

SS 137	**Nonlinear Dynamics, Chaos, and Applications: From Fractional Systems to Astrophysical Models** Organizer(s): Mattia Coccolo , Juan Carlos Vallejo	**Room 315**
JULY 9 **16:30-17:00**	**Antonio Alejandro Valido** (Universidad de Las Palmas de Gran Canaria, Spain) Stochastic resonance in time-delayed bistable active particles	
JULY 9 **17:00-17:30**	**Ricardo Lopez-Ruiz** (Univ of Zaragoza, Spain) From discrete to continuous modeling and from continuous to discrete modeling in gas-like models in Econophysics	
JULY 9 **17:30-18:00**	**Manuel Array\`as** (Universidad Rey Juan Carlos, Spain) Controlling the dynamics of a superconducting sphere inside superfluid He-II	

SS 140	**Recent advances in wavelet analysis, PDEs and dynamical systems – part III** Organizer(s): Emanuel Guariglia	**Room 445**
JULY 9 **16:30-17:00**	**Zhenxin Liu** (Dalian University of Technology, Peoples Rep of China) Trajectorial version of the W_h-gradient flow for nonlinear Fokker-Planck equations	
JULY 9 **17:00-17:30**	**Samares Pal** (University of Kalyani, India) Deterministic and stochastic analysis of eco-epidemic models, focusing on fear, refuge, and selective predation dynamics	
JULY 9 **17:30-18:00**	**Slim TAYACHI** (University of Tunis El Manar, Tunisia) Asymptotically Self-Similar global Solutions for the Inhomogenous Nonlinear Schr\odinger Equation	

SS 141	**New trends and methods for differential problems** Organizer(s): Simone Creo , Ida De Bonis	**Room 638**

JULY 9 **16:30-17:00**	**Paolo Musolino** (Universita` degli Studi di Padova, Italy) Dirichlet problem on perturbed conical domains via converging generalized power series
JULY 9 **17:00-17:30**	**Micol Amar** (Department of Basic and Applied Sciences for Engineering - Sapienza University of Rome, Italy) Multiscale analysis in composite materials with rough imperfect interfaces
JULY 9 **17:30-18:00**	**Gianpaolo Piscitelli** (Universita` degli studi di Napoli Parthenope, Italy) Asymptotic behavior of Finsler p-Laplace eigenvalues
JULY 9 **18:00-18:30**	**Vishnu Raveendran** (University of Bonn, Germany) Homogenization of reaction-diffusion equation with large nonlinear drift
JULY 9 **18:30-19:00**	**Sandra Carillo** (University LA SAPIENZA, Italy) Solutions and algebraic properties of nonlinear equations of soliton type

SS 143	**Nonlinear dynamics for kinetic, fluids and mathematical physics** Organizer(s): Hyeong-Ohk Bae , Jongmin Han , Jeongho Kim	**Room 316**
JULY 9 **16:30-17:00**	**Junha Kim** (Ajou University, Korea) On wellposedness of alpha-SQG equations in the half-plane	
JULY 9 **17:00-17:30**	**Minha Yoo** (National Institute for Mathematical Sciences, Korea) Homogenization of non-divergence type equation with oscillating coefficients defined on a highly oscillating obstacles.	
JULY 9 **17:30-18:00**	**Jinmyoung Seok** (Seoul National University, Korea) On rotating solutions for Euler-Poisson equations	
JULY 9 **18:00-18:30**	**Jongmin Han** (Kyung Hee University, Korea) Convergence and aymptotics for multi-component Ginzburg-Landau equations	

SS 146	**Nonlinear differential equations: control, delay, and boundary value problems** Organizer(s): Irene Benedetti , Francesca Dalbono , Elisa Sovrano , Valentina Taddei	**Room 427**

JULY 9 **16:30-17:00**	**Alberto Boscaggin** (University of Turin, Italy) Bifurcation of periodic solutions from central force problems
JULY 9 **17:00-17:30**	**Veronica Felli** (University of Milano-Bicocca, Italy) On the splitting of Neumann eigenvalues in perforated domains
JULY 9 **17:30-18:00**	**Nsoki Mavinga** (Swarthmore College, USA) An interpolation approach to L^{∞} a priori estimates for elliptic problems with nonlinearity on the boundary
JULY 9 **18:00-18:30**	**Alejandro Sahuquillo** (Universidad Complutense de Madrid, Spain) Limiting behavior of principal eigenvalues for a class of mixed boundary value problems as the measure of the support domain goes to zero
JULY 9 **18:30-19:00**	**Andrea Tellini** (Universidad Politécnica de Madrid, Spain) Bifurcation approach for periodic solutions in a superlinear BVP

SS 151	**Encounter and Merging of Mesh-based Methods and Meshless Methods in the Era of Machine Learning** Organizer(s): Shuo Zhang , Haijun Yu , Chensong Zhang	**Room 826**
JULY 9 **16:30-17:00**	**Xiang ZHOU** (City University of Hong Kong, Hong Kong) Weak Generative Sampler	
JULY 9 **17:00-17:30**	**Yucheng Hu** (CNU, Peoples Rep of China) Lattice-Based Modeling of Cell Migration Dynamics	
JULY 9 **17:30-18:00**	**Jiulong Liu** (Academy of Mathematics and Systems Science,CAS, Peoples Rep of China) Computational Imaging with Generative Models	
JULY 9 **18:00-18:30**	**Hehu Xie** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) Machine learning method with numerical Integration for singular problems	
JULY 9 **18:30-19:00**	**Shihua Gong** (The Chinese University of Hong Kong, Shenzhen, SICIAM and SLAI, Peoples Rep of China) Massively parallel domain decomposition methods for solving the Helmholtz equations in $\mathcal{O}(k)$ runtime	

SS 153	**Stochastic computing and structure preserving methods** Organizer(s): Yanzhao Cao , Chuchu Chen , Jialin Hong	Room 433
JULY 9 **16:30-17:00**	**Hengguang Li** (Wayne State University, USA) C0 Finite Element Methods for Biharmonic and Triharmonic Problems	
JULY 9 **17:00-17:30**	**Michela Ottobre** (Heriot Watt University and Maxwell Institute, Edinburgh, Scotland) Old and new numerical methods for SPDEs: non-asymptotic uniform in time error bounds	
JULY 9 **17:30-18:00**	**Linyu Peng** (Keio University, Japan) Geometric collocation methods for stochastic multisymplectic PDEs	
JULY 9 **18:00-18:30**	**Liying Sun** (Capital Normal University, Peoples Rep of China) Controllability of stochastic Maxwell system: Theory and numerical simulation	
JULY 9 **18:30-19:00**	**Tomasz Tyranowski** (University of Twente, Netherlands) Learning deterministic and stochastic forced Hamiltonian systems	

SS 155	**Advances in mathematical modelling and numerical simulation of superfluids** Organizer(s): Ionut Danaila , Weizhu Bao	Room 738
JULY 9 **16:30-17:00**	**Wei Liu** (National University of Defense Technology, Peoples Rep of China) Computing the action ground states of nonlinear Schr\odinger equation	
JULY 9 **17:00-17:30**	**Ionut Danaila** (University of Rouen Normandy, France) Numerical models for coupling Navier-Stokes and Gross-Pitaevskii solvers for two-fluid quantum flows	

SS 156	**Structure and dynamics of solutions for nonlinear elliptic and parabolic equations** Organizer(s): Satoshi Tanaka , Raul Manasevich , Marta Garcia-Huidobro	Room 312
JULY 9 **16:30-17:00**	**Jifeng Chu** (Hangzhou Normal University, Peoples Rep of China) Extremal norms of potentials from fixed eigenvalues for Camassa-Holm equations	

JULY 9 **17:00-17:30**	**Tohru Wakasa** (Kyushu Institute of Technology, Japan) The Lam`e equation on the circle and applications to singular limite eigenvalue problems
JULY 9 **17:30-18:00**	**Yuta Ishii** (Fukuoka University, Japan) Multi-peak stationary solutions for the Gierer-Meinhardt model on a star shaped graph
JULY 9 **18:00-18:30**	**Nobuhito Miyake** (Faculty of Mathematics, Kyushu University, Japan) Asymptotic expansion of the heat content for polyharmonic heat equations
JULY 9 **18:30-19:00**	**Kensuke Yoshizawa** (Nagasaki University, Japan) Stability of pinned p-elasticae

SS 159	**New Developments in Open-Source Software for Inverse Problems** Organizer(s): Evangelos Papoutsellis , Ander Biguri	**Room 823**
JULY 9 **16:30-17:00**	**Alexander Skorikov** (CWI Amsterdam, Netherlands) Evolving the ASTRA Toolbox: Computed Tomography in the Age of Deep Learning	
JULY 9 **17:00-17:30**	**Antony Vamvakeros** (Imperial College London, England) nDTomo: A Python library for X-ray Chemical Imaging and Computed Tomography	
JULY 9 **17:30-18:00**	**Ville-Veikko Wettenhovi** (University of Eastern Finland, Finland) OMEGA - Open-source multi-dimensional tomographic reconstruction software for MATLAB, GNU Octave and Python	

SS 163	**Mathematical Modeling of Multiphysics Coupled Systems—Models, Algorithms, and Scalable Computing** Organizer(s): Yifan Wang , Haibiao Zheng , Yizhong Sun	**Room 314**
JULY 9 **16:30-17:00**	**Hao Liu** (Hong Kong Baptist University, Hong Kong) Fast Operator-Splitting Methods for Nonlinear Elliptic Equations	
JULY 9 **17:00-17:30**	**Li Shan** (Shantou University, Peoples Rep of China) Ensemble decoupled algorithms for dual-porosity-Stokes model with random physical parameters	

JULY 9 **17:30-18:00**	**Shihan Guo** (Otto von Guericke University Magdeburg, Germany) Neural enrichment finite element method: A hybrid method for problems with strong oscillations and interface problems
JULY 9 **18:00-18:30**	**Xiaohe Yue** (Leibniz University Hannover, Germany) A Locking-free and Loosely Coupled Robin-Robin Scheme for Fluid-Poroelasticity Interaction

SS 164	**Periodic and Ergodic Schrodinger Operators** Organizer(s): Matthew Faust , Ilya Kachkovskiy , Omar Hurtado	**Room 740**
JULY 9 **16:30-17:00**	**Tome Filipe Silvestre T. Graxinha** (Centro de Estudos Matematicos - Universidade de Lisboa, Portugal) Moduli of Continuity of Lyapunov Exponents for Random Non-Invertible Cocycles	
JULY 9 **17:00-17:30**	**Constanze D Liaw** (University of Delaware, USA) Singular Spectrum under a Wide Class of Perturbations	

SS 167	**Functional spaces and multiphase problems** Organizer(s): Calogero Vetro , Marek Galewski	**Room 827**
JULY 9 **16:30-17:00**	**Rosario Corso** (University of Palermo, Italy) Sampling-type series and approximation of differential operators	
JULY 9 **17:00-17:30**	**Makson Santos** (University of Lisbon, Portugal) Regularity theory for a class of normalized $p-$Laplace type equations	
JULY 9 **17:30-18:00**	**Calogero Vetro** (University of Palermo, Italy) Anisotropic (p,q)-Laplacian equations with competing nonlinearities	

SS 168	**Stochastic Analysis and Large Scale Interacting Systems** Organizer(s): Danielle Hilhorst , Perla El Kettani , Bin Xie	**Room 313**
JULY 9 **16:30-17:00**	**Johannes Zimmer** (TU Munich, Germany) From particles via fluctuating hydrodynamics to gradient flows: Rigorous error estimates	
JULY 9 **17:00-17:30**	**Zhenfu Wang** (Peking University, Peoples Rep of China) Kac`s program for the Landau equation	

JULY 9 **17:30-18:00**	**Scott A Smith** (Academy of Mathematics and Systems Sciences, Chinese Academy of Sciences, Peoples Rep of China) Mass generation for the O(N) Linear Sigma Model in the large N limit

SS 172	**Stochastic and geometric analysis on manifolds and metric measure spaces** Organizer(s): Kazuhiro Kuwae , Xiangdong Li , Asuka Takatsu	**Room 639**
JULY 9 **16:30-17:00**	**Yuzuru Inahama** (Kyushu University, Japan) Large deviations for small noise hypoelliptic diffusion bridges on sub-Riemannian manifolds	
JULY 9 **17:00-17:30**	**Xiang-Dong Li** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) On the W-entropy on Riemannian manifolds, metric measure spaces, Clifford algebra and quantum Markov semigroups	
JULY 9 **17:30-18:00**	**Bo Wu** (Fudan University, Peoples Rep of China) Functional inequalities on the Riemannian path space	
JULY 9 **18:00-18:30**	**Kazuhiro Kuwae** (Fukuoka University/Department of Applied Mathematics, Japan) On Morrey`s inequality over RCD(K,N)-spaces	

SS 175	**Modern Trends in Partial Differential Equations and General Relativity** Organizer(s): Anahit Galstyan , Makoto Nakamura , Karen Yagdjian	**Room 739**
JULY 9 **16:30-17:00**	**Yusuke Ishigaki** (Kwansei Gakuin University, Japan) Asymptotic stability of parallel flow of compressible viscoelastic system under local perturbation	
JULY 9 **17:00-17:30**	**Takuma Yoshizumi** (The University of Osaka, Japan) Blow-up phenomena and lifespan estimates for nonlinear Klein-Gordon equations in FLRW spacetimes	
JULY 9 **17:30-18:00**	**Anahit Galstyan** (University of Texas Rio Grande Valley, USA) Waves in the Reissner-Nordstrom space-time	

SS 177	**Innovations in Data Assimilation: Theory, Algorithms, and Application** Organizer(s): Adam Larios , Jared Whitehead	Room 442
JULY 9 **16:30-17:00**	**Jared Whitehead** (Brigham Young University, USA) System Identification via Optimization in Data Assimilation	
JULY 9 **17:00-17:30**	**Marios Andreou** (University of Wisconsin-Madison, USA) DASSH -- Diffusion-Accelerated Smoothing using Score-based Heuristics	
JULY 9 **17:30-18:00**	**Julia Novo** (Universidad Autonoma de Madrid, Spain) Error analysis of proper orthogonal decomposition data assimilation schemes for the Navier-Stokes equations with grad-div stabilization	
JULY 9 **18:00-18:30**	**Jana de Wiljes** (Ilmenau University of Technology, Germany) Challenges in Data Assimilation and Ideas for Addressing Them	
JULY 9 **18:30-19:00**	**Andrew Stuart** (Caltech, USA) Analysis of Data-Driven Smoothing and Forecasting	
JULY 9	**Robin Armstrong** (Cornell University, USA) Estimating High-Dimensional Covariance Matrices with Hierarchical Rank Structure	

SS 185	**Multiscale Analysis: Geometry and Evolution Problems (mSPACE)** Organizer(s): Delio Mugnolo , Leonard Monsaingeon , Matthias Neumann	Room 311
JULY 9 **16:30-17:00**	**Simone Dovetta** (Politecnico di Torino, Italy) Non-uniqueness of normalized ground states for nonlinear Schr\\odinger equations	
JULY 9 **17:00-17:30**	**Sara Farinelli** (University of Genova, Italy) On the stability of the JKO operator under different notions of convexity.	
JULY 9 **17:30-18:00**	**Gianna Goetzmann** (University of Augsburg, Germany) Effective transmission through a thin heterogeneous layer via EDP-convergence	

JULY 9 **18:00-18:30**	**Jeremy Marzuola** (University of North Carolina, USA) Probing the influence of topological and geometric disorder on the spectrum of the differential Laplacian operator on networks
JULY 9 **18:30-19:00**	**Idriss Mazari-Fouquer** (CEREMADE, Paris Dauphine University PSL, France) Multiscale approaches in optimal control

SS 191	**Stochastic Dynamical Systems Under Levy Noise: Theory and Applications** Organizer(s): Ting Gao , Xiaoli Chen	**Room 824**
JULY 9 **16:30-17:00**	**Hui Wang** (Zhengzhou University, Peoples Rep of China) Identifying and Predicting Critical Transitions in a Cdc2-Cyclin B/Weel System	
JULY 9 **17:00-17:30**	**YUNFEI XIA** (Harbin Engineering University, Peoples Rep of China) Modeling Epidemic Dynamics: A Stochastic SIR Framework with Tempered Stable Distributions	
JULY 9 **17:30-18:00**	**Qi Zhang** (Beijing Institute of Mathematical Sciences and Applications, Peoples Rep of China) Convergence of One--Dimensional Ising--Kac--Kawasaki Dynamics to Stochastic Cahn--Hilliard Equations	
JULY 9 **18:00-18:30**	**Larissa Serdukova** (University of Leicester, Department of Computing and Mathematical Science, England) Levy noise versus Gaussian-noise-induced transitions in the Ghil-Sellers energy balance model	

SS 194	**The rigirous mathematical theory on the convergence in the fluid related model** Organizer(s): Feng Xie , Xiongfeng Yang	**Room 421**
JULY 9 **16:30-17:00**	**Yucheng Wang** (Shanghai University, Peoples Rep of China) Suppression of blow-up in 3-D Keller-Segel system with fractional diffusion via Couette flow in whole space	

JULY 9 **17:00-17:30**	**Xin Liu** (Shanghai University of International Business and Economics, Peoples Rep of China) Global well-posedness of one-dimensional infrarelativistic model for a compressibleviscous gas with radiation
JULY 9 **17:30-18:00**	**Lijuan Wang** (Shanghai University of International Business and Economics, Peoples Rep of China) Enhanced Dissipation and Global Well-Posedness for a Three-Dimensional Flame Propagation Model with Couette Flow
JULY 9 **18:00-18:30**	**Xiongfeng Yang** (Shanghai Jiao Tong University, Peoples Rep of China) Decoupled rotational Camassa-Holm approximation from the Green-Naghdi system with Coriolis effect

SS 195	**Calculus of Variations and Hyperbolic PDEs in Solid Mechanics** Organizer(s): Andreas Vikelis , Konstantinos Koumatos , Athanasios Tzavaras	**Room 821**
JULY 9 **16:30-17:00**	**Srdan Trifunovic** (Faculty of Sciences, University of Novi Sad, Yugoslavia) Regular solutions and long-time dynamics in nonlinearly coupled thermoelasticity	
JULY 9 **17:00-17:30**	**Leonard Kreutz** (Technical University of Munich, Germany) Geometric rigidity in variable domains and applications in dimension reduction	
JULY 9 **17:30-18:00**	**Anastasia Molchanova** (TU Wien, Austria) Derivation of membrane models in nonlocal hyperelasticity	
JULY 9 **18:00-18:30**	**Stefano Spirito** (University of L Aquila, Italy) Global Weak Solutions for Korteweg-Type Fluid Models	

CS 2	**PDEs and Applications**	**Room 635**
JULY 9 **16:30-16:50**	**Monti Das** (Indian Institute of Technology Guwahati, India) Finsler N-Laplace equations with critical exponential nonlinearity	
JULY 9 **16:50-17:10**	**Shilpa Gupta** (Indian Institute of Technology, India) Elliptic and Parabolic Problems Involving the Anisotropic $\vec{\textbf{p}}(u)$-Laplacian	

JULY 9 **17:10-17:30**	**Gyeonggyu Lee** (National Institute for Mathematical Science, Korea) Thermodynamical Allen-Cahn equation with general polynomial free energy
JULY 9 **17:30-17:50**	**Narges Shabgard** (University of New England, Australia) Propagation through a barrier: Numerical analysis of a reaction diffusion model with free boundary
JULY 9 **17:50-18:10**	**Anja Vrbaski** (University of Zagreb, Croatia) An existence result for the two-phase two-component flow in porous media
JULY 9 **18:10-18:30**	**Yidan Yang** (Xiamen University, Peoples Rep of China) A hybrid ROM-FOM framework for efficient solution of elliptic PDE inverse problems

CS 3	**Modeling, Math Biology and Math Finance**	**Room 634**
JULY 9 **16:30-16:50**	**Elcin Celik** (Izmir Institute of Technology, Turkey) A Dynamic SIR Epidemic Model with Taylor Collocation Method: Analysis of Transmission Dynamics Under Intervention Changes	
JULY 9 **16:50-17:10**	**Chengming Huang** (Huazhong University of Science and Technology, Peoples Rep of China) Long-time numerical approximations for stiff ODEs on semi-infinite intervals	
JULY 9 **17:10-17:30**	**Yakun LI** (The Hong Kong University of Science and Technology, Peoples Rep of China) Variational modeling and numerical simulation of evaporating thin droplets and the coffee-ring effect	
JULY 9 **17:30-17:50**	**Nour A. Nabhan** (American University of Armenia, Armenia) A Modeling Approach to Habitability Probabilities using Survival-Filtered Stellar Demographics with Biogeochemical Implications.	
JULY 9 **17:50-18:10**	**Ruben Taieb** (INRIA, France) The role of dormancy in population dynamics in fluctuatng and uncertain environments	

Parallel Session 12 :: Friday, 07/10, 8:00-10:00

SS 2	**New frontiers in the compressible mathematical fluid mechanics and thermodynamics** Organizer(s): Milan Pokorny , Eduard Feireisl	**Room 315**
JULY 10 **8:00-8:30**	**Maria Lukacova** (Institute of Mathematics, University Mainz, Germany) Dafermos entropy criterion and dissipative weak solutions of the compressible Euler equations	
JULY 10 **8:30-9:00**	**Piotr Mucha** (University of Warsaw, Poland) Various approaches to the issue of existence for systems of compressible flows	
JULY 10 **9:00-9:30**	**Yong Lyu** (Nanjing University, Peoples Rep of China) Unconditional stability of equilibria in thermally driven compressible fluids	
JULY 10 **9:00-9:30**	**Ewelina Zatorska** (University of Warwick, England) Relative entropy method and applications for the compressible two-fluid flows	
JULY 10 **9:30-10:00**	**Francesco Fanelli** (Basque Center for Applied Mathematics, Spain) Mach, Rossby and the Rayleigh-B\`enard problem	

SS 8	**Differential, Difference, and Integral Equations: Techniques and Applications** Organizer(s): Jeffrey Lyons , Wenying Feng	**Room 440**
JULY 10 **8:00-8:30**	**Jeffrey Lyons** (The Citadel, USA) Shooting Method Using Difference Equations	
JULY 10 **8:30-9:00**	**Abdelghani Ouahab** (University of Djillali Liabes Sidi Bel Abbes, Algeria) Fixed point theorems in orders metric and Banach spaces based on degree of nondensifiability and applications	
JULY 10 **9:00-9:30**	**Vakhtang Lomadze** (Javakhishvili State University, Rep of Georgia) A Purely Algebraic Unified Approach to Linear Differential and Difference Equations	
JULY 10 **9:30-10:00**	**Huicai Xu** (Shanxi Datong University, Peoples Rep of China) Uniqueness of meromorphic functions sharing values with their difference polynomials	

SS 9	**Stochastics and randomness in physical models** Organizer(s): Luca Scarpa , Margherita Zanella	**Room 620**

JULY 10 **8:00-8:30**	**Mark Veraar** (TU Delft, Netherlands) New methods in Large deviations for SPDE
JULY 10 **8:30-9:00**	**Lucio Galeati** (University of L`Aquila, Italy) Fluctuations for mean field limits of singular interacting particle systems driven by fBm
JULY 10 **9:00-9:30**	**Joshua Utley** (Friedrich Alexander University Erlangen Nuremberg, Germany) Finite Speed of Propagation and Waiting Time Phenomena for Stochastic Porous-Media Equations with Nonlinear Conservative Noise
JULY 10 **9:30-10:00**	**giuseppina guatteri** (Politecnico di Milano, Italy) Small Noise Asymptotics for Nonlinear Reaction-Diffusion Equations

SS 19	**Topics on singular stochastic equations** Organizer(s): Xicheng Zhang , Jian Wang , Wei Liu	**Room 641**
JULY 10 **8:00-8:30**	**Wei Liu** (Wuhan University, Peoples Rep of China) Transportation-cost information inequalities for McKean-Vlasov equations and mean field interacting particle system	
JULY 10 **8:30-9:00**	**Jian Wang** (Fujian Normal University, Peoples Rep of China) Quantitative Asymptotics for Time-Inhomogeneous L\\\`evy-Driven SDEs with Asymptotically Vanishing Drifts	
JULY 10 **9:00-9:30**	**Jing Wu** (Sun Yat-sen University, Peoples Rep of China) On reflected SDEs with superlinear coefficients	
JULY 10 **9:30-10:00**	**Wenjie Ye** (School of Mathematics and Statistics at Fujian Normal University, Peoples Rep of China) Stochastic Differential Equations with Local Growth Singular Drifts	

SS 24	**Mathematical and Computational Modeling of Complex Biological Systems** Organizer(s): Zhisheng Shuai , Michael Li , Samares Pal	**Room 432**
JULY 10 **8:30-9:00**	**Michael Li** (University of Alberta, Canada) Modeling for a purpose: an influenza outbreak in a boarding school revisited.	

JULY 10 **9:00-9:30**	**Naveen K. Vaidya** (San Diego State University, USA) Modeling Climate-Driven Spatiotemporal Mosquito Population and Dengue Risk
JULY 10 **9:30-10:00**	**Bouchra BN NASRI** (University of Montreal, Canada) Infectious disease surveillance using deep learning models

SS 48	**Recent Advances in Nonlinear PDEs and Inverse Problems** Organizer(s): Yi-Hsuan Lin , Yavar Kian , Mikko Salo	**Room 619**
JULY 10 **8:00-8:30**	**Teemu Tyni** (University of Oulu, Finland) Inverse scattering problems for nonlinear wave equations on Lorentzian manifolds	
JULY 10 **8:30-9:00**	**Luca Rondi** (Universit\`a degli Studi di Pavia, Italy) Interior decay of solutions to elliptic equations and applications to inverse problems	
JULY 10 **9:00-9:30**	**David Johansson** (Aarhus University, Denmark) Recovery of nonlinear material parameters in a quasilinear Lam\`e system	
JULY 10 **9:30-10:00**	**Marvin Weidner** (University of Bonn, Germany) Boundary regularity for nonlocal equations	

SS 49	**Nonlinear Waves in Discrete Systems** Organizer(s): Baofeng Feng , Panayotis Kevrekidis , Georgios Theocharis	**Room 425**
JULY 10 **8:00-8:30**	**Christopher Lustri** (The University of Sydney, Australia) Exponential asymptotics for calculating stability in discrete NLS equations	
JULY 10 **8:30-9:00**	**Nikos I Karachalios** (Department of Mathematics, University of Thessaly, Greece) Discrete Nonlinear Schr\odinger versus Ablowitz-Ladik: Existence and dynamics of NLS-type lattices over a nonzero background	
JULY 10 **9:00-9:30**	**VASSILIOS ROTHOS** (Aristostle University of Thessaloniki, Greece) Geometry Meets Computation: Localized States in DNLS Lattices with Extended Interactions	

JULY 10 **9:30-10:00**	**Ioannis Kourakis** (Khalifa University of Science and Technology, United Arab Emirates) Wavepacket Modulation in Nonlinear Lattices: Nonlinear Schrodinger Formalism and Application in Dusty Plasma Crystals

SS 52	**Differential Equations and Dynamical Systems in Mathematical Biology** Organizer(s): Peter Hinow , Jozsef Farkas , Peter Rashkov	**Room 812**
JULY 10 **8:00-8:30**	**Andrea Pugliese** (University of Trento, Italy) Self-regulation and resource dependent growth rates: a size-structured predator-prey mode	
JULY 10 **8:30-9:00**	**Harsh Jain** (University of Minnesota Duluth, USA) Modeling Combination Therapy to Overcome NUPR1-mediated Docetaxel Resistance in Prostate and Pancreatic Cancer	
JULY 10 **9:00-9:30**	**Thomas Hagen** (The University of Memphis, USA) Energy-Driven Organization and Positivity in a Beetle-Inspired Droplet System with Non-Newtonian Fluids	
JULY 10 **9:30-10:00**	**Marcello Delitala** (Politecnico di Torino, Italy) Agent-based and continuum models for spatial dynamics of infection by oncolytic viruses	

SS 67	**Modeling, Machine Learning and Data Analysis for Complex Systems and Dynamics** Organizer(s): Pengcheng Xiao , Honghui Zhang , Lixia Duan	**Room 642**
JULY 10 **8:00-8:30**	**Zilu Cao** (Chang`an University, Peoples Rep of China) Dynamic Modeling and Regulation of Parkinson`s Disease Network	
JULY 10 **8:30-9:00**	**Aili Fan** (Northwestern Polytechnical University, Peoples Rep of China) Prescribed performance projective synchronization for unknown complex networks with mismatched dimensions via event-triggered mechanism	
JULY 10 **9:00-9:30**	**Shutong Liu** (Shaanxi Normal University, Peoples Rep of China) Time scale governs explosive transitions in two-layer multiplex networks	

SS 71	**Progress in Partial Differential Equations of Mathematical Physics: Theory and Methods** Organizer(s): Andreas Chatziafratis , Spyridon Kamvissis , Tohru Ozawa	Room 316
JULY 10 **8:00-8:30**	**Dimitra Antonopoulou** (National and Kapodistrian University of Athens, Greece) On the nonlinear Schr\odinger equation on the half line: analysis and numerical solution	
JULY 10 **8:30-9:00**	**Deniz Bilman** (University of Cincinnati, USA) Extreme Superposition: Rogue Waves of Infinite Order, Universality, and Anomalous Temporal Decay	
JULY 10 **9:00-9:30**	**Jerry L Bona** (University of Illinois at Chicago, USA) Bore Propagation Models	
JULY 10 **9:30-10:00**	**Bernard Deconinck** (University of Washington, USA) The Unified Transform Method for variable-coefficient equations	

SS 81	**Analytic and numerical progress in complex fluids and related PDE models** Organizer(s): Xinyu Cheng , Shijie Dong , Tongou Yang	Room 434
JULY 10 **8:00-8:30**	**Yuan Cai** (Fudan University, Peoples Rep of China) Global current-vortex sheets in the two-dimensional ideal incompressible MHD	
JULY 10 **8:30-9:00**	**De Huang** (Peking University, Peoples Rep of China) On self-similar finite-time blowups of the incompressible Euler equations and related models	
JULY 10 **9:00-9:30**	**Xiao Ren** (Center for Applied Mathematics, Fudan University, Peoples Rep of China) On the steady Navier-Stokes equations in a system of channels: existence, uniqueness and rigidity	
JULY 10 **9:30-10:00**	**Ning-An Lai** (Zhejiang Normal University, Peoples Rep of China) Morawetz type estimates for wave/Schr\{o}dinger equations and its applications	

SS 86	**Advances in Differential, Difference and Dynamic Equations with Applications in Science and Engineering** Organizer(s): Elvan Akin , Billur Kaymakcalan , Ozkan Ozturk	Room 428

JULY 10 **8:30-9:00**	**Chris Ahrendt** (University of Wisconsin-Eau Claire, USA) Analysis of Initial Conditions of Various Discrete Dynamic Equations and Iterated Function Systems using Visual Heuristics
JULY 10 **9:00-9:30**	**Chris Lynd** (Commonwealth University of Pennsylvania, USA) New Theorems for Determining the Global Dynamics of Anti-Competitive Systems
JULY 10 **9:30-10:00**	**Md Mutakabbir Khan** (Missouri University of Science and Technology, USA) \title{Bifurcation Analysis of a Smith-Type Growth Predator--Prey Model and Its Application}

SS 108	**Regularity in local versus nonlocal problems** Organizer(s): Antonio Iannizzotto , Eurica Henriques , Simone Ciani	**Room 430**
JULY 10 **8:00-8:30**	**Eugenio Vecchi** (ALMA MATER STUDIORUM - Universita' di Bologna, Italy) Existence and uniqueness of weak solutions to singular anisotropic elliptic problems	
JULY 10 **8:30-9:00**	**Ana Jacinta Soares** (Centre of Mathematics, University of Minho, Portugal) Fractional diffusion in heterogeneous media with a discontinuous coefficient	
JULY 10 **9:00-9:30**	**Antonella Nastasi** (University of Palermo, Italy) Unified regularity properties for minimizers under double-phase and exponential growth	
JULY 10 **9:30-10:00**	**Patrizia Di Gironimo** (Dipartimento di Matematica, Università di Salerno, Italy) Non-Diagonal Quasilinear Degenerate Elliptic Systems: Existence and Regularity	

SS 113	**Recent Advances in Uncertainty Quantification and Scientific Machine Learning with Applications to Complex Dynamical Systems** Organizer(s): Marios Andreou , Konstantinos Zygalakis , Nan Chen	**Room 827**
JULY 10 **8:00-8:30**	**Sumith Reddy Anugu** (TU Ilmenau, Germany) New results in feedback particle filter	
JULY 10 **8:30-9:00**	**Fabio Nobile** (Ecole Polytechnique Federale de Lausanne (EPFL), Switzerland) Dynamical Low-Rank Ensemble Kalman filtering	

JULY 10 **9:00-9:30**	**Tijana Janjic** (KU Eichstaett Ingolstadt, Germany) Capturing Prediction Uncertainty in Data Assimilation
JULY 10 **9:30-10:00**	**Marc BOCQUET** (\`Ecole nationale des ponts et chauss\`ees, France) Learning data assimilation from artificial intelligence

SS 125	**Models of Fluid Motion** Organizer(s): John Carter , Mats Ehrnstrom , Panayiotis Panayotaros	**Room 436**
JULY 10 **8:00-8:30**	**Yvonne Alama Bronsard** (Massachusetts Institute of Technology, USA) From explicit formulas to Wave Kinetic theory for the Benjamin-Ono equation	
JULY 10 **8:30-9:00**	**JOHANNA MARSTRANDER** (NTNU - Norwegian University of Science and Technology, Norway) A variational construction of solitary waves for the Babenko equation on finite depth	
JULY 10 **9:00-9:30**	**Douglas Svensson Seth** (Norwegian University of Science and Technology, Sweden) Asymmetric Travelling Capillary-Gravity Waves	
JULY 10 **9:30-10:00**	**Nadia Skoglund Taki** (University of Bergen, Norway) Improved existence time for dispersive water waves equations	

SS 135	**Dynamical Systems in Mathematical Biology: Epidemiology, Population Dynamics, and Reaction Networks** Organizer(s): Burcu Gürbüz , Eugenia Franco , Nicola Vassena	**Room 426**
JULY 10 **8:00-8:30**	**Yogesh Bali** (Johannes Gutenberg University of Mainz, Germany) Integrating Behavioral Survey Data into Epidemic ModelsA Data-Driven Modeling Framework	
JULY 10 **8:30-9:00**	**Dipo Aldila** (Universitas Indonesia, Indonesia) Understanding recurrent COVID-19 outbreaks under imperfect mask protection and reinfection: a mathematical modeling study	
JULY 10 **9:00-9:30**	**Nishith NM Mohan** (RPTU Kaiserslautern-Landau, Germany) On Reaction-Diffusion-Taxis Systems in Eco-Epidemiology	

JULY 10 **9:30-10:00**	**Luca Nieding** (Technical University Braunschweig, Germany) A reaction-diffusion model of resistance development in diploid organisms

SS 136	**Collective Dynamics in Large Networks: From Kuramoto to Spin Models** Organizer(s): Georgi Medvedev , Nils Berglund , Matthew Mizuhara	**Room 437**
JULY 10 **8:00-8:30**	**Pablo Groisman** (Universidad de Buenos Aires, Argentina) Kuramoto's Energy Landscape in random geometric graphs.	
JULY 10 **8:30-9:00**	**Gideon Simpson** (Drexel University, USA) Numerical Methods for Stochastic McKean-Vlasov Equations	
JULY 10 **9:00-9:30**	**Georgi Medvedev** (Drexel University, USA) Interacting dynamical systems on self-similar networks	

SS 140	**Recent advances in wavelet analysis, PDEs and dynamical systems – part III** Organizer(s): Emanuel Guariglia	**Room 445**
JULY 10 **9:00-9:30**	**Veneta Koleva** (Sofia University St. Kliment Ohridski, Bulgaria) Inverse Problems for Nonlinear Epidemiological Models: Parameters Identifications and Validation of SEIRS-type Models	
JULY 10 **9:30-10:00**	**Hyeong-Ohk Bae** (Ajou University, Korea) ANALYSIS AND MODELLING OF FASHION TRENDS	

SS 144	**PDEs and Irregular Interfaces: New Frontiers for Industrial Applications** Organizer(s): Michael Hinz , Maria Rosaria Lancia , Chiara Sorgentone	**Room 628**
JULY 10 **9:00-9:30**	**Cherif Amrouche** (Universite de Pau et des Pays de l`Adour, France) On the traces of harmonic functions $H^{1/2}$ and $H^{3/2}$ in Lipschitz domains	
JULY 10 **9:30-10:00**	**Gianluca Mola** (Sorbonne University Abu Dhabi, Italy) Identification of constant coefficients in a model of linear anisotropic subdiffusion	

SS 146	**Nonlinear differential equations: control, delay, and boundary value problems** Organizer(s): Irene Benedetti , Francesca Dalbono , Elisa Sovrano , Valentina Taddei	**Room 427**
JULY 10 **8:00-8:30**	**Sumit Arora** (Instituto de Matematicas, Universidad de Talca, Chile) Controllability problem of a differential equation with memory	
JULY 10 **8:30-9:00**	**Francesca Bucci** (Universit\\`a degli Studi di Firenze, Italy) Evolutionary partial differential equations with finite memory: state space representation approach and the linear quadratic problem	
JULY 10 **9:00-9:30**	**Jos\`{e} J. Oliveira** (University of Minho, Portugal) Convergence of asymptotic systems in Cohen-Grossberg neural network models with unbounded delays	
JULY 10 **9:30-10:00**	**Paola Rubbioni** (University of Perugia, Italy) Optimal strategies for differential problems with feedback controls and distributed delay	

SS 153	**Stochastic computing and structure preserving methods** Organizer(s): Yanzhao Cao , Chuchu Chen , Jialin Hong	**Room 433**
JULY 10 **8:00-8:30**	**Yibo Wang** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Peoples Rep of China) Preservation of random attractor and SRB measure under numerical discretization	
JULY 10 **8:30-9:00**	**Fuke Wu** (Huazhong University of Science and Technology, Peoples Rep of China) Convergence rate of two classes of error processes for stochastic differential equations	

SS 156	**Structure and dynamics of solutions for nonlinear elliptic and parabolic equations** Organizer(s): Satoshi Tanaka , Raul Manasevich , Marta Garcia-Huidobro	**Room 312**
JULY 10 **8:30-9:00**	**Yuki Osada** (Tokyo University of Science, Japan) Variational analysis for coupled nonlinear Schr\{o}dinger equations with point interaction	

JULY 10 **9:00-9:30**	**Shingo Takeuchi** (Shibaura Institute of Technology, Japan) Generalized Jacobi elliptic functions and their properties
JULY 10 **9:30-10:00**	**Mieko Tanaka** (Tokyo University of Science, Japan) On Rayleigh quotients with a parameter for p-Laplace equations

SS 164	**Periodic and Ergodic Schrodinger Operators** Organizer(s): Matthew Faust , Ilya Kachkovskiy , Omar Hurtado	**Room 740**
JULY 10 **8:00-8:30**	**Shengquan Xiang** (Peking University, Peoples Rep of China) Exponential mixing for the randomly forced NLS equation	
JULY 10 **8:30-9:00**	**Lior Tenenbaum** (Bar-Ilan university, Israel) Measure estimates coming from periodic approximations	
JULY 10 **9:00-9:30**	**Kiran Kumar** (New York University Abu Dhabi, United Arab Emirates) Ergodicity in discrete-time quantum walks	
JULY 10 **9:30-10:00**	**Omar Hurtado** (Georgia Institute of Technology, USA) Localization for the non-stationary Anderson model in two and three dimensions	

SS 168	**Stochastic Analysis and Large Scale Interacting Systems** Organizer(s): Danielle Hilhorst , Perla El Kettani , Bin Xie	**Room 313**
JULY 10 **8:00-8:30**	**Robert Dalang** (Ecole Polytechnique Federale de Lausanne (EPFL), Switzerland) Sharp upper bounds on hitting probabilities for the solution to the stochastic heat equation on the line	
JULY 10 **8:30-9:00**	**Perla El Kettani** (University of Toulon, France) The vanishing latent heat limit of a stochastic Stefan problem : An error estimate	
JULY 10 **9:00-9:30**	**Alexandra Stavrianidi** (University of Munster, Germany) On the density of the supremum of nonlinear SPDEs	
JULY 10 **9:30-10:00**	**BIN XIE** (Shinshu University, Japan) Convergence rate of lattice approximations for reflected stochastic partial differential equation	

SS 172	**Stochastic and geometric analysis on manifolds and metric measure spaces** Organizer(s): Kazuhiro Kuwae , Xiangdong Li , Asuka Takatsu	Room 639
JULY 10 **8:30-9:00**	**Sangmin Park** (California Institute of Technology, USA) Dissipative Hamiltonian structure of the Vlasov-Fokker-Planck equation	
JULY 10 **9:00-9:30**	**Ting Kam Leonard Wong** (University of Toronto, Canada) Gaussian processes under adapted Wasserstein distance	
JULY 10 **9:30-10:00**	**Asuka Takatsu** (The University of Tokyo, Japan) Disintegrated optimal transport for metric fiber bundles and their applications	

SS 177	**Innovations in Data Assimilation: Theory, Algorithms, and Application** Organizer(s): Adam Larios , Jared Whitehead	Room 442
JULY 10 **8:00-8:30**	**Adam Larios** (University of Nebraska-Lincoln, USA) Data Assimilation in Turbulent Flows: Model Mismatch and Incomplete Dissipation	
JULY 10 **8:30-9:00**	**Eviatar Bach** (University of Reading, England) Learning probabilistic filters for data assimilation	
JULY 10 **9:00-9:30**	**Daniel Sanz-Alonso** (University of Chicago, USA) Continuous Data Assimilation with Learned Surrogate Dynamics	
JULY 10 **9:30-10:00**	**Nicholas White** (University of Nebraska-Lincoln, USA) Spectral Viscosity with Continuous Data Assimilation: Model Mismatch	

SS 185	**Multiscale Analysis: Geometry and Evolution Problems (mSPACE)** Organizer(s): Delio Mugnolo , Leonard Monsaingeon , Matthias Neumann	Room 311
JULY 10 **8:30-9:00**	**Hannah HZ Zoller** (Stockholm Resilience Centre, Sweden) Panarchy: From Theory to Measurement	

JULY 10 **9:00-9:30**	**Fatihcan M. Atay** (Bilkent University, Turkey) On the Lumpability of Dynamical Systems
JULY 10 **9:30-10:00**	**Marco Morandotti** (Politecnico di Torino, Italy) Replicator dynamics as the large population limit of a discrete Moran process

SS 187	**New Trends in Crowd Dynamics and Traffic Flow** Organizer(s): Noureddine igbida , Karami Fahd , El Mahdi Erraji	**Room 637**
JULY 10 **8:00-8:30**	**Noureddine igbida** (Unniveristy of Limoges, France) A New Class of Non-Linear PDEs for Species Dispersal under Congestion Constraints	
JULY 10 **8:30-9:00**	**Hamza Ennaji** (Univ. Grenoble Alpes, CNRS, Grenoble INP*, LJK, France) On a modified Hughes model for crowd motion	
JULY 10 **9:00-9:30**	**Kamal Khalil** (LMAH, University of Le Havre Normandie, FR-CNRS-3335, ISCN, Le Havre 76600, France., France) Analysis of some pedestrians PDE models for a population under stress	
JULY 10 **9:30-10:00**	**Valeria Iorio** (University of L`Aquila, Italy) Fully discrete follow-the-leader approximation of one-dimensional scalar conservation laws with vacuum	

Parallel Session 13 :: Friday, 07/10, 10:30-12:30

SS 2	**New frontiers in the compressible mathematical fluid mechanics and thermodynamics** Organizer(s): Milan Pokorny , Eduard Feireisl	**Room 315**
JULY 10 **10:30-11:00**	**Agnieszka Swierczewska-Gwiazda** (University of Warsaw, Poland) Unconditional stability of radially symmetric steady sates of compressible viscous fluids with inflow/outflow boundary conditions	
JULY 10 **11:30-12:00**	**Aneta Wr\`oblewska-Kami\`nska** (Institute of Mathematics, Polish Academy of Sciences, Poland) Incompressible limits at large Mach number for a reduced compressible MHD system	

JULY 10 **12:00-12:30**	**Yuhuan Yuan** (Nanjing University of Aeronautics and Astronautics, Peoples Rep of China) temperature-driven turbulence in compressible fluid flows

SS 8	**Differential, Difference, and Integral Equations: Techniques and Applications** Organizer(s): Jeffrey Lyons , Wenying Feng	**Room 440**
JULY 10 **10:30-11:00**	**John Davis** (Baylor University, USA) A family of Gibbs constants for symmetric Krawtchouk expansions	
JULY 10 **11:00-11:30**	**darko volkov** (Worcester Polytechnic Institute, USA) Passive inverse problems: stability and neural network solutions	
JULY 10 **11:30-12:00**	**Qi Li** (School of Mathematics and Statistics, Shanxi Datong University, Peoples Rep of China) Inverse interior scattering problems for perturbed quantum Bunimovich billiards	
JULY 10 **12:00-12:30**	**Wenying Feng** (Trent University, Canada) Multiple positive solutions for a fractional differential system with nonlocal boundary conditions	

SS 9	**Stochastics and randomness in physical models** Organizer(s): Luca Scarpa , Margherita Zanella	**Room 620**
JULY 10 **10:30-11:00**	**Benedetta Ferrario** (University of Pavia, Italy) The nonlinear Schr\odinger equation with multiplicative noise and arbitrary power of the nonlinearity	
JULY 10 **11:00-11:30**	**Umberto Pappalettera** (University of Basel, Switzerland) Anomalous dissipation and regularization in isotropic Gaussian turbulence	
JULY 10 **11:30-12:00**	**Erika Hausenblas** (Technical University of Leoben, Austria) Motion planing with fractals - a rough path approach	
JULY 10 **12:00-12:30**	**Annie MILLET** (University Paris 1 Pantheon Sorbonne, France) On the stochastic H^1-critical Non Linear Sch\odinger equation	

SS 24	**Mathematical and Computational Modeling of Complex Biological Systems** Organizer(s): Zhisheng Shuai , Michael Li , Samares Pal	Room 432
JULY 10 **10:30-11:00**	**Troy Day** (Queen`s University, Canada) Some dimension reduction techniques for Leslie matrix models	
JULY 10 **11:00-11:30**	**Jacques B\`elair** (Universit\\\\\\\\\\\\\\\\\\'{e} de Montr\\\\\\\\\\\\\\\\\\'{e}al, Canada) Awareness and compliance in an infectious disease model	
JULY 10 **11:30-12:00**	**Summer Atkins** (The University of Alabama in Huntsville, USA) An immuno-epidemiological model with consideration for symptom score	
JULY 10 **12:00-12:30**	**Byul Nim Kim** (Kyung Hee University/Department of Applied Mathematics, Korea) From Viral Kinetics to Epidemic Dynamics: A Unified Multiscale Modeling Framework with Analytical and Agent-Based Approaches	

SS 48	**Recent Advances in Nonlinear PDEs and Inverse Problems** Organizer(s): Yi-Hsuan Lin , Yavar Kian , Mikko Salo	Room 619
JULY 10 **10:30-11:00**	**Shubham Jaiswal** (University of Jyv\\"askyl\\"a, Finland) An inverse source problem for a quasilinear elliptic equation	
JULY 10 **11:00-11:30**	**Jason Choy** (Chinese University of Hong Kong, Hong Kong) Simultaneous Stable Determination of Quasilinear terms for Parabolic equations	
JULY 10 **11:30-12:00**	**Maolin Deng** (The Chinese University of Hong Kong, Hong Kong) Stable Determination and Reconstruction of a Semilinear Term in a Parabolic Equation	

SS 49	**Nonlinear Waves in Discrete Systems** Organizer(s): Baofeng Feng , Panayotis Kevrekidis , Georgios Theocharis	Room 425
JULY 10 **10:30-11:00**	**Baofeng Feng** (University of Texas Rio Grande Valley, USA) Breather solutions to the coupled Ablowitz-Ladik lattice equations	

SS 52	**Differential Equations and Dynamical Systems in Mathematical Biology** Organizer(s): Peter Hinow , Jozsef Farkas , Peter Rashkov	Room 812
JULY 10 **10:30-11:00**	**Attila Denes** (Bolyai Institute, University of Szeged, Hungary) A two-patch SEIR model with prevalence-dependent behavioural response and mobility for Ebola dynamics	
JULY 10 **11:00-11:30**	**Yun Kang** (Arizona State University, USA) Obesity Epidemic: Impact of Genetics, Environment and Social Behavior	
JULY 10 **11:30-12:00**	**Anca Matioc** (University of Regensburg, Germany) Analysis of a two-phase model describing the growth of solid tumors	
JULY 10 **12:00-12:30**	**Chiu-Yen Kao** (Claremont McKenna College, USA) Is maximum tolerated dose (MTD) chemotherapy scheduling optimal for glioblastoma multiforme?	

SS 67	**Modeling, Machine Learning and Data Analysis for Complex Systems and Dynamics** Organizer(s): Pengcheng Xiao , Honghui Zhang , Lixia Duan	Room 642
JULY 10 **10:30-11:00**	**Michail Todorov** (Institute of Mathematics and Informatics, Bulgarian Academy of Sciences, Sofia, Bulgaria) On a Splitting Method for Solving of the Nonlinear Schrodinger Equation and Its Generalization to the Manakov System	
JULY 10 **11:00-11:30**	**Xiaohui Wang** (University of Texas Rio Grande Valley, USA) Improving The PERT Activity Duration Estimation	
JULY 10 **11:30-12:00**	**Nicolae Tarfulea** (Purdue University Northwest, USA) Sparse Discovery of Functional Relationships in Solutions to Systems of Differential Equations	

SS 71	**Progress in Partial Differential Equations of Mathematical Physics: Theory and Methods** Organizer(s): Andreas Chatziafratis , Spyridon Kamvissis , Tohru Ozawa	Room 316

JULY 10 **10:30-11:00**	**Alex Himonas** (University of Notre Dame, USA) Initial and boundary value problems for dispersive equations
JULY 10 **11:00-11:30**	**Setsuro SF Fujiie** (RITSUMEIKAN UNIVERSITY (Department of Mathematical Scinence), Japan) Some remarks on the semiclassical asymptotics of eigenvalues and resonances for matrix-valued operators
JULY 10 **11:30-12:00**	**Jesse Hulse** (University of Manitoba, Canada) New transform methods for doubly connected planar domains
JULY 10 **12:00-12:30**	**Robert Jenkins** (University of Central Florida, USA) Models of soliton gas for the AKNS hierarchy

SS 81	**Analytic and numerical progress in complex fluids and related PDE models** Organizer(s): Xinyu Cheng , Shijie Dong , Tongou Yang	**Room 434**
JULY 10 **10:30-11:00**	**Cheng Yuan** (School of Mathematical Sciences, Fudan University, Peoples Rep of China) Boundary Regularity and Global Classical Solution of Dynamic Prandtl Equation	
JULY 10 **11:00-11:30**	**Hui Chen** (Zhejiang University of Science and Technology, Peoples Rep of China) The local regularity theory for the Stokes and Navier-Stokes equations near the curved boundary	
JULY 10 **11:30-12:00**	**Xinyu Cheng** (Fudan University, Peoples Rep of China) Parameter-limit preserving low-regularity method in fluid models: analytic and numerical results	
JULY 10 **12:00-12:30**	**Xiaoqian Xu** (Duke Kunshan University, Peoples Rep of China) Mixing flow and its applications	

SS 86	**Advances in Differential, Difference and Dynamic Equations with Applications in Science and Engineering** Organizer(s): Elvan Akin , Billur Kaymakcalan , Ozkan Ozturk	**Room 428**
JULY 10 **10:30-11:00**	**Ozkan Ozturk** (Giresun University, Turkey) Existence Results for Third-Order Nonlinear Dynamic Equations	

JULY 10 **11:00-11:30**	**Billur Kaymakcalan** (University of Turkish Aeronautical Association, Turkey) Inverse Forms of Pachpatte-Type Dynamic Inequalities within Diamond-Alpha Calculus
JULY 10 **11:30-12:00**	**Rana Parshad** (Iowa State University, USA) The effect of very fast dispersal on two species competition with drift
JULY 10 **12:00-12:30**	**Naveen K. Vaidya** (San Diego State University, USA) Modeling Influenza Transmission Across Ecological Scales: Aquatic Birds, Domestic Poultry, and Humans

SS 108	**Regularity in local versus nonlocal problems** Organizer(s): Antonio Iannizzotto , Eurica Henriques , Simone Ciani	**Room 430**
JULY 10 **10:30-11:00**	**Pedra Andrade** (Paris Lodron University of Salzburg, Austria) Interior Gradient Estimates for Nonhomogeneous Parabolic p-Laplace Systems	
JULY 10 **11:00-11:30**	**Davide Giovagnoli** (University of Bologna, Italy) On the H\\older differentiability of fractional p-harmonic functions	
JULY 10 **11:30-12:00**	**Yevgeniia Yevgenieva** (Max Planck Institute for Dynamics of Complex Technical Systems, Germany) H\\{o}lder Regularity for Doubly Nonlinear Equations	
JULY 10 **12:00-12:30**	**Fatma Gamze DUZGUN** (Cagliari University, Italy) Regularity Results for Weak Solutions of Singular Parabolic-Elliptic Chemotaxis Models with a Source Term	

SS 113	**Recent Advances in Uncertainty Quantification and Scientific Machine Learning with Applications to Complex Dynamical Systems** Organizer(s): Marios Andreou , Konstantinos Zygalakis , Nan Chen	**Room 827**
JULY 10 **10:30-11:00**	**Soon Hoe Lim** (KTH Royal Institute of Technology and Nordita, Sweden) On the Potential and Pitfalls of Flow Matching for Probabilistic Forecasting	
JULY 10 **11:00-11:30**	**Quanling Deng** (Yau Mathematical Sciences Center, Peoples Rep of China) Multiscale Modelling and Data Assimilation for Sea Ice Dynamics	

JULY 10 **11:30-12:00**	**Ioannis Papastathopoulos** (University of Edinburgh, Scotland) Geometric extremal graphical models
JULY 10 **12:00-12:30**	**Ilias Bilionis** (Purdue University, USA) Scalable Method for Unsupervised Reconstruction of Flow (SMURF) with application to clinical 4D flow MRI data

SS 125	**Models of Fluid Motion** Organizer(s): John Carter , Mats Ehrnstrom , Panayiotis Panayotaros	**Room 436**
JULY 10 **10:30-11:00**	**Christopher Curtis** (San Diego State University, USA) Following Information Flow in the Majda-McLaughlin-Tabak Model	
JULY 10 **11:00-11:30**	**Rosa Maria RM Vargas-Magana** (University of Bergen, Norway) Inertial particle transport under weakly modulated nearshore waves	
JULY 10 **11:30-12:00**	**Robert Pego** (Carnegie Mellon University, USA) Analysis of the adhesion model and reconstruction in cosmology	
JULY 10 **12:00-12:30**	**Zhan Wang** (Institute of Mechanics, Chinese Academy of Sciences, Peoples Rep of China) Dynamics of inviscid ferrofluid jets: the Hamiltonian framework	

SS 135	**Dynamical Systems in Mathematical Biology: Epidemiology, Population Dynamics, and Reaction Networks** Organizer(s): Burcu Gürbüz , Eugenia Franco , Nicola Vassena	**Room 426**
JULY 10 **10:30-11:00**	**Rim Adenane** (University Ibn Tofail, Morocco) Stoichiometric Ruin Theory: Coupling Balanced Bilinear Epidemics with Cramer-Lundberg Processes	
JULY 10 **11:00-11:30**	**Burcu Gürbüz** (Johannes Gutenberg-University Mainz, Germany) SIRS Dynamics with Waning Immunity and Periodic Revaccination	
JULY 10 **11:30-12:00**	**Takashi Okada** (Hiroshima University, Japan) Structural Determination of Bifurcation and Multistability in Chemical Reaction Networks	

JULY 10 **12:00-12:30**	**Phillipo Lappicy** (Universidad Complutense de Madrid, Spain) New oscillatory regimes for competing predators with Holling type II response

SS 140	**Recent advances in wavelet analysis, PDEs and dynamical systems – part III** Organizer(s): Emanuel Guariglia	**Room 445**
JULY 10 **10:30-11:00**	**Salim Messaoudi** (University of Sharjah, United Arab Emirates) ON SOME THERMOELASTIC SHEAR BRESSE SYSTEMS	
JULY 10 **11:00-11:30**	**Kunyi (Mark) Ma** (Columbia University, USA) Optimal Regularity for the Scalar and N Membranes Alt-Phillips Free Boundary Problem	
JULY 10 **11:30-12:00**	**Emmanuel Adeyefa** (Federal university Oye-Ekiti, Nigeria) An Accurate Numerical Model for Solving Elliptic-Type PDEs Directly	

SS 144	**PDEs and Irregular Interfaces: New Frontiers for Industrial Applications** Organizer(s): Michael Hinz , Maria Rosaria Lancia , Chiara Sorgentone	**Room 628**
JULY 10 **10:30-11:00**	**David P Hewett** (University College London, England) A discontinuous Galerkin method on a fractal domain	
JULY 10 **11:00-11:30**	**Ludvig af Klinteberg** (Malardalen University (MDU), Sweden) A fast integral equation solver for self-similar and prefractal domains with corners	
JULY 10 **11:30-12:00**	**Andrea Mola** (IMT School for Advanced Studies Lucca, Italy) Potential flow solver for ship hydrodynamics problems with fully nonlinear free surface boundary conditions	
JULY 10 **12:00-12:30**	**Tristan Goodwill** (University of Chicago, USA) Integral equation methods for ice floes and other surface wave scattering problems	

SS 146	**Nonlinear differential equations: control, delay, and boundary value problems** Organizer(s): Irene Benedetti , Francesca Dalbono , Elisa Sovrano , Valentina Taddei	**Room 427**

JULY 10 **10:30-11:00**	**Diego Berti** (Univeristy of Turin, Italy) Shock wavefronts for parabolic equation with sign-changing diffusivity
JULY 10 **11:00-11:30**	**Simone Creo** (Sapienza Universita' di Roma, Italy) On anisotropic fractional inverse problems
JULY 10 **11:30-12:00**	**Cristina Tarsi** (Universita` degli Studi di Milano, Italy) Symmetry breaking for biharmonic H\\` {e}non type problems with exponential nonlinearities
JULY 10 **12:00-12:30**	**Rafayel Teymurazyan** (KAUST, Saudi Arabia) The degenerate quenching problem

SS 183	**Mathematics in Cryptography and Codes** Organizer(s): Anyu Wang , Yang Yu	**Room 312**
JULY 10 **10:30-11:00**	**Yi Chen** (Institute of Advanced Study, Tsinghua University, Peoples Rep of China) Cryptanalytic Parameter Recovery of Neural Networks: Some Recent Advances	
JULY 10 **11:30-12:00**	**Xuan Guang** (Nankai University, Peoples Rep of China) Secure Network Function Computation for Linear Functions	
JULY 10 **12:00-12:30**	**Han Wang** (Institute of Information Engineering, CAS, Peoples Rep of China) A New Configuration for 3rd-FHE Bootstrapping from the Key Switching	

SS 185	**Multiscale Analysis: Geometry and Evolution Problems (mSPACE)** Organizer(s): Delio Mugnolo , Leonard Monsaingeon , Matthias Neumann	**Room 311**
JULY 10 **10:30-11:00**	**Laura Abatangelo** (Politecnico di Milano, Italy) Eigenbranches of elliptic operators in singularly perturbed problems	
JULY 10 **11:00-11:30**	**Ali BenAmor** (University of Sousse, high school for transport and logistics, Tunisia) limits of time-changed degenerate semigroups & applications	
JULY 10 **11:30-12:00**	**Christian Budde** (University of the Free State, So Africa) Bi-Continuous semigroups for flows on infinite networks	

JULY 10 **12:00-12:30**	**Matthias Hofmann** (FernUniversit\"at in Hagen, Germany) On the asymptotic behavior of the spectral gap for discrete Schr\{o}dinger operators

SS 186	**Recent Advances in Symbolic Computation and Applications** Organizer(s): Zafeirakis Zafeirakopoulos , Ioannis Emiris , Ilias Kotsireas	**Room 638**
JULY 10 **10:30-11:00**	**Joris van der Hoeven** (CNRS, Ecole polytechnique, France) Integer multiplication is at least as hard as matrix transposition	
JULY 10 **11:00-11:30**	**Kimon Fountoulakis** (Computer Science, University of Waterloo, Canada) Learnability of Algorithms	
JULY 10 **11:30-12:00**	**Alexander Levin** (Catholic University of America, USA) E*-Groebner Bases via Homogenization and Applications to Bivariate Difference Dimension Polynomials	
JULY 10 **12:00-12:30**	**Carles Checa** (University of Copenhagen, Denmark) Vertically parametrized systems, matroids and positive solutions	

SS 187	**New Trends in Crowd Dynamics and Traffic Flow** Organizer(s): Noureddine igbida , Karami Fahd , El Mahdi Erraji	**Room 637**
JULY 10 **10:30-11:00**	**Filippo Santambrogio** (Institut Camille Jordan, France) Fully discrete methods for Wasserstein gradient flows and crowd motion	
JULY 10 **11:00-11:30**	**Francisco Silva** (XLIM, Universite de Limoges, France) Optimal Control of Sweeping Processes: Theoretical Framework and Numerical Approximation	
JULY 10 **11:30-12:00**	**Elisabetta Carlini** (Sapienza University of Rome, Italy) Error Estimate for a Semi-Lagrangian Scheme for a Time-Dependent Hamilton-Jacobi Equation on Networks	

Parallel Session 14 :: Friday, 07/10, 13:30-16:00

SS 2	**New frontiers in the compressible mathematical fluid mechanics and thermodynamics** Organizer(s): Milan Pokorny , Eduard Feireisl	**Room 315**
JULY 10 **13:30-14:00**	**Piotr Gwiazda** (Institute of Mathematics Polish Academy of Sciences, Poland) On a system of equations arising in meteorology: Well-posedness and data assimilation	
JULY 10 **14:00-14:30**	**Mimi Dai** (University of Illinois at Chicago, USA) Reverse in time blowup for compressible NSE	
JULY 10 **14:30-15:00**	**Bangwei She** (Capital Normal University, Peoples Rep of China) A finite element method for the incompressible Euler system	
JULY 10 **15:00-15:30**	**Hana Mizerova** (Comenius University in Bratislava, Slovak Rep) Stability and convergence in compressible magnetohydrodynamics	
JULY 10 **15:30-16:00**	**Nilasis Chaudhuri** (University of Warsaw, Poland) Weak-Strong Uniqueness and Relaxation Limit for a Navier-Stokes-Korteweg Model	

SS 9	**Stochastics and randomness in physical models** Organizer(s): Luca Scarpa , Margherita Zanella	**Room 620**
JULY 10 **13:30-14:00**	**Hakima Bessaih** (Florida Internaational University, USA) Continuous data assimilation for 2d stochastic Navier-Stokes	
JULY 10 **14:00-14:30**	**Andrea Di Primio** (Scuola Normale Superiore, Italy) The stochastic Cahn--Hilliard equation with singular potential, degenerate mobility and transport noise	
JULY 10 **14:30-15:00**	**Marco Bagnara** (Imperial College London, England) Absence of anomalous dissipation in passive scalars advected by random autonomous drifts	
JULY 10 **15:00-15:30**	**Davide Augusto Bignamini** (Universita degli studi dell`Insubria, Italy) Pathwise uniqueness for stochastic PDEs with singular Holder continuous drift	
JULY 10 **15:30-16:00**	**Federica Masiero** (Milano-Bicocca University, Italy) Bismut-Elworthy type formulae for BSDEs with degenerate noise and related Kolmogorov equations	

SS 24	**Mathematical and Computational Modeling of Complex Biological Systems** Organizer(s): Zhisheng Shuai , Michael Li , Samares Pal	**Room 432**
JULY 10 **13:30-14:00**	**Elena Braverman** (University of Calgary, Canada) On the influence of diffusion strategies on the average population levels and competition outcomes	
JULY 10 **14:00-14:30**	**Tianxu Wang** (university of Alberta, Canada) Cognitive Movement Strategies in a Resource-Threat Dilemma	
JULY 10 **14:30-15:00**	**Nitu Kumari** (IIT Mandi, India) THE FIRST MATHEMATICAL MODEL FOR ELK-WOLF INTERACTION IN YELLOWSTONE NATIONAL PARK USING E-SINDY ALGORITHM	
JULY 10 **15:00-15:30**	**Hayriye Gulbudak** (University of Louisiana at Lafayette, USA) Bistability between acute and chronic states in a Model of Hepatitis B Virus Dynamics	
JULY 10 **15:30-16:00**	**CAMERON BROWNE** (University of Louisiana at Lafayette, USA) Probability of Antibiotic Resistance in Stochastic PK/PD-Based Bacterial Model with Distinct Drug and Mutation Modes	

SS 48	**Recent Advances in Nonlinear PDEs and Inverse Problems** Organizer(s): Yi-Hsuan Lin , Yavar Kian , Mikko Salo	**Room 619**
JULY 10 **14:00-14:30**	**DROSSOS GINTIDES** (NATIONAL TECHNICAL UNIVERSITY OF ATHENS, Greece) Uniqueness for the inverse spectral modified transmission eigenvalue problem for a piecewise continuous spherically symmetric refractive index	
JULY 10 **14:30-15:00**	**Dimitra Kyriakopoulou** (Biomedical Research Foundation Academy of Athens, Greece) Extension of the Boundary Control Method to Elliptic and Parabolic Problems, with Applications to the Calder\\`{o}n Problem	
JULY 10 **15:00-15:30**	**Cristiana Filippis** (University of Parma, Italy) Nonlocal Partial Regularity	

SS 52	**Differential Equations and Dynamical Systems in Mathematical Biology** Organizer(s): Peter Hinow , Jozsef Farkas , Peter Rashkov	Room 812
JULY 10 **13:30-14:00**	**Yangjin Kim** (Konkuk University/Brown University, Korea) How does asthma prevent optic glioma?	
JULY 10 **14:00-14:30**	**Matilde Polizzi** (Politecnico di Milano, Italy) The transition to parenthood in a romantic relationship: A modeling approach	
JULY 10 **14:30-15:00**	**Polly Y. Yu** (University of Illinois Urbana-Champaign, USA) A new framework for Generalized Lotka-Volterra models	
JULY 10 **15:00-15:30**	\`**{A}bel Garab** (University of Szeged, Hungary) Evolution into chaos -- implications of the trade-off between transmissibility and immune evasion	

SS 67	**Modeling, Machine Learning and Data Analysis for Complex Systems and Dynamics** Organizer(s): Pengcheng Xiao , Honghui Zhang , Lixia Duan	Room 642
JULY 10 **13:30-14:00**	**Liyuan Zhang** (Beijing University of Technology, Peoples Rep of China) Unraveling Epileptic Dynamics via Neurovascular Coupling: A Tripartite Neuro-Astrocytic-Arteriolar Computational Framework	
JULY 10 **14:00-14:30**	**Pengcheng Xiao** (Kennesaw State University, USA) Computational Analysis of Stress-Induced Glucocorticoid Effects on Cognitive Processing	
JULY 10 **14:30-15:00**	**HONGHUI ZHANG** (Northwestern Polytechnical University, Peoples Rep of China) Intelligent Modulation of Brain Disorders Driven by Data and Models	

SS 71	**Progress in Partial Differential Equations of Mathematical Physics: Theory and Methods** Organizer(s): Andreas Chatziafratis , Spyridon Kamvissis , Tohru Ozawa	Room 316

JULY 10 **13:30-14:00**	**Mukhtar Karazym** (Nazarbayev University, Kazakhstan) Existence of traveling wave solutions for the nonlocal derivative nonlinear Schr\{o}dinger equation
JULY 10 **14:00-14:30**	**Elena Luca** (The Cyprus Institute, Cyprus) New transform methods for boundary value problems in planar domains
JULY 10 **14:30-15:00**	**Maria Ntekoume** (Concordia University, Canada) Homogenization results for the nonlinear Schr\\odinger equation
JULY 10 **15:00-15:30**	**Demetrios T Papageorgiou** (Imperial College London, England) Uncovering bistability phenomena in two-layer Couette flow experiments using nonlocal evolution equations
JULY 10 **15:30-16:00**	**Beatrice Pelloni** (Heriot-Watt University, Scotland) The surprising world of third-order dispersion

SS 81	**Analytic and numerical progress in complex fluids and related PDE models** Organizer(s): Xinyu Cheng , Shijie Dong , Tongou Yang	**Room 434**
JULY 10 **13:30-14:00**	**Kiyeon Lee** (KAIST, Korea) Asymptotic behavior for the Maxwell-Dirac system in Lorenz and Coulomb gauges	
JULY 10 **14:00-14:30**	**Bin Han** (Donghua University, Peoples Rep of China) Global well-posedness and stability for the non-resistive magnetohydrodynamical systems	
JULY 10 **14:30-15:00**	**Jieliang Hong** (Southern University of Science and Technology, Peoples Rep of China) On the differentiability of local times of ($1+\beta$)-stable super-Brownian motion	
JULY 10 **15:00-15:30**	**Yangyang CAO** (Shenzhen MSU-BIT University, Peoples Rep of China) Flux Globalization Based Well-Balanced Path-Conservative Central-Upwind Scheme for Shallow Water Equations	
JULY 10 **15:30-16:00**	**Yongcun Song** (Nanyang Technological University, Singapore) Neural network methods for non-smooth PDE-constrained optimization	

SS 86	**Advances in Differential, Difference and Dynamic Equations with Applications in Science and Engineering** Organizer(s): Elvan Akin , Billur Kaymakcalan , Ozkan Ozturk	Room 428
JULY 10 **13:30-14:00**	**Elvan Akin** (Missouri University of Science and Technology, USA) Modeling HIV-1 Infection Dynamics Using Mathematical and Statistical Approaches	
JULY 10 **14:00-14:30**	**Beyza Cetin** (Missouri University Science and Technology, USA) Chebyshev Collocation Method for a Three-Dimensional HIV Infection Model	
JULY 10 **14:30-15:00**	**Esrat Nur** (Louisiana State University, USA) \title{Bifurcation and Chaos Control in a Discrete Predator-Prey Model with Fear Effect and Immigration}	

SS 108	**Regularity in local versus nonlocal problems** Organizer(s): Antonio Iannizzotto , Eurica Henriques , Simone Ciani	Room 430
JULY 10 **13:30-14:00**	**Matias Vestberg** (Uppsala Universitet, Sweden) Fundamental regularity results for widely degenerate, doubly nonlinear anisotropic diffusion equations	
JULY 10 **14:00-14:30**	**Filomena De Filippis** (University of Salzburg, Austria) Manifold-valued minimizers of double phase functionals: partial regularity and Lavrentiev gap	
JULY 10 **14:30-15:00**	**Filippo Maria Cassanello** (Universita degli studi di Cagliari, Italy) Holder regularity for a class of doubly non linear PDEs	
JULY 10 **15:00-15:30**	**Simona Fornaro** (University of Pavia, Italy) Towards local regularity for signed solutions to doubly nonlinear parabolic equations involving nonlocal operators	
JULY 10 **15:30-16:00**	**Leah Schaetzler** (Aalto University, Finland) Carleson-type removability for p-parabolic equations	

SS 113	**Recent Advances in Uncertainty Quantification and Scientific Machine Learning with Applications to Complex Dynamical Systems** Organizer(s): Marios Andreou , Konstantinos Zygalakis , Nan Chen	Room 827
JULY 10 **13:30-14:00**	**Marios Andreou** (University of Wisconsin-Madison, USA) Assimilative Causal Inference: Tracing Causes from Effects to Predict and Attribute Significant Events	
JULY 10 **14:00-14:30**	**Daniel Sanz-Alonso** (University of Chicago, USA) Data assimilation with machine-learned dynamics	
JULY 10 **14:30-15:00**	**Konstantinos Spiliopoulos** (Boston University, USA) Global Convergence of Adjoint-Optimized Neural PDEs	
JULY 10 **15:00-15:30**	**Aretha Teckentrup** (University of Edinburgh, Scotland) Neural network surrogates with uncertainty quantification for inverse problems	
JULY 10 **15:30-16:00**	**Josef Martinek** (Heidelberg University, Germany) Sequential Monte Carlo for Bayesian Inference Using Randomized Likelihoods	

SS 135	**Dynamical Systems in Mathematical Biology: Epidemiology, Population Dynamics, and Reaction Networks** Organizer(s): Burcu Gürbüz , Eugenia Franco , Nicola Vassena	Room 827
JULY 10 **13:30-14:00**	**Casian Pantea** (West Virginia University, USA) Computational approaches to inheritance of dynamics in reaction networks	
JULY 10 **14:00-14:30**	**Nicola Vassena** (Leipzig University, Germany) Dynamical consequences of autocatalysis in reaction networks	

SS 144	**PDEs and Irregular Interfaces: New Frontiers for Industrial Applications** Organizer(s): Michael Hinz , Maria Rosaria Lancia , Chiara Sorgentone	Room 628
JULY 10 **14:00-14:30**	**Zo{\"\i}s Moitier** (ENSTA, France) High order cubature for iterated function system	

JULY 10 **14:30-15:00**	**Eric Stachura** (Kennesaw State University, USA) The Drude-Born-Fedorov system on anisotropic fractal porous media
JULY 10 **15:00-15:30**	**Gabriel CLARET** (Paris-Saclay University, France) Acoustic impedance scattering on extension domains
JULY 10 **15:30-16:00**	**Simone Creo** (Sapienza Universita' di Roma, Italy) Obstacle problems for nonlinear fractional operators in irregular domains

SS 146	**Nonlinear differential equations: control, delay, and boundary value problems** Organizer(s): Irene Benedetti , Francesca Dalbono , Elisa Sovrano , Valentina Taddei	**Room 427**
JULY 10 **13:30-14:00**	**Pierluigi Benevieri** (University of S\~ao Paulo, Brazil) Periodic solutions for second order time and state-dependent delay equations with a non-asymptotic condition	
JULY 10 **14:00-14:30**	**Vittorio Colao** (University of Calabria, Italy) First and Second Order Nonlocal Evolution Equations Governed by Non Autonomous Forms	
JULY 10 **14:30-15:00**	**Guglielmo Feltrin** (University of Udine, Italy) A paradigmatic superlinear boundary value problem: an overview of recent advances	
JULY 10 **15:00-15:30**	**Matteo Franca** (University of Florence, Italy) Subharmonics for homoclinic trajectories via Melnikov theory	
JULY 10 **15:30-16:00**	**Serena Matucci** (Department of Mathematics and Computer Sciences, Italy) Global positive bounded solutions for second order nonlinear equations with regularly varying operator	

SS 183	**Mathematics in Cryptography and Codes** Organizer(s): Anyu Wang , Yang Yu	**Room 312**
JULY 10 **13:30-14:00**	**Jun Xu** (Institute of Information engineering, CAS, Peoples Rep of China) New Results on Elliptic Curve Hidden Number Problem for ECDH Key Exchange	

JULY 10 **14:00-14:30**	**Shiduo Zhang** (Tsinghua University, Peoples Rep of China) Applications of Gaussian Sampling in Cryptography
JULY 10 **14:30-15:00**	**Cong Zhang** (Tsinghua University, Peoples Rep of China) A Simple Introduction to Secure Multi-Party Computation

SS 185	**Multiscale Analysis: Geometry and Evolution Problems (mSPACE)** Organizer(s): Delio Mugnolo , Leonard Monsaingeon , Matthias Neumann	**Room 311**
JULY 10 **13:30-14:00**	**Juliane Krautz** (University of Augsburg, Germany) The dynamic Schr\\"{o}dinger problem on metric graphs	
JULY 10 **14:00-14:30**	**Gilad Sofer** (Technion - Israel Institute of Technology, Israel) Spectral Flow and Eigenvalue Comparison for Schrodinger Operators on Metric Graphs	

SS 186	**Recent Advances in Symbolic Computation and Applications** Organizer(s): Zafeirakis Zafeirakopoulos , Ioannis Emiris , Ilias Kotsireas	**Room 638**
JULY 10 **13:30-14:00**	**Manolis Tsakiris** (Chinese Academy of Sciences, Peoples Rep of China) Groebner bases, Grassmannians, and Low-Rank Matrix Completion	
JULY 10 **14:00-14:30**	**Ioannis Vlassopoulos** (Athena Research Center, Greece) ReLU and Softplus neural nets as zero-sum, turn-based, stopping games	
JULY 10 **14:30-15:00**	**Elias Tsigaridas** (Inria Paris and Sorbonne University, France) Condition-based Low-Degree Approximation of Real Polynomial Systems. I: The Zero-Dimensional Case	
JULY 10 **15:00-15:30**	**Georgios Barmpalias** (Institute of Software, Chinese Academy of Sciences, Peoples Rep of China) Computable oneway functions on the reals	

SS 187	**New Trends in Crowd Dynamics and Traffic Flow** Organizer(s): Noureddine igbida , Karami Fahd , El Mahdi Erraji	**Room 637**

JULY 10 **13:30-14:00**	**Annette Dumas** (Universit\`e de Limoges, XLIM, France) Deterministic Mean Field Games with jumps
JULY 10 **14:00-14:30**	**Ahmad Zorkot** (University of Vienna, Austria) From Mean Field Games to a Hughes-Type Model: A Lagrange-Galerkin Approach
JULY 10 **14:30-15:00**	**Mariam AL KHATIB** (University of Limoges, France) Congested Crossing Pedestrian Traffic Flow : Dispersion vs. Transport in Crowded Areas
JULY 10 **15:00-15:30**	**Konstantinos Koutsomitis** (Universite Paris Saclay/ LPTMS, France) Merging agent-based and Mean Field Game descriptions of crowd dynamics

Parallel Session 15 :: Friday, 07/10, 16:30-19:00

SS 2	**New frontiers in the compressible mathematical fluid mechanics and thermodynamics** Organizer(s): Milan Pokorny , Eduard Feireisl	Room 315
JULY 10 16:30-17:00	**Miroslav Bul\\'{\\i}\\v{c}ek** (Charles University, Czech Rep) Existence results for thermoviscoelastic fluid models	
JULY 10 17:00-17:30	**Arnab Roy** (Basque Center for Applied Mathematics (BCAM), Spain) The hydrostatic Lagrangian approach to the compressible primitive equations	
JULY 10 17:30-18:00	**Milan Pokorny** (Charles University, Czech Rep) Steady compressible Navier--Stokes--Fourier system with temperature dependent viscosities	

SS 9	**Stochastics and randomness in physical models** Organizer(s): Luca Scarpa , Margherita Zanella	Room 620
JULY 10 16:30-17:00	**Eliseo Luongo** (Bielefeld University, Germany) Anomalous Regularization and Dissipation for 2D Euler Equations with Rough Kraichnan Noise	
JULY 10 17:00-17:30	**Fabian Germ** (Delft University of Technology, Netherlands) On new results in the well-posedness of stochastic reaction diffusion models	
JULY 10 17:30-18:00	**Dimitra Antonopoulou** (National and Kapodistrian University of Athens, Greece) Moments estimates and sharp interface limit for the stochastic Cahn-Hilliard equation	

SS 52	**Differential Equations and Dynamical Systems in Mathematical Biology** Organizer(s): Peter Hinow , Jozsef Farkas , Peter Rashkov	Room 812
JULY 10 16:30-17:00	**Negar Mohammadnejad** (University of Alberta, Canada) Travelling Waves in a Mathematical Model for Oncolytic Virotherapy	

JULY 10 **17:00-17:30**	**Janet Best** (The Ohio State University, USA) Period Homeostasis Near Hopf Bifurcation
JULY 10 **17:30-18:00**	**Hayriye Gulbudak** (University of Louisiana at Lafayette, USA) Modeling the impact of antigenic distance and immune imprinting of sequential viral infections on disease severity
JULY 10 **18:00-18:30**	**CAMERON BROWNE** (University of Louisiana at Lafayette, USA) Invasion, replacement and coexistence in ecological models

SS 71	**Progress in Partial Differential Equations of Mathematical Physics: Theory and Methods** Organizer(s): Andreas Chatziafratis , Spyridon Kamvissis , Tohru Ozawa	**Room 316**
JULY 10 **16:30-17:00**	**Lionel ROSIER** (Universite du Littoral Cote d`Opale, France) On the critical lengths and controllability of the Kawahara equation	
JULY 10 **17:00-17:30**	**Georgios Sakellaris** (Aristotle University of Thessaloniki, Greece) Scale invariant regularity estimates for the Neumann problem in Lipschitz domains	
JULY 10 **17:30-18:00**	**Fangchi Yan** (Virginia Tech, USA) Higher order dispersive equations on the half-line	

SS 81	**Analytic and numerical progress in complex fluids and related PDE models** Organizer(s): Xinyu Cheng , Shijie Dong , Tongou Yang	**Room 434**
JULY 10 **16:30-17:00**	**Tongou Yang** (Southern University of Science and Technology, Peoples Rep of China) Decoupling for degenerate hypersurfaces	
JULY 10 **17:00-17:30**	**Shijie Dong** (Southern University of Science and Technology, Peoples Rep of China) Scattering and energy cascade for the 2D Klein-Gordon-Zakharov	

SS 113	**Recent Advances in Uncertainty Quantification and Scientific Machine Learning with Applications to Complex Dynamical Systems** Organizer(s): Marios Andreou , Konstantinos Zygalakis , Nan Chen	**Room 827**

JULY 10 **16:30-17:00**	**Samuel Isaacson** (Boston University, USA) Spatial Jump Process Models for Estimating Antibody-Antigen Interactions
JULY 10 **17:00-17:30**	**Di Qi** (Purdue University, USA) Reduced-order models for data assimilation and uncertainty quantification of multiscale turbulent systems
JULY 10 **17:30-18:00**	**Savvas Melidonis** (Forschungszentrum Juelich GmbH, Germany) HClimRep: a Foundation Model for capturing interactions between the atmosphere, ocean, and sea ice

SS 144	**PDEs and Irregular Interfaces: New Frontiers for Industrial Applications** Organizer(s): Michael Hinz , Maria Rosaria Lancia , Chiara Sorgentone	**Room 628**
JULY 10 **16:30-17:00**	**Romain CERVERA** (Universite Paris Saclay, France) A Functional Framework for Maxwell`s Equations on H^1-Extension Domains	
JULY 10 **17:00-17:30**	**Ruming Zhang** (Technical University of Berlin, Germany) The radiation condition for Helmholtz equations above (locally perturbed) periodic surfaces	
JULY 10 **17:30-18:00**	**Peter Nekrasov** (University of Chicago, USA) On Rumples and Rolls: Efficient Representations for Elastodynamics in Ice Sheets	