

SCHEDULES

Meaning of the Rooms references:

"A Amphi 501" stands for Theater 501 in the Faculté de Droit et de Sciences Economiques: see "Fac Droit Sciences Eco" on the campus map.

"A.152" stands for room 152 on the first floor of the Faculté de Droit et de Sciences Economiques: see "Fac Droit Sciences Eco" on the campus map.

"P. 310" stands for room 310 on the third floor of the Building of Physics of the Faculté des Sciences: see "Physique" on the campus map.

"P Amphi I" stands for Theater I in the Building of Physics of the Faculté des Sciences: see "Physique" on the campus map.

Sunday, June 25, 2006

Welcome Session **Room: A Amphi 501**
8h00-8h30

Plenary Sessions **Room: A Amphi 501**

Chair **Michel Chipot**
8h30-9h15 Title: Impulsive control of Lagrangian systems and locomotion in fluids
Speaker: **Alberto Bressan**, Penn State University, USA
9h15-9h45 Break
9h45-10h30 Title: On singular quasilinear elliptic differential inequalities
on complete Riemannian manifolds
Speaker: **Patrizia Pucci**, Université de Perugia, Italie

SS9: Formation and Dynamics of Patterns in Evolution Equations

Organized by **Amy Novick-Cohen, Thomas Wanner**

Room: A Amphi 501

10:30 - 11:00 Stabilisation in a bistable dispersal equation
Michael Grinfeld, University of Strathclyde, Scotland
11:00 - 11:30 Similarity solutions involving boundary value problems:
The example of free convection and some more general case
Jean-david Hoernel, Technion, Haifa, Israel
11:30 - 12:00 Oscillating solutions in autonomous parabolic PDE
Michael Winkler, RWTH Aachen, Germany

SS16: Dynamical Systems Associated with Nonlinear Phenomena with Energy Dissipation

Organized by **Toyohiko Aiki, Nobuyuki Kenmochi**

Room: P. 108

10:30 - 11:00 On an abstract doubly nonlinear equation with memory

Gianni Gilardi, University of Pavia, Italy

11:00 - 11:30 A Class of Quasi-Variational Inequalities for Hysteresis

Masahiro Kubo, Nagoya Institute of Technology, Japan

11:30 - 12:00 The entropy approach for phase transitions with thermal memory:
existence results and long-time behaviour of solutions

Elena Bonetti, University of Pavia, Italy

SS19: Qualitative Properties of Evolution Equations

Organized by **Jong-Shenq Guo, Mokhtar Kirane, Arnaud Rougirel**

Room: P Amphi I

10:30 - 11:00 Complex Degenerate Advection Diffusion Systems

William E. Fitzgibbon, University of Houston, USA

11:00 - 11:30 Asymptotic behaviour for quasilinear parabolic equations with lower order terms

Daniele Andreucci, Università di Roma La Sapienza, Italy

11:30 - 12:00 Multi-dimensional bistable reaction-diffusion fronts

Francois Hamel, Université Aix-Marseille III, France

SS20: Nonlinear Dispersive Waves

Organized by **J. Bona, T. Colin, M. Colin, D. Lannes**

Room: P. 109

10:30 - 11:00 Recent Progress on BBM type Equations

Jerry L. Bona, University of Illinois at Chicago, USA

11:00 - 11:30 Weakly transverse Boussinesq systems

Jean-claude Saut, Mathématiques, Université Paris-Sud, France

11:30 - 12:00 Influence of Topography on Water Waves

Florent Chazel, Institute of Mathematics of Bordeaux (IMB), France

SS21: Dynamical Systems and Control in Biology

Organized by **Bedr Eddine Ainseba, Odo Diekmann, Pierre Magal, Shigui Ruan**

Room: P.151

10:30 - 11:00 The control of some population dynamics. Dependence on the support of the control

Sebastian Anita, University "Al.I. Cuza" Iasi, Romania

11:00 - 11:30 The basic reproduction number R_0 for infectious diseases in a periodic environment

Nicolas Bacaër, I.R.D., France

11:30 - 12:00 Travelling waves analysis of a reaction-diffusion model describing
a powdery mildew epidemics over a vineyard

Jean-baptiste Burie, INRIA et CNRS MAB Université Bordeaux2, France

SS25: Dynamical Approach to Pattern-formation Equations, and Related Topics

Organized by **M. A. Efendiev**

Room: P Amphi II

10:30 - 11:00 Existence of attracting solutions in non-autonomous delay FDEs

Ana M. Sanz, Universidad de Valladolid, Spain

11:00 - 11:30 Exponential Attractors for Lotka-Volterra competitive system with cross diffusion

Atsushi Yagi, Osaka University, Japan

11:30 - 12:00 Localised pattern of a compressed elastic strip: centre manifold and homoclinic solutions

Boris Buffoni, Ecole Polytechnique Federale - Lausanne, Switzerland

SS26: Nonlinear Parabolic and Elliptic PDEs and Applications

Organized by **Ratnasingham Shivaji, Peter Takac**

Room: P Amphi IV

- 10:30 - 11:00 Indefinite superlinear boundary value problems
Thomas Bartsch, University of Giessen, Germany
- 11:00 - 11:30 A biharmonic problem on a domain with a reentrant corner
Guido Sweers, Delft University of Technology & Universität zu Köln, Germany
- 11:30 - 12:00 Fundamental Negativity and Application to Some Parabolic Problem
Jacqueline J. Fleckinger, UNIV TOULOUSE 1, France

SS27: Multiscale Modeling and Simulations in Materials Science

Organied by **Carlos J. Garcia-Cervera, Xiao-Ping Wang**

Room: Amphi J

- 10:30 - 11:00 Three-dimensional shear flow dynamics of a model for liquid crystalline polymers
Harley Klein, University of California at Santa Barbara, USA
- 11:00 - 11:30 Stochastic Mode Reduction with Metastability in Biomolecular Modeling
Peter R. Kramer, Renselaer Polytechnic Institute, USA
- 11:30 - 12:00 Numerical analysis for micro-macro models of polymeric fluids
Tony Lelièvre, Ecole Nationale des Ponts et Chaussées, France

SS28: Delay Differential Equations

Organied by **Hans-Otto Walther**

Room: P.301

- 10:30 - 11:00 A local Hopf Bifurcation Theorem for differential equations with state dependent delays
Markus Eichmann, Justus-Liebig Universitaet Giessen, Germany
- 11:00 - 11:30 Quasilinear neutral differential difference equations
Karl P. Hadeler, University of Tuebingen, Germany
- 11:30 - 12:00 Smooth center manifolds for differential equations with state-dependent delay
Tibor Krisztin, University of Szeged, Hungary

SS34: Recent Advances in Evolutionary and Stationary Problems on Unbounded Domains and Related Topics

Organied by **Stavrakakis Nikolaos**

Room: P.309

- 10:30 - 11:00 Antimaximum Principle for Problems Defined on the Whole Space and Applications
Jacqueline J. Fleckinger, Univ Toulouse 1, France
- 11:00 - 11:30 Local energy decay for a perturbed wave equation
Ryo Ikehata, Hiroshima University, Japan
- 11:30 - 12:00 Indefinite quasilinear elliptic problems on unbounded domains
Athanasios N. Lyberopoulos, Department of Mathematics, University of the Aegean, Greece

SS39: Hemivariational Inequalities, Nonsmooth and Nonconvex Variational Problems with Applications

Organied by **Stanislaw Migorski, Zdzislaw Naniewicz**

Room: P.RC2a

- 10:30 - 11:00 A Class of Evolution Hemivariational Inequalities for Dynamic Piezoelectric Contact Problems with Friction
Stanislaw Migorski, Jagiellonian University, Poland
- 11:00 - 11:30 New Applications of the Method of Moreau and Panagiotopoulos
Daniel Goeleven, IREMIA, Université de La Réunion, Réunion
- 11:30 - 12:00 Complete Solutions to a Class of Nonconvex/Nonsmooth Variational Problems
David Y. Gao, Virginia Tech, USA

SS40: Nonlinear Partial Differential EquationsOrganized by **Wenxiong Chen, Congming Li****Room: P.RC2b**

- 10:30 - 11:00 On a Source-type Solution for a Nonlinear Parabolic Equation
Hong-ming Yin, Washington State University, USA
- 11:00 - 11:30 Fractional degree vortices for a spinor Ginzburg-Landau model
Stan Alama, McMaster University, Canada
- 11:30 - 12:00 Eigenvalue, maximum principle and regularity for fully nonlinear operators
Isabeau Birindelli, Università di Roma "La Sapienza", Italy

11h30-13h30: **Lunch****SS1: Mathematical Aspects of Wave Propagation**Organized by **Ivan Victorovich Andronov, Boris Belinskiy, Anjan Biswas, Peter Caithamer****Room: P Amphi VI**

- 13:30 - 14:00 Energy of a General Linear Wave Equation Driven by Fractional-in-Time Noise
Peter M. Caithamer, University of Southern Indiana, USA
- 14:00 - 14:30 Stochastic Perturbation of power law optical solitons
Anjan Biswas, Delaware State University, USA
- 14:30 - 15:00 Stochastic Volterra equations in Hilbert space
Anna Karczewska, University of Zielona Góra, Poland

SS5: Nonlinear Evolution Equations and Related TopicsOrganized by **Mitsuharu OTANI****Room: P.314**

- 13:30 - 14:00 On certain fully nonlinear parabolic equation associated with the infinity-Laplacian
Goro Akagi, Shibaura Institute of Technology, Japan
- 14:00 - 14:30 Periodic problems of quasilinear elliptic-parabolic variational inequalities with time-dependent constraints
Noriaki Yamazaki, Muroran Institute of Technology, Japan
- 14:30 - 15:00 Periodic solutions of classes of abstract evolution equations
Sergiu Aizicovici, Ohio University, USA

SS9: Formation and Dynamics of Patterns in Evolution EquationsOrganized by **Amy Novick-Cohen, Thomas Wanner****Room: A Amphi 501**

- 13:30 - 14:00 Weakly nonlinear asymptotics of the $\kappa - \theta$ model of cellular flames
Claude-Michel Brauner, Université Bordeaux 1, France
- 14:00 - 14:30 The singular limit of the Allen-Cahn equation and the FitzHugh-Nagumo system
Danielle Hilhorst, University Paris-Sud, France
- 14:30 - 15:00 Stability analysis of phase boundary motion by surface diffusion in a bounded domain
Yoshihito Kohsaka, Muroran Institute of Technology, Japan
- 15:00 - 15:30 Evolution of support in multidimensional thin-film flow with nonlinear diffusion, convection and absorption
Andrey Shishkov, Institute of Applied Mathematics and Mechanics of NAS of Ukraine, Ukraine

SS11: Nonautonomous Dynamical SystemsOrganized by **Russell Johnson, Rafael Obaya****Room: A.152**

- 13:30 - 14:00 Periodic Solutions of Singular Hamiltonian Elliptic Systems
Flaviano Battelli, Università Politecnica delle Marche, Ancona, Italy

- 14:00 - 14:30 Quasi-periodic Schrodinger equations and SNA
Kristian Bjerklöv, University of Toronto, Canada
- 14:30 - 15:00 Pullback attractors for asymptotically compact non-autonomous dynamical systems
Tomas Caraballo, Universidad de Sevilla, Spain
- 15:00 - 15:30 Spectral properties for the one dimensional quasi-periodic Schrödinger operator
Roberta Fabbri, Università di Firenze, Italy

SS12: New trends in electromagnetism and micromagnetism

Organized by **Alouges Francois, Frank Jochmann, Hong Ming Yin**

Room: A.151

- 13:30 - 14:00 L^2 - well-posedness for mixed 3d div-curl systems on bounded regions
Giles Auchmuty, National Science Foundation, USA
- 14:00 - 14:30 A mathematical model for nonlinear polarizable media
Frank Jochmann, TU-Berlin, Germany
- 14:30 - 15:00 On Mathematical Models of Microwave and Induction Heating
Hong-ming Yin, Washington State University, USA

SS16: Dynamical Systems Associated with Nonlinear Phenomena with Energy Dissipation

Organized by **Toyohiko Aiki, Nobuyuki Kenmochi**

Room: P.108

- 13:30 - 14:00 Cahn-Hilliard system for microstructure evolution in elastic solids
Irena Pawłow, Systems Research Institute, Polish Academy of Sciences, Poland
- 14:00 - 14:30 Stability of the solution to the Falk model system of shape memory alloys
Shuji Yoshikawa, Ube National College of Technology, Japan
- 14:30 - 15:00 Nonlocal phase field models
Elisabetta Rocca, University of Milan, Italy
- 15:00 - 15:30 Large time behaviour of solutions of Nonlinear ODE describing hysteresis
Takanobu Okazaki, Chiba University, Japan

SS19: Qualitative Properties of Evolution Equations

Organized by **Jong-Shenq Guo, Mokhtar Kirane, Arnaud Rougirel**

Room: P Amphi I

- 13:30 - 14:00 Mild solutions and their long-time behavior for the 2D Boussinesq equation in a disc
Vladimir V. Varlamov, University of Texas - Pan American, USA
- 14:00 - 14:30 General decay of solutions of a semilinear viscoelastic equation
Salim A. Messaoudi, King Fahd university of Petroleum and minerals, Saudi Arabia
- 14:30 - 15:00 Asymptotic stability for non-autonomous damped Kirchhoff equations
Maria cesarina Salvatori, Dipartimento di Matematica e Informatica, Italy
- 15:00 - 15:30 Periodic solutions in Marchuk model with time-dependent immune reactivity
Marek Bodnar, Institute of Applied Mathematics and Mechanics, Warsaw University, Poland

SS20: Nonlinear Dispersive Waves

Organized by **J. Bona, T. Colin, M. Colin, D. Lannes**

Room: P. 109

- 13:30 - 14:00 On semirelativistic Hartree equations
Tohru Ozawa, Department of Mathematics, Hokkaido University, Japan
- 14:00 - 14:30 Global dispersive solutions for the Gross-Pitaevskii equation
Kenji Nakanishi, Kyoto University, Japan
- 14:30 - 15:00 Moving poles of the the two soliton solution
Fred Weissler, Université Paris 13, France
- 15:00 - 15:30 From wave equations system to Zakharov system: a limit process in laser plasma interactions
Mathieu Colin, University Bordeaux 1, France

SS21: Dynamical Systems and Control in BiologyOrganized by **Bedr Eddine Ainseba, Odo Diekmann, Pierre Magal, Shigui Ruan****Room: P.121**

- 13:30 - 14:00 On the effects of nonlinear boundary conditions in diffusive logistic equations on bounded domains
Robert stephen Cantrell, University of Miami, USA
- 14:00 - 14:30 Modelling and Asymptotic Stability of a Growth Factor-Dependent Stem Cells Dynamics Model with Distributed Delay
Fabien Crauste, University of Pau, France
- 14:30 - 15:00 Travelling wave solutions for an age-structured equation in epidemiology
Arnaud Ducrot, Université Bordeaux 2, France
- 15:00 - 15:30 Epidemics in an optimal economic growth model
Veron Emmanuelle, University of La Rochelle, France

SS23: New Developments in Nonlinear Partial Differential Equations and Control TheoryOrganized by **Irena Lasiecka, Grozdna Todorova****Room: Amphi J**

- 13:30 - 14:00 Modelling the Flutter Instability Problem of Aeroelasticity
A. V. Balakrishnan, UCLA, USA
- 14:00 - 14:30 On a proportional and derivative robust optimal feedback for linear quadratic control problems
Jacques Henry, INRIA, France
- 14:30 - 15:00 Large deviations for stochastic Navier-Stokes equations: A PDE approach.
Andrzej Swiech, Georgia Institute of Technology, USA
- 15:00 - 15:30 Controllability Properties of Nonlinear Rotation-Free Thermoelastic Systems
George Avalos, University of Nebraska-Lincoln, USA

SS25: Dynamical Approach to Pattern-formation Equations, and Related TopicsOrganized by **M. A. Efendiev****Room: P Amphi II**

- 13:30 - 14:00 Dimension reduction methods and cell-cell communication
Johannes Mueller, Technical University of Munich, Germany
- 14:00 - 14:30 Generalized waves and their qualitative properties
Francois Hamel, Université Aix-Marseille III, France
- 14:30 - 15:00 Stability of Lipid Bilayers: A Continuum Cartoon
Mark A. Peletier, TU Eindhoven, Netherlands
- 15:00 - 15:30 Degenerate Hopf instability in oscillatory reaction-diffusion equations
Toshiyuki Ogawa, Osaka University, Japan

SS26: Nonlinear Parabolic and Elliptic PDEs and ApplicationsOrganized by **Ratnasingham Shivaji, Peter Takac****Room: P Amphi IV**

- 13:30 - 14:00 Ratios of eigenvalues of p-Laplacians and other consequences of some elementary inequalities
Evans M. Harrell, Georgia Institute of Technology, USA
- 14:00 - 14:30 Multiple positive solutions for classes of elliptic systems with combined nonlinear effects
Ratnasingham Shivaji, Mississippi State University, USA
- 14:30 - 15:00 Multiple positive solutions to nonlinear singular elliptic problems
Jesus Hernandez Alonso, Universidad Autonoma de Madrid, Spain
- 15:00 - 15:30 Standing Pulse solution of a reaction-diffusion equation of logistic growth
Junping Shi, College of William and Mary, USA
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SS27: Multiscale Modeling and Simulations in Materials ScienceOrganized by **Carlos J. Garcia-Cervera, Xiao-Ping Wang****Room: P.122**

- 13:30 - 14:00 Mesoscopic dynamics of copolymer thin films with dispersed nanoparticles
Roderick Melnik, WLU, Waterloo, Canada
- 14:00 - 14:30 A variational approach to the moving contact line hydrodynamics
Tiezheng Qian, Hong Kong University of Science and Technology, Hong Kong
- 14:30 - 15:00 Dynamic theory and applications in smectic A liquid crystals
Iain W. Stewart, University of Strathclyde, Great Britain
- 15:00 - 15:30 Dislocation dynamics in thin films using the level set method
Yang Xiang, Hong Kong University of Science and Technology, Hong Kong

SS28: Delay Differential EquationsOrganized by **Hans-Otto Walther****Room: P.301**

- 13:30 - 14:00 Dynamics of a simple gene regulatory switch
Tomas Gedeon, Montana State University, USA
- 14:00 - 14:30 On the approximation of attractors for infinite delay differential equations. A logistic model
Pedro Marin-rubio, Universidad de Sevilla, Spain
- 14:30 - 15:00 Center manifold for some partial functional differential equations
Mostafa Adimy, LMA CNRS UMR 5142, University of Pau, France
- 15:00 - 15:30 Existence of traveling waves connecting equilibrium point and periodic solution for a class of time delayed and non-local reaction-diffusion equations
Wenzhang Huang, University of Alabama in Huntsville, USA

SS33: Nonlinear Elliptic and Parabolic ProblemsOrganized by **Filippo Gazzola, Hans-Christoph Grunau****Room: A.150**

- 13:30 - 14:00 Enclosure Methods for Elliptic Partial Differential Equations
Michael Plum, University of Karlsruhe, Germany
- 14:00 - 14:30 Enclosures for variational inequalities
Christian Wiemers, University of Karlsruhe, Germany
- 14:30 - 15:00 Strongly Competing Species in Special Domains
Monica Conti, Politecnico di Milano, Italy
- 15:00 - 15:30 Lotka-Volterra type cross-diffusion models
Dirk Horstmann, University of Cologne, Germany

SS34: Recent Advances in Evolutionary and Stationary Problems on Unbounded Domains and Related TopicsOrganized by **Stavrakakis Nikolaos****Room: P.309**

- 13:30 - 14:00 On the problem of convergence for the compressible Navier-Stokes equations
Eduard Feireisl, Mathematical Institute, Czech Academy of Sciences, Prague, Czech Rep
- 14:00 - 14:30 Hadamard differentiability and bifurcation results for some nonlinear Schrödinger equations
Gilles Evéquoz, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland
- 14:30 - 15:00 On the dynamics of a degenerate damped semilinear wave equation: The non-compact case.
Nikos I. Karachalios, University of the Aegean, Greece
- 15:00 - 15:30 Non-existence of global solutions to frac-diff wave equations
Mokhtar Kirane, university of La Rochelle, France

SS36: Topological Methods for Boundary Value ProblemsOrganized by **Kunquan Lan, Haiyan Wang, J. R. L Webb**

Room: P.310

- 13:30 - 14:00 Positive Solutions of Second Order Differential Equations With Integral Boundary Conditions
Abdelkader Y. Boucherif, King Fahd University of Petroleum and Minerals, Saudi Arabia
- 14:00 - 14:30 Stationary states for a competition-diffusion system with inhomogeneous Dirichlet boundary conditions
Elaine Crooks, Oxford University, England
- 14:30 - 15:00 Positive solutions of a third order nonlocal boundary value problem
John R. Graef, University of Tennessee at Chattanooga, USA
- 15:00 - 15:30 Positive solutions of some nonlinear boundary value problems involving singularities and integral boundary conditions
Gennaro Infante, Universita della Calabria, Italy

SS39: Hemivariational Inequalities, Nonsmooth and Nonconvex Variational Problems with ApplicationsOrganized by **Stanislaw Migorski, Zdzislaw Naniec****Room: P.RC2a**

- 13:30 - 14:00 Non-resonance and Resonance for Hemivariational Inequalities
Dumitru Motreanu, University of Perpignan, France
- 14:00 - 14:30 Existence Results for Quasilinear Hemivariational Inequalities at Resonance
Leszek Gasinski, Jagiellonian University, Poland
- 14:30 - 15:00 Degree theoretic methods in the study of positive solutions for nonlinear hemivariational inequalities
Michael E. Filippakis, National Technical University of Athens, Greece
- 15:00 - 15:30 A class of hemivariational inequalities for viscoelastic materials with long-term memory
Anna Ochal, Jagiellonian University, Poland

SS40: Nonlinear Partial Differential EquationsOrganized by **Wenxiong Chen, Congming Li****Room: P.RC2b**

- 13:30 - 14:00 Boundary-value problems for light near a caustic
Thomas H. Otway, Yeshiva University, USA
- 14:00 - 14:30 Some gradient estimates on solutions to the heat equation on domains and manifolds
Qi S. Zhang, U. California Riverside, USA
- 14:30 - 15:00 On a semilinear PDE with a singular nonlinearity
Pierpaolo Esposito, Università degli Studi Roma Tre, Italy
- 15:00 - 15:30 Bubble tower solutions of slightly supercritical elliptic equations and application in symmetric domains
Yuxin Ge, Université Paris XII, France

15h30-16h00: **Break****SS5: Nonlinear Evolution Equations and Related Topics**Organized by **Mitsuharu OTANI****Room: P.314**

- 16:00 - 16:30 Asymptotic Behavior of Solutions for Some Semilinear Heat Equations in Exterior Domains
Kyoji Takaichi, Waseda University, Japan
- 16:30 - 17:00 Nonexistence of global solutions of nonlinear Schrödinger equations in non star-shaped domains
Takahiro Hashimoto, Ehime University, Japan
- 17:00 - 17:30 Baire category and evolution differential inclusions
Francesco S. De blasi, University of Roma "Tor Vergata", Italy

SS9: Formation and Dynamics of Patterns in Evolution EquationsOrganized by **Amy Novick-Cohen, Thomas Wanner****Room: A Amphi 501**

- 16:00 - 16:30 Cylinder Buckling and a Mountain Pass Solution
Gabriel Lord, Heriot Watt University, Scotland
- 16:30 - 17:00 The Lojasiewicz inequality in the pattern formation
Piotr Rybka, Warsaw University and University of Paris XI, France
- 17:00 - 17:30 Random Field Kac Model: From micro to macro structures.
Enza Orlandi, Dep. Matematics Roma Tre, Roma, Italy

SS11: Nonautonomous Dynamical SystemsOrganized by **Russell Johnson, Rafael Obaya****Room: A.152**

- 16:00 - 16:30 On the fractalization of invariant curves
Angel Jorba, Universitat de Barcelona, Spain
- 16:30 - 17:00 Stable and unstable manifolds for quasilinear parabolic systems with fully nonlinear boundary conditions
Yuri Latushkin, University of Missouri-Columbia, USA
- 17:00 - 17:30 An extension of the Sacker-Sell spectrum theory
Weishi Liu, University of Kansas
- 17:30 - 18:00 Some generic results in non-autonomous bifurcation theory
Carmen Nunez, University of Valladolid, Spain
- 18:00 - 18:30 On periodic solutions of forced coupled second order differential equations on manifolds
Marco Spadini, Dipartimento di Matematica Applicata, Italy

SS12: New trends in electromagnetism and micromagnetismOrganized by **Alouges Francois, Frank Jochmann, Hong Ming Yin****Room: A.151**

- 16:00 - 16:30 On the localization of three-dimensional inclusions of small volume from numerical measurements
Mark Asch, LAMFA, Université de Picardie Jules Verne, France
- 16:30 - 17:00 Computing electrostatic charge densities at rounded corners : an improved Peek's formula
Samir Kaddouri, ENSTA, France
- 17:00 - 17:30 Relaxation approximation of some nonlinear Maxwell initial-boundary value problem
Carbou Gilles, MAB Université Bordeaux 1, France
- 17:30 - 18:00 An efficient Indirect Integral Equation for Large Scale
David Levadoux, ONERA, France

SS16: Dynamical Systems Associated with Nonlinear Phenomena with Energy DissipationOrganized by **Toyohiko Aiki, Nobuyuki Kenmochi****Room: P.108**

- 16:00 - 16:30 On solutions of control system of subdifferential type depending on a parameter
Tolstonogov A. Alexander, Siberian Branch, Russian Academy of Sciences, Russia
- 16:30 - 17:00 Nonconvex optimization problems for semilinear second order evolution equations
Shin-ichi Nakagiri, Kobe University, Japan
- 17:00 - 17:30 A free boundary problem for elastic materials
Toyohiko Aiki, Gifu University, Japan

SS19: Qualitative Properties of Evolution EquationsOrganized by **Jong-Sheng Guo, Mokhtar Kirane, Arnaud Rougirel****Room: P Amphi I**

- 16:00 - 16:30 On the p-Laplace operator in domains becoming unbounded
Michel M. Chipot, University of Zurich, Switzerland
- 16:30 - 17:00 Asymptotic behavior of solutions of hyperbolic problems on a cylindrical domain.
Senoussi Guesmia, Université de Haute Alsace, France
- 17:00 - 17:30 Rate of Convergence to a Singular Steady State for a Heat Equation with Strong Absorption
Jong-shenq Guo, National Taiwan Normal University, Taiwan
- 17:30 - 18:00 Wellposedness and optimal decay rates for wave equation with nonlinear boundary damping-source interaction
Valéria N. Domingos cavalcanti, State University of Maringa, Brazil

SS20: Nonlinear Dispersive WavesOrganized by **J. Bona, T. Colin, M. Colin, D. Lannes****Room: P. 109**

- 16:00 - 16:30 Numerical Solution of Boussinesq Systems
Vassilios A. Dougalis, University of Athens and IACM, FORTH, Greece
- 16:30 - 17:00 Hamiltonian long-wave expansions for water waves over a rough bottom
Catherine Sulem, University of Toronto, Canada
- 17:00 - 17:30 Asymptotic and numerical study of water waves
David Lannes, CNRS, France
- 17:30 - 18:00 Some hints on shallow water : sedimentation and avalanches
Didier Bresch, CNRS, Université Joseph Fourier, France

SS21: Dynamical Systems and Control in BiologyOrganized by **Bedr Eddine Ainseba, Odo Diekmann, Pierre Magal, Shigui Ruan****Room: P. 121**

- 16:00 - 16:30 The control of some population dynamics. Dependence on the support of the control
Sebastian Anita, University "Al.I. Cuza" Iasi, Romania

SS23: New Developments in Nonlinear Partial Differential Equations and Control TheoryOrganized by **Irena Lasiecka, Grozdana Todorova****Room: Amphi J**

- 16:00 - 16:30 Pointwise Carleman estimates at the H^1 -level with no lower order terms for non-conservative Schrödinger equations on a Riemannian manifold: control theoretic implications
Xiangjin Xu, University of Virginia, USA
- 16:30 - 17:00 Modern Boundary Conditions
Jerome A. Goldstein, University of Memphis, USA
- 17:00 - 17:30 Linear and Nonlinear Kinetic Boundary Conditions for the Wave Equation
Gisele R. Goldstein, University of Memphis, USA
- 17:30 - 18:00 Weak and Regular Solutions for a Non-linear Shell Problem with Small Finite Deflections
John Cagnol, Pole Universitaire Leonard de Vinci, France

SS25: Dynamical Approach to Pattern-formation Equations, and Related TopicsOrganized by **M. A. Efendiev****Room: P Amphi II**

- 16:00 - 16:30 Dynamics of a nonautonomous coagulation system
Fernando P. Da costa, Universidade Aberta, Portugal
- 16:30 - 17:00 Spikes in biological systems
Matthias Winter, Brunel University, England
- 17:00 - 17:30 Discretizations of chemotaxis-growth system and dimension estimate of their attractors
Etsushi Nakaguchi, Osaka University, Japan

SS26: Nonlinear Parabolic and Elliptic PDEs and ApplicationsOrganized by **Ratnasingham Shivaji, Peter Takac****Room: P Amphi IV**

- 16:00 - 16:30 Turing Patterns on Spheres
Jon J. Jacobsen, Harvey Mudd College, USA
- 16:30 - 17:00 Generalizations of Logarithmic Sobolev inequalities
Jochen Merker, University of Rostock, Germany
- 17:00 - 17:30 quasilinear elliptic equations with singular and critical nonlinearities
Jacques Giacomoni, Laboratoire MIP-Ceremath, Institut de Maths de Toulouse, France
- 17:30 - 18:00 A dynamical systems framework for symmetries in PDE's
Pablo Padilla, University of Mexico (UNAM), Mexico

SS27: Multiscale Modeling and Simulations in Materials ScienceOrganized by **Carlos J. Garcia-Cervera, Xiao-Ping Wang****Room: P.122**

- 16:00 - 16:30 Stochastic modeling and multiscale computation of biochemical networks
Di Liu, Michigan State University, USA

SS28: Delay Differential EquationsOrganized by **Hans-Otto Walther****Room: P.301**

- 16:00 - 16:30 Dynamics generated by delayed unimodal positive feedback
Gergely Röst, York University, Toronto, Canada
- 16:30 - 17:00 Differential delay equations with state dependent time lags
Roger D. Nussbaum, Rutgers University, USA
- 17:00 - 17:30 Controlling Oscillations with time delays: From oscillators to networks
Fatihcan M. Atay, Max Planck Institute for Mathematics in the Sciences, Germany
- 17:30 - 18:00 Soft landing and state-dependent delay
Hans-otto Walther, Universitaet Giessen, Germany
- 18:00 - 18:30 Delay equations with rapidly oscillating stable periodic solutions
Daniel Stoffer, ETH-Zurich, Switzerland

SS33: Nonlinear Elliptic and Parabolic ProblemsOrganized by **Filippo Gazzola, Hans-Christoph Grunau****Room: A.150**

- 16:00 - 16:30 On the stochastic thin-film equation
Günther Grün, Institute for Applied Mathematics, University of Erlangen, Germany
- 16:30 - 17:00 Positivity preserving property for a class of biharmonic elliptic problems
Elvise Berchio, Università di Torino (Italy), Italy
- 17:00 - 17:30 Radial entire solutions for supercritical biharmonic equations
Filippo Gazzola, Dipartimento di Matematica, Politecnico di Milano, Italy
- 17:30 - 18:00 Global solutions for superlinear parabolic equations involving the biharmonic operator for initial data with optimal slow decay
Hans-Christoph Grunau, Otto-von-Guericke Universitaet Magdeburg, Germany

SS34: Recent Advances in Evolutionary and Stationary Problems on Unbounded Domains and Related TopicsOrganized by **Stavrakakis Nikolaos****Room: P.309**

- 16:00 - 16:30 Two remarks on solutions of Gross-Pitaevski equations on Zhidkov spaces
Olivier Goubet, LAMFA UMR 6140 CNRS-Univ. de Picardie, France

- 16:30 - 17:00 Large-Time Behaviour of Solutions to Quasilinear Parabolic Equations on a Half-Line
Lukáš Poul, Mathematical Institute, Academy of Sciences of the Czech Republic, Czech Rep
- 17:00 - 17:30 Global Existence and Blow-up results for a quasilinear wave equation on \mathbb{R}^n .
Perikles G. Papadopoulos, National Technical University of Athens, Greece

SS36: Topological Methods for Boundary Value Problems

Organized by **Kunquan Lan, Haiyan Wang, J. R. L Webb**

Room: P.310

- 16:00 - 16:30 Optimal constants arising from some boundary value problems
K. Q. Lan, Ryerson University, Canada
- 16:30 - 17:00 Higher Order Two-Point Boundary Value Problems with Asymmetric Growth
Feliz M. Minhós, University of Évora, Portugal
- 17:00 - 17:30 Mild almost automorphic solutions to some semilinear boundary evolution
Gaston N'guerekata, Morgan State university, USA
- 17:30 - 18:00 Multiple positive solutions for a fourth order equation of Kirchhoff type
To fu Ma, State University of Maringa, Brazil

SS40: Nonlinear Partial Differential Equations

Organized by **Wenxiong Chen, Congming Li**

Room: P.RC2b

- 16:00 - 16:30 Elliptic problems: inverse square potential versus dependence on power of the gradient
Ireneo Peral, Universidad Autonoma de Madrid, Spain
- 16:30 - 17:00 Nonrelativistic limit in the Abelian Chern-Simons model
Jongmin Han, Hankuk University of Foreign Studies, Korea
- 17:00 - 17:30 A priori bounds and the Ambrosetti-Prodi problem for nonlinear elliptic systems
Boyan Sirakov, University of Paris X and EHESS, France
- 17:30 - 18:00 Global Well-Posedness of Equations of Fluid Type
Congming Li, CU, USA

SS44: Differential equations, dynamical systems and related applications

Organized by **Chao-Nien Chen, Yung-Sze Choi**

Room: P.06

- 16:00 - 16:30 Global behavior of the branch of positive solutions for nonlinear Sturm-Liouville problems
Tetsutaro Shibata, Hiroshima University, Japan
- 16:30 - 17:00 Multiplicity results for asymptotically linear second order boundary value problems with indefinite weights.
Francesca Dalbono, CMAF, Universidade de Lisboa, Portugal
- 17:00 - 17:30 Transonic 2D compressible potential flows
Eun Heui Kim, California State University Long Beach, USA
- 17:30 - 18:00 Reaction-diffusion systems with skew-gradient structure
Chao-nien Chen, National Changhua University of Education, Taiwan

Monday, June 26, 2006

SS3: Theory and Applications of Hysteresis Modeling

Organized by **Pavel Krejci**

Room: P Amphi II

- 08:00 - 08:30 On some P.D.E.s with hysteresis
Michela Eleuteri, Department of Mathematics, University of Trento, Italy
- 08:30 - 09:00 BV-extension of rate independent operators
Vincenzo Recupero, Università degli Studi di Padova, Italy
- 09:00 - 09:30 Three state relays
Oleg Rasskazov, University College Cork, Ireland
- 09:30 - 10:00 Equations with time derivatives of the Preisach operator
Dmitrii Rachinskii, University College Cork, Ireland

SS4: Global and Exponential Attractors for Dissipative Dynamical Systems

Organized by **Maurizio Grasselli**

Room: A.151

- 09:00 - 09:30 Asymptotic compactness and attractors for models of compressible fluids
Eduard Feireisl, Mathematical Institute, Czech Academy of Sciences, Prague, Czech Rep
- 09:30 - 10:00 Global Regularity of the 3D Primitive Equations of Large Scale Ocean and Atmosphere Dynamics
Edriss S. Titi, University of California - Irvine, and Weizmann Institute of Science, Israel

SS18: Concepts, architecture and dynamics of non-standard computations

Organized by **Ruedi Stoop**

Room: A.150

- 08:00 - 08:30 Neural computation from cell to small networks
Stephane Binczak, LE2I UMR CNRS 5158, France
- 08:30 - 09:00 Computation in olfactory neuronal networks beyond synchronization
Markus Christen, Institute of Neuroinformatics, University/ETH Zurich, Switzerland
- 09:00 - 09:30 Information transfer and computation in *Drosophila* courtship behavior
Christian Heid, Institute of neuroinformatics ETHZ/UNIZH, Switzerland
- 09:30 - 10:00 Global Invariants for Variable-Mass Systems
Jim Howard, University of Colorado

SS19: Qualitative Properties of Evolution Equations

Organized by **Jong-Shenq Guo, Mokhtar Kirane, Arnaud Rougirel**

Room: P Amphi I

- 08:00 - 08:30 Gaussian estimates for degenerate operators on Lie groups
Sergio Polidoro, University of Bologna, Italy
- 08:30 - 09:00 Qualitative properties of solutions of fractional integro-differential equations
with special regard to asymptotic behavior
Eduardo Cuesta, University of Valladolid, Spain
- 09:00 - 09:30 Extremal equilibria for parabolic equations and applications.
Anibal Rodriguez-Bernal, U. Complutense, Madrid, Spain

SS22: Large Time Behavior in Parabolic PDEs

Organized by **Peter Polacik, Eiji Yanagida**

Room: A.161

- 08:00 - 08:30 Spreading speeds for KPP-type equations in general domains
Francois Hamel, Université Aix-Marseille III, France
- 08:30 - 09:00 Multiple blowup on different places at prescribed time
Noriko Mizoguchi, Tokyo Gakugei University, Japan
- 09:00 - 09:30 Time dependent Ornstein-Uhlenbeck operators and invariant measures
Alessandra Lunardi, Dipartimento di Matematica, Università di Parma, Italy
- 09:30 - 10:00 Entire solutions with two fronts of reaction-diffusion equations
Hirokazu Ninomiya, Ryukoku University, Japan

SS36: Topological Methods for Boundary Value ProblemsOrganized by **Kunquan Lan, Haiyan Wang, J. R. L Webb****Room: P.310**

- 08:00 - 08:30 Another topological approach to boundary value problems
Palamides K. Panos, Naval Academy of Greece, Greece
- 08:30 - 09:00 Population Models with Diffusion and Strong Allee Effect
Ratnasingham Shivaji, Mississippi State University, USA
- 09:00 - 09:30 Periodic solutions of differential equations with weak singularities
Pedro J. Torres, University of Granada, Spain
- 09:30 - 10:00 On the unique principal eigenvalue of nonlocal boundary value
Jeffrey R. Webb, University of Glasgow, Scotland
- 10:30 - 11:00 On the Existence of Fixed-sign Solutions for a System of Generalized Right Focal Problems with Deviating Arguments
Patricia J. Y. Wong, Nanyang Technological University, Singapore
- 11:00 - 11:30 On positive solutions to coincidence equations
Mirosława Zima, Institute of Mathematics, University of Rzeszow, Poland
- 11:30 - 12:00 Positive Solutions of Nonlinear Systems of Differential Equations
Haiyan Wang, Arizona State University, USA

SS39: Hemivariational Inequalities, Nonsmooth and Nonconvex Variational Problems with ApplicationsOrganized by **Stanislaw Migorski, Zdzislaw Naniewicz****Room: P.RC2a**

- 08:00 - 08:30 On a General Equilibrium Model in Reflexive Banach Space
Zdzislaw Naniewicz, Cardinal Stefan Wyszyński University, Warsaw, Poland
- 08:30 - 09:00 Multiple positive solutions and sign-changing solutions
Nikolaos S. Papageorgiou, National Technical University, Zografou Campus, Greece
- 09:00 - 09:30 On the regularization of sliding modes
Silvia Villa, Università di Genova, Italy
- 09:30 - 10:00 Existence and stability of solutions to semilinear wave equation with Dirichlet boundary control
Andrzej Nowakowski, Faculty of Math, University of Lodz, Poland

SS43: Non-linear Dynamics and ApplicationsOrganized by **Wenzhang Huang, Weishi Liu****Room: P.05**

- 08:00 - 08:30 Subharmonic Solutions with Prescribed Minimal Period for a Class of Nonautonomous Hamiltonian Systems
Jianshe Yu, Guangzhou University, P. R. China
- 08:30 - 09:00 Non-monotone travelling waves for a scalar reaction-diffusion equation with delay
Teresa Faria, University of Lisbon, Portugal
- 09:00 - 09:30 Periodic Traveling Wave Solutions for Reaction diffusion Equations with Time Delayed and Non-Local Response
Wenzhang Huang, University of Alabama in Huntsville, USA
- 09:30 - 10:00 Orthogonal Integration and Exponential Dichotomy
Erik S. Van vleck, University of Kansas, USA

SS46: Stochastic evolution equations with spatial structure and applications, from micro to macro scalesOrganized by **Roberto Camassa, Brenton LeMesurier****Room: P.314**

- 08:00 - 08:30 Nonlinear localization of light in disorderd optical fiber arrays

- Alejandro B. Aceves**, The University of New Mexico, USA
 08:30 - 09:00 Evolution of passive scalar distributions in some basic deterministic fluid flows
Roberto Camassa, University of North Carolina, USA
 09:00 - 09:30 Sensitivity analysis of financial options in jump-diffusion models
David Delphine, Université de la Rochelle, France
 09:30 - 10:00 Wave energy localization by self-focusing in large molecular structures:
 a damped stochastic discrete nonlinear Schrödinger equation model
Brenton J. Lemesurier, Department of Mathematics, College of Charleston, South Carolina, USA

SS47: Applications of Dynamical Systems: Celestial Mechanics and BeyondOrganized by **Marian Gidea**, **Josep Masdemont****Room: Amphi J**

- 08:00 - 08:30 Geometry of homoclinic connections in a planar circular restricted three-body problem
Marian Gidea, Northeastern Illinois University, USA
 08:30 - 09:00 A Methodology for the Computation of Heteroclinic Orbits between Invariant Tori about L_1 and L_2
 in the Sun-Earth System
Josep J. Masdemont, Universitat Politècnica de Catalunya, Spain
 09:00 - 09:30 The dynamics around the collinear point L_3 of the RTBP
Esther Barrabés, Universitat de Barcelona, Spain
 09:30 - 10:00 Solar Sailing near a collinear point
Ariadna Farres, Universitat de Barcelona, Spain

CS1: Hamiltonian SystemsChair **T. Story** **Room: P.01**

- 08:00 - 08:30 Trajectory of a periodically delta-kicked system moving at low speed:
 Comparison of the predictions of Newtonian and special relativistic mechanics
Boon Leong Lan, Monash University, Malaysia
 08:30 - 09:00 Numerical Solution of Integral Equation of the First Kind by Using Wavelet Galerkin Method
Khosrow Maleknejad, school of mathematics Iran university of Science & Technology, Iran
 09:00 - 09:30 The equations of physical processes in dissipative media as variation of functionals of energy
Basil Tchaban, University of Rzeszow, Poland
 09:30 - 10:00 Navier-Stokes dynamics on a differential one-form
Troy L. Story, Morehouse College, USA

CS2: ODEs and ApplicationsChair **J. Benedikt** **Room: P.011**

- 08:00 - 08:30 On a modified version of ILDM method and its asymptotics
Sofia Borok, Department of Mathematics, Ben-Gurion University of the Negev, Israel
 08:30 - 09:00 Limit cycles of Liénard systems
Makhlouf M. Amar, University of Annaba, Algeria
 09:00 - 09:30 On The Growth Of Meromorphic Solutions Of Complex Linear
 Differential Equations With Meromorphic Coefficients
Benharrat Belaidi, University of Mostaganem, Algeria
 09:30 - 10:00 Spectral Properties of p -Biharmonic Problems
Jiri Benedikt, University of West Bohemia, Czech Rep

CS3: Delay and Difference EquationsChair **Room: P.122**

- 08:00 - 08:30 A Stochastic-difference-equation-model of moving equilibria in the public health care sector:
 a low quality-low performance trap and a resolution
Ahmet Kara, Fatih University, Turkey
 08:30 - 09:00 Positivity and stability for Partial Neutral Differential Equations

Soumia Lalaoui rhali, Sidi Mohamed Ben Abdellah University, Faculty of Taza, Morocco
 09:00 - 09:30 Approximation of solutions to a class of second order history-valued delay differential equations
M Muslim, Indian Institute of Technology Kanpur, India

CS4: Modelling and Math BiologyChair **O. Angulo** Room: **P.015**

08:00 - 08:30 Turing Bifurcation in a Ratio-Dependent Predator-Prey Model with Diffusion
Shaban Aly, Al-Azhar University, Egypt
 08:30 - 09:00 A Qualitative Mathematical Analysis of a Class of Dynamical Models in Biochemistry
Oanh Chau, university of La Réunion, Réunion
 09:00 - 09:30 Modelling seasonal effects on the West Nile Virus Infection
Gustavo Cruz-pacheco, Institute of Applied Mathematics, National University of Mexico, Mexico
 09:30 - 10:00 Numerical integration of a hierarchically size-structured population model with contest competition
Oscar Angulo, Universidad de Valladolid, Spain

CS9: PDEs and ApplicationsChair **P. Mucha** Room: **P.301**

08:00 - 08:30 Weak solutions to a Stefan problem
Piotr B. Mucha, Institute of Applied Mathematics and Mechanics, Warsaw University, Poland
 08:30 - 09:00 Fractional Fourier Transform of Tempered Distribution
Bharat N. Bhosale, University of Mumbai, India
 09:00 - 09:30 Semi-classical states for nonlinear Schrödinger equations with potentials vanishing at infinity
Denis Bonheure, Université catholique de Louvain, Belgium
 09:30 - 10:00 Spiral wave patterns in the complex Ginzburg-Landau equation
Maria Aguares, Universitat Politècnica de Catalunya, Spain

CS9: PDEs and ApplicationsChair Room: **P.109**

08:00 - 08:30 On a free boundary problem
Sidi mohammed Bouguima, university of Tlemcen., Algeria
 08:30 - 09:00 Sumudu transform applications to the Cosner conjecture
Fethi Bin Muhammad Belgacem, Arab Open University, Kuwait
 09:00 - 09:30 Numerical Simulations of FitzHugh-Nagumo Equations in Two-dimensional Heterogeneous Medium
Arnold Dikansky, St. John's University, USA
 09:30 - 10:00 Numerical Stability of Solitarywave-like Solutions in a Two Layer Fluid over a Bump
Jeongwhan Choi, Korea University, Korea

10h00-10h30: **Break****Plenary Sessions****Room: Amphi J**

Chair **Filippo Gazzola**
 8h30-9h15 Title: On a problem of Liao and Mane for nonsingular star flows
 Speaker: **Lan Wen**, Université de Beijing, Chine
 9h15-9h45 Break
 9h45-10h30 Title: Principal Floquet bundles, exponential separation and asymptotic behavior of solutions of parabolic equations
 Speaker: **Peter Polacik**, Université du Minnesota, USA

12h00-13h30: **Lunch**

SS1: Mathematical Aspects of Wave Propagation

Organied by **Ivan Victorovich Andronov, Boris Belinskiy, Anjan Biswas, Peter Caithamer**

Room: P Amphi VI

- 13:30 - 14:00 Asymptotic models for diffraction by thin wires
Xavier Claeys, Projet POems INRIA Rocquencourt, France
- 14:00 - 14:30 Degeneration of creeping waves on an anisotropic impedance surface
Ivan V. Andronov, St.Petersburg State University, Russia
- 14:30 - 15:00 A new method for the determination of the electromagnetic impulse response of a target
Frédéric Molinet, Société MOTHESIM, France
- 15:00 - 15:30 Diffraction of an electromagnetic wave by a elongated prolate body using Heun bi-confluent equation
Damien M. Laval, Dassault-Aviation, France

SS3: Theory and Applications of Hysteresis Modeling

Organied by **Pavel Krejci**

Room: A.152

- 13:30 - 14:00 Prandtl-Ishlinskii hysteresis operators and 1D elastoplasticity
Juergen Sprekels, Weierstrass Institute for Applied Analysis and Stochastics, Berlin, Germany
- 14:00 - 14:30 Rate-independent models of isothermal hysteretic response of shape-memory alloys.
Tomáš Roubíček, Mathematical Institute, Charles University, Czech Rep
- 14:30 - 15:00 Asymptotic behavior for a phase-field model for thermo-visco-plasticity involving outwards pointing hysteresis operators
Olaf Klein, Weierstrass Institute for Applied Analysis and Stochastics, Berlin, Germany
- 15:00 - 15:30 Hysteresis and semigroups
Jana Kopfova, Silesian University, Opava, Czech Rep

SS4: Global and Exponential Attractors for Dissipative Dynamical Systems

Organied by **Maurizio Grasselli**

Room: A.151

- 13:30 - 14:00 Damped/driven Navier–Stokes system on large domains
Alexei A. Ilyin, Russian Academy of Sciences, Russia
- 14:00 - 14:30 Global attractors for 2D Navier-Stokes equations in a strip in the class of spatially non-decaying solutions
Zelik M. Sergey, WIAS, Germany
- 14:30 - 15:00 Dissipative equations in locally uniform spaces
Jan W. Cholewa, Silesian University, Poland

SS5: Nonlinear Evolution Equations and Related Topics

Organied by **Mitsuharu Otani**

Room: P.309

- 13:30 - 14:00 Modeling Quorum Sensing and Cell-Cell Communication
Christina Kuttler, Institute of Biomathematics and Biometry, Germany
- 14:00 - 14:30 On the structure of attractors for a class of degenerate reaction-diffusion systems
Laurent Demaret, GSF/IBB, Germany
- 14h:30 - 15:00 Asymptotic analysis for Kirchhoff equation
Tokio Matsuyama, Tokai University, Japan

SS7: Differential inclusionsOrganized by **Alain Pietrus****Room: P.01**

- 13:30 - 14:00 On the Stability of Noncoercive Variational Inclusions and Applications
Samir Adly, University of Limoges, France
- 14:00 - 14:30 Dry friction and oscillation: results of stabilization in finite time
Alexandre Cabot, University of Limoges, France
- 14:30 - 15:00 Convergence of the Proximal Point Method for Metrically Regular Mappings
Michel H. Geoffroy, Université Antilles-Guyane, Guadeloupe
- 15:00 - 15:30 A secant-type method for generalized equations
Said Hilout, FST Béni Mellal, Morocco

SS11: Nonautonomous Dynamical SystemsOrganized by **Russell Johnson, Rafael Obaya****Room: A.157**

- 13:30 - 14:00 Chain recurrence, growth rates and ergodic limits
Fritz Colonius, University of Augsburg, Germany
- 14:00 - 14:30 On nonautonomous shadowing
Arno Berger, University of Canterbury, New Zealand
- 14:30 - 15:00 Exponential stability in non-autonomous delayed equations with applications to neural networks
Sylvia Novo, Universidad de Valladolid, Spain

SS12: New trends in electromagnetism and micromagnetismOrganized by **Alouges Francois, Frank Jochmann, Hong Ming Yin****Room: P Amphi II**

- 13:30 - 14:00 Landau-Lifschitz-Gilbert equation with applied electric current
Gaél Bonithon, Université Bordeaux 1, France
- 14:00 - 14:30 Multi-tracks reading heads modelling by coupling boundary elements and finite differences approaches
Ioana Firastrau, Transilvania University of Brasov, Romania
- 14:30 - 15:00 Finite element schemes for Landau-Lifshitz equations
François Alouges, Université Paris-Sud, France

SS18: Concepts, architecture and dynamics of non-standard computationsOrganized by **Ruedi Stoop****Room: P.05**

- 13:30 - 14:00 Acoustic Source Separation by Atomic Signal Decomposition
Albert Kern, ETH Zürich, Switzerland
- 14:00 - 14:30 Chaos and its control in applications to financial analysis
Alexander Loskutov, Moscow State University, Russia
- 14:30 - 15:00 Repeated Patterns in Real-Time Behavior and Interactions: Definitions, Detection and Validation
Magnus S. Magnusson, University of Iceland
- 15:00 - 15:30 Phase-coupled neural networks: Architectures and computation
Stefan Martignoli, ETH Zürich, Switzerland

SS19: Qualitative Properties of Evolution EquationsOrganized by **Jong-Shenq Guo, Mokhtar Kirane, Arnaud Rougirel****Room: P Amphi I**

- 13:30 - 14:00 The blow-up problem for a semilinear parabolic equation with a potential
Julio D. Rossi, Consejo Superior de Investigaciones Científicas (CSIC) Spain, Spain
- 14:00 - 14:30 Asymptotic analysis and estimates of blow-up time for the radial symmetric semilinear heat equation in the open-spectrum case

Dimitrios E. Tzanetis, National Technical University of Athens, Greece

14:30 - 15:00 Positivity properties and nonuniqueness in the quenching problem

Michael Winkler, RWTH Aachen, Germany

15:00 - 15:30 Large-time behaviour of solutions of the porous media equation in an exterior domain

Brian Gilding, Sultan Qaboos University, Oman

SS20: Nonlinear Dispersive Waves

Organized by **J. Bona, T. Colin, M. Colin, D. Lannes**

Room: P.109

13:30 - 14:00 A unified theory for nonlinear steady travelling waves in constant, but arbitrary, depth

Gerassimos A. Athanassoulis, National Technical University of Athens, Greece

14:00 - 14:30 Spatially Periodic Problems in Nonlinear Dispersive Theory

Hongqiu Chen, University of Memphis, USA

14:30 - 15:00 Global existence for damped nonlinear Schrödinger equations

Masahito Ohta, Saitama University, Japan

15:00 - 15:30 Instability of vortex solitons for 2D focusing NLS

Tetsu Mizumachi, Kyushu University, Japan

SS22: Large Time Behavior in Parabolic PDEs

Organized by **Peter Polacik, Eiji Yanagida**

Room: A.161

13:30 - 14:00 Non-parabolic asymptotic limits of solutions of the heat equation on \mathbb{R}^N

Fred Weissler, Universite Paris 13, France

14:00 - 14:30 On some free boundary problems with moving contact lines and prescribed contact angle

Gieri Simonett, Vanderbilt University, USA

14:30 - 15:00 On the asymptotics of gradient blow-up

Philippe Souplet, Université Paris 13, France

15:00 - 15:30 Grow-up and convergence of solutions for a parabolic equation

Eiji Yanagida, Tohoku University, Japan

SS23: New Developments in Nonlinear Partial Differential Equations and Control Theory

Organized by **Irena Lasiecka, Grozdana Todorova**

Room: Amphi J

13:30 - 14:00 Semilinear hyperbolic equations with a localized dissipation in an exterior domain

Ryo Ikehata, Hiroshima University, Japan

14:00 - 14:30 Large-time behavior of solutions for the damped wave equation

Kenji Nishihara, Waseda University, Japan

14:30 - 15:00 Weighted L^2 -Estimates for Dissipative Wave Equations with Variable Coefficients

Grozdana H. Todorova, University of Tennessee, USA

15:00 - 15:30 L^p - L^q decay estimates for solutions of wave equations with time-dependent dissipation and applications

Jens Wirth, TU Bergakademie Freiberg, Germany

SS26: Nonlinear Parabolic and Elliptic PDEs and Applications

Organized by **Ratnasingham Shivaji, Peter Takac**

Room: P Amphi IV

13:30 - 14:00 A Reaction-Diffusion System from Climate Modeling

Georg Hetzer, Auburn University, USA

14:00 - 14:30 Structure of the set of large radial solutions of polyharmonic equations with superlinear growth

Monica Lazzo, University of Bari, Italy

14:30 - 15:00 Asymptotic behavior of large radial solutions of polyharmonic equations with superlinear growth

Paul G. Schmidt, Auburn University, USA

15:00 - 15:30 Asymmetric eigenvalue problems for the p-laplacian with Neumann boundary conditions
Mabel Cuesta, Universite du Littoral ULCO, France

SS29: Dynamics of forced oscillators

Organied by **Rafael Ortega**

Room: P.301

13:30 - 14:00 The Stability of equilibrium of quasi-periodic planar Hamiltonian and Reversible Systems
Bin Liu, Peking University, Peoples Rep of China

14:00 - 14:30 Multiplicity of solutions of Dirichlet problems associated to second order equations in \mathbb{R}^2
Carlota Rebelo, Centro de Matemática e Aplicações Fundamentais, Lisboa, Portugal

14:30 - 15:00 Existence of periodic solutions for enzyme-catalyzed reactions with periodic substrate input
Guy Katriel, Hebrew University, Jerusalem, Israel

SS31: Convex/Nonconvex Dynamical Systems and Computational Mechanics with Applications in Physics and Engineering

Organied by **Zhaosheng Feng, Claire David, David Y. Gao**

Room: P.121

13:30 - 14:00 Front propagation into unstable states: a general perspective
Wim Van saarloos, Leiden University, Netherlands

14:00 - 14:30 Numerical Methods for Computing Nonlinear Eigenpairs
Jianxin Zhou, Texas A&M University, USA

14:30 - 15:00 Pseudo-potential and Some Exact Solutions of Two-dimensional Flow
Ke-ying Guan, Beijing Jiaotong University, Peoples Rep of China

15:00 - 15:30 Lie group stability study of finite difference schemes
Emma Hoarau, ONERA, France

SS32: Magnetohydrodynamics in Astrophysics and Geophysics: advances in dynamo theory

Organied by **Emmanuel Dormy, Manuel Nunez**

Room: A.150

14:00 - 14:30 Highly Supercritical Convection in a Strong Magnetic Field
Edgar Knobloch, University of California at Berkeley, USA

14:00 - 14:30 Mathematical Study of small scale dynamos
David Gerard-varet, CNRS, Ecole Normale Superieure, France

14:30 - 15:00 A Landau fluid description of collisionless plasmas
Pierre-louis Sulem, CNRS, Observatoire de la Cote d'Azur, France

SS33: Nonlinear Elliptic and Parabolic Problems

Organied by **Filippo Gazzola, Hans-Christoph Grunau**

Room: A Amphi 501

13:30 - 14:00 Critical Elliptic Systems in Potential Form
Emmanuel Hebey, Université de Cergy-Pontoise, France

14:00 - 14:30 Quantization issues for fourth order elliptic equations in dimension four
Frédéric Robert, Université de Nice-Sophia Antipolis, France

14:30 - 15:00 Four manifolds with constant fourth order curvature
Zindine Djadli, Université de Cergy-Pontoise, France

SS38: Nonlinear Analysis, Trends and Applications, Special Session Celebrating the Sixtieth Birthday of J.R.L. Webb

Organied by **Messoud Efendiev, Gennaro Infante, K.Q. Lan**

Room: P.310

- 13:30 - 14:00 Global branches of periodic solutions for delay differential equations on compact manifolds
Pierluigi Benevieri, Dipartimento Matematica Applicata, Università di Firenze, Italy
- 14:00 - 14:30 Existence and uniqueness of solutions to a super-linear three-point boundary value problem
Bruce Calvert, University of Auckland, New Zealand
- 14:30 - 15:00 Eigenvalues of homogeneous gradient mappings in Hilbert space
Raffaele Chiappinelli, Università di Siena, Italy
- 15:00 - 15:30 Some Topological Results for the Semilinear A-Spectrum
Casey T. Cremins, University of Maryland, USA

SS39: Hemivariational Inequalities, Nonsmooth and Nonconvex Variational Problems with Applications

Organized by **Stanislaw Migorski, Zdzislaw Naniecicz**

Room: P.RC2a

- 13:30 - 14:00 Optimal control for impulsive systems on the space of finitely additive measures
Nasiruddin Ahmed, University of Ottawa, Canada
- 14:00 - 14:30 Comparison Results for a Class of Quasilinear Evolutionary Hemivariational Inequalities
Siegfried Carl, University of Halle, Germany
- 14:30 - 15:00 Generalizations of the Lax-Milgram theorem
Nikos Yannakakis, National Technical University of Athens, Greece

SS40: Nonlinear Partial Differential Equations

Organized by **Wenxiong Chen, Congming Li**

Room: P.RC2b

- 13:30 - 14:00 On the existence of sign changing solutions to some critical problems
Angela Pistoia, Università di Roma "La Sapienza", Italy
- 14:00 - 14:30 A generalized sup + inf inequality for $-\Delta u = R(x)e^u$
Wenxiong Chen, Yeshiva University, USA

SS44: Differential equations, dynamical systems and related applications

Organized by **Chao-Nien Chen, Yung-Sze Choi**

Room: P.06

- 13:30 - 14:00 A traveling domain solution
Yung S. Choi, University of Connecticut, USA
- 14:00 - 14:30 Networks of Three-Identical Coupled Systems
Maria Leite, Purdue University, USA
- 14:30 - 15:00 Rotations in a Car-Following Model
Tilman Seidel, Universität Hamburg, Germany
- 15:00 - 15:30 Elasto-dynamical Systems with Friction Constrained Motions
Liejune Shiau, University of Houston-Clear Lake, USA

SS46: Stochastic evolution equations with spatial structure and applications, from micro to macro scales

Organized by **Roberto Camassa, Brenton LeMesurier**

Room: P.314

- 13:30 - 14:00 Closed form expressions of the probability density function for passive scalar advection by random winds and shears
Zhi Lin, University of North Carolina at Chapel Hill, USA
- 14:00 - 14:30 Spinning Rods and Passive Tracers, from Nanoscale to Table-Top scale: coherent fluctuations in the presence of thermal noise
Richard M. McLaughlin, Mathematics, University of North Carolina, USA
- 14:30 - 15:00 Evaluating First Passage Times in Stochastic Evolution Equations with Jump-Diffusions and Applications in Finance

Roderick Melnik, WLU, Waterloo, Canada

15:00 - 15:30 Stochastic Dynamics of Integrable, Nonlinear Partial Differential Wave Equations

Alfred R. Osborne, Università di Torino, Italy

SS47: Applications of Dynamical Systems: Celestial Mechanics and Beyond

Organized by **Marian Gidea, Josep Masdemont**

Room: P.108

13:30 - 14:00 Computing long lifetime science orbits around natural satellites

Martin Lara, Real Observatorio de la Armada, Spain

14:00 - 14:30 Low Energy Transfers In Space Using Chaos: Applications to Astrodynamics and Astronomy

Edward A. Belbruno, Princeton University, USA

14:30 - 15:00 An Interactive Software System for Mission Design and Trajectory Optimization

Cesar Ocampo, The University of Texas at Austin, USA

15:00 - 15:30 Estimation of optimal time for low thrust transfers between elliptic orbits

Alex Bombrun, INRIA, France

15h30-1600: **Break**

SS1: Mathematical Aspects of Wave Propagation

Organized by **Ivan Victorovich Andronov, Boris Belinskiy, Anjan Biswas, Peter Caithamer**

Room: P Amphi VI

16:00 - 16:30 Oscillatory motion of solitons in two-dimensional waveguides

Matthew E. Edwards, Alabama A&M University, USA

16:30 - 17:00 About Some Aspects in Numerical Investigation of Nonlinear Schrödinger Equation

Michail D. Todorov, University of Sofia, Bulgaria

17:00 - 17:30 Analysis and Discretization of Semilinear Stochastic Wave Equations with Power Law

Nonlinearity and Q-Regular Space-Time Noise

Henri Schurz, Southern Illinois University (SIU-C), USA

SS3: Theory and Applications of Hysteresis Modeling

Organized by **Pavel Krejci**

Room: A.152

16:00 - 16:30 Emergent Hysteretic Behavior in Systems of Interconnected Relays

Gary Friedman, Drexel University, USA

16:30 - 17:00 Hysteresis in congested networks

Alexander Vladimirov, Institute for information transmission problems, Russia

17:00 - 17:30 Compensation of parameter-dependent complex hysteretic actuator nonlinearities in smart material systems

Klaus Kuhnen, Saarland University, Laboratory of Process Automation (LPA), Germany

17:30 - 18:00 A thermodynamically consistent temperature-dependent Preisach hysteresis model

Pavel Krejci, WIAS Berlin, Germany

SS4: Global and Exponential Attractors for Dissipative Dynamical Systems

Organized by **Maurizio Grasselli**

Room: P.RC1

16:00 - 16:30 Synchronization of random attractors for a stochastic reaction-diffusion system on a thin two-layer domain

Tomas Caraballo, Universidad de Sevilla, Spain

16:30 - 17:00 Global Attractors for a Klein-Gordon-Schrödinger Type System

Nikolaos M. Stavrakakis, National Technical university Athens, Greece

17:00 - 17:30 Dissipative waterwaves equations

Olivier Goubet, LAMFA UMR 6140 CNRS-Univ. de Picardie, France

17:30 - 18:00 Large time behavior of solutions to a dissipative boussinesq system

Abdelghafour Atlas, Université Picardie Jules Verne, France

SS5: Nonlinear Evolution Equations and Related Topics

Organized by **Mitsuharu OTANI**

Room: P.309

16:00 - 16:30 Exponential attractors for a quasilinear parabolic equation

Kei Matsuura, Waseda University, Japan

16:30 - 17:00 Attractors for the complex Ginzburg-Landau equation

Tomomi Yokota, Science University of Tokyo, Japan

17:00 - 17:30 Dynamics of partially damped wave equations

Romain Joly, Université Paris-Sud (Orsay), France

SS8: Biomathematics and cancer modelling

Organized by **Didier Bresch, Emmanuel Grenier, Benjamin Ribba**

Room: A.153

16:00 - 16:30 An age-cyclin structured cell population model with proliferation and quiescence

Fadia S. Bekkal brikci, Institut de Recherche en Informatique et Automatique, France

16:30 - 17:00 A multiscale mathematical model of 5-fluorouracil activity on metastatic colorectal cancer

Justine Bodin, Service de Pharmacologie Clinique - Université Lyon 1, France

17:00 - 17:30 Continuum Models for Cell Movement in Network Tissues

Arnaud Chauviere, Dipartimento Matematica, Politecnico di Torino, Italy

17:30 - 18:00 The Keller-Segel system for chemotaxis: existence and long time behavior of solutions

Lucilla Corrias, Université d'Evry Val d'Essonne, France

18:00 - 18:30 Cell response to a shear flow in a microchannel

Cecile Couzon, Laboratoire de Spectrometrie Physique, France

SS11: Nonautonomous Dynamical Systems

Organized by **Russell Johnson, Rafael Obaya**

Room: A.157

16:00 - 16:30 Reduction principle in the theory of stability of differential equations

Andrejs Reinfelds, Institute of Mathematics, Latvia

16:30 - 17:00 A dynamical approach to p -Laplace equations

Matteo Franca, Università Politecnica delle Marche, Italy

17:00 - 17:30 Inverse problem for the Sturm-Liouville operator

Luca Zampogni, Università di Firenze, Italy

17:30 - 18:00 Global Attractors of Nonautonomous Difference Equations

David Cheban, State University of Moldova, Moldova

SS12: New trends in electromagnetism and micromagnetism

Organized by **Alouges Francois, Frank Jochmann, Hong Ming Yin**

Room: P Amphi II

16:00 - 16:30 Controllability for ferromagnetism systems: the nano wires

Stéphane Labbé, Laboratoire de Mathématique, Université Paris 11, France

16:30 - 17:00 The equations of ferromagnetism in domains with spacers

Kévin Santugini repiquet, UNIGE, Switzerland

17:00 - 17:30 Quasi-stationary limit for Maxwell-Landau-Lifshitz system in inhomogeneous media

Jean Starynkevitch, Mathématiques Appliquées de Bordeaux, France

17:30 - 18:00 Asymptotics from Maxwell-Bloch equations to Schrödinger-Boltzmann equations

Dumas Eric, Université Grenoble 1, France

SS13: Shapes and Free BoundariesOrganized by **Michel Pierre, Pierre Cardaliaguet****Room: A.151**

- 16:00 - 16:30 Constant width bodies in dimension 3
Edouard Oudet, University of Savoie, France
- 16:30 - 17:00 Some regularity results in a shape optimization problem with perimeter
Nicolas Landais, ENS CACHAN antenne de Bretagne, France
- 17:00 - 17:30 Rearrangement inequalities and applications to isoperimetric problems for eigenvalues
Emmanuel Russ, Université Paul Cézanne, France

SS14: Hamiltonian systemsOrganized by **Massimiliano Berti, Luigi Chierchia, Amadeu Delshams****Room: P.108**

- 16:00 - 16:30 Detecting global instability in Hamiltonian systems by means of geometrical methods
Amadeu Delshams, Universitat Politecnica de Catalunya, Spain
- 16:30 - 17:00 Scattering maps of a normally hyperbolic invariant manifold: geometric properties and examples
Tere M. Seara, Universitat Politecnica de catalunya, Spain
- 17:00 - 17:30 Diffusion with optimal time in the large gap problem
Marian Gidea, Northeastern Illinois University, USA
- 17:30 - 18:00 On the total disconnectedness of the quotient Aubry set
Alfonso Sorrentino, Princeton University, USA
- 18:00 - 18:30 Entropy penalized weak KAM theory
Enrico Valdinoci, Universita' di Roma Tor Vergata, Italy

SS19: Qualitative Properties of Evolution EquationsOrganized by **Jong-Sheng Guo, Mokhtar Kirane, Arnaud Rougirel****Room: P Amphi I**

- 16:00 - 16:30 Convergence in some Degenerate Parabolic Equations with Delay
Robert Laister, University of the West of England (UWE), England
- 16:30 - 17:00 Asymptotic behavior of linear parabolic problems with the Dirichlet and Neumann conditions imposed on varying subsets
Carmen Calvo jurado, Universidad de Extremadura, Spain
- 17:00 - 17:30 Reaction-diffusion on network-like domains
Maria Gokiel, ICM Warsaw University, Poland
- 17:30 - 18:00 Large time behaviour of solutions of a reaction - diffusion equations under dynamical boundary conditions
Joachim von Below, Université du Littoral Côte d'Opale, France, France

SS20: Nonlinear Dispersive WavesOrganized by **J. Bona, T. Colin, M. Colin, D. Lannes****Room: P.109**

- 16:00 - 16:30 Time decay of solution for the KdV equation with multiplicative time-dependent noise
Yoshio Tsutsumi, Department of Mathematics, Kyoto University, Japan
- 16:30 - 17:00 The Korteweg-de Vries equation in a quarter plane and a bounded domain
Shu-ming Sun, Virginia Polytechnic Institute and State University, USA
- 17:00 - 17:30 Korteweg-de Vries-Type Equations and their Properties Related to the Fractional Airy Transform
Vladimir V. Varlamov, University of Texas - Pan American, USA
- 17:30 - 18:00 On The Local Well-Posedness for Some Systems of Coupled KdV Equations
Borys Alvarez-samaniego, MAB-Université Bordeaux 1, CNRS UMR 5466, France
- 18:00 - 18:30 Models for crossing laser beams
Thierry Colin, Université Bordeaux 1, France

SS23: New Developments in Nonlinear Partial Differential Equations and Control Theory

Organized by **Irena Lasiecka, Grozdna Todorova**

Room: Amphi J

- 16:00 - 16:30 Stabilizing Steady State Solutions of the 3D Navier-Stokes Equations and Other Dissipative Models
Edriss S. Titi, University of California - Irvine, and Weizmann Institute of Science, Israel
- 16:30 - 17:00 Global attractor for nonlinear wave equations with some nonlinear dissipations in exterior domains
Mitsuhiro Nakao, Kyushu University, Japan
- 17:00 - 17:30 Long time behavior of solutions to nonlinear strongly damped wave equations
Varga Kalantarov, Koc University, Istanbul, Turkey
- 17:30 - 18:00 Long-time behaviour of a coupled wave/plate PDE model
Francesca Bucci, Università degli Studi di Firenze, Italy
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SS24: Optimization and Optimal Control with Applications

Organized by **K.L. Teo, L. Caccetta, C.C. Lim**

Room: P.122

- 16:00 - 16:30 A Global Computational Approach to Impulsive Optimal Control Problems
Kok-lay Teo, Curtin University of Technology, Australia
- 16:30 - 17:00 Optimal Control of Oscillatory Systems by Iterative Dynamic Programming
Rein Luus, University of Toronto, Canada
- 17:00 - 17:30 Optimization methods applied to bang-bang and singular control problems
Helmut Maurer, Universität Münster, Germany
- 17:30 - 18:00 Optimality and Controllability of Complex Systems with Distributed Parameters
David Y. Gao, Virginia Tech, USA
-

SS26: Nonlinear Parabolic and Elliptic PDEs and Applications

Organized by **Ratnasingham Shivaji, Peter Takac**

Room: P Amphi IV

- 16:00 - 16:30 On the p-laplacian on \mathbb{R}^N
Jean-pierre Gossez, Université Libre de Bruxelles, Belgium
- 16:30 - 17:00 Ground-state Positivity, Negativity, and Compactness for a Schrödinger Operator in \mathbb{R}^N
Bénédicte Alziary, Université de Toulouse 1, France
- 17:00 - 17:30 Abstract concentration compactness and some applications
Ian Schindler, Université de Toulouse 1, France
- 17:30 - 18:00 Concentration compactness in mountain pass problems and other applications
Kyryl Tintarev, Uppsala University, Sweden
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SS29: Dynamics of forced oscillators

Organized by **Rafael Ortega**

Room: P.301

- 16:00 - 16:30 Interaction of normal modes and local bifurcation
Massimo Tarallo, Università degli Studi di Milano, Italy
- 16:30 - 17:00 Fucik Spectrum for nonautonomous periodic equations
Juan Campos, Universidad de Granada, Spain
- 17:00 - 17:30 The Dynamics of Impact Oscillators
Dingbian Qian, Suzhou University, Peoples Rep of China
- 17:30 - 18:00 Invariant curves via the differentiability of the flow of a control system
Alessandro Margheri, Centro de Matemática e Aplicações Fundamentais, Lisboa, Portugal
-

SS31: Convex/Nonconvex Dynamical Systems and Computational Mechanics with Applications in Physics and Engineering

Organized by **Zhaosheng Feng, Claire David, David Y. Gao**

Room: P.121

- 16:00 - 16:30 New Way to Understand Chaos: Canonical Duality Approach
David Y. Gao, Virginia Tech, USA
- 16:30 - 17:00 Axisymmetric Ivantsov type traveling waves in generalized 3-D Mullins-Sekerka equation
Jianzhong Su, The University of Texas at Arlington, USA
- 17:00 - 17:30 A Minimax Result with Applications to Adhesive Contact Problems
Dumitru Motreanu, University of Perpignan, France
- 17:30 - 18:00 Bifurcation and Synchronization of A Synaptically Coupled FHN Neurons Model with Time Delay
Qishao Lu, Beijing University of Aeronautics and Astronautics, Peoples Rep of China

SS32: Magnetohydrodynamics in Astrophysics and Geophysics: advances in dynamo theory.

Organized by **Emmanuel Dormy, Manuel Nunez**

Room: A.150

- 16:00 - 16:30 Force-free magnetic fields in the solar corona
Jean-jacques Aly, CEA Saclay, France
- 16:30 - 17:00 Magnetohydrodynamic evolution of solar coronal magnetic field
Tahar Amari, CNRS. Ecole Polytechnique, France
- 17:00 - 17:30 The Magnetorotational Instability in Nature and in the Laboratory
Steven Balbus, Ecole Normale Supérieure, France
- 17:30 - 18:00 Saturation of the Magnetorotational Instability
Edgar Knobloch, University of California at Berkeley, USA

SS33: Nonlinear Elliptic and Parabolic Problems

Organized by **Filippo Gazzola, Hans-Christoph Grunau**

Room: A Amphi 501

- 16:00 - 16:30 Triple junctions in geometric evolution equations: Analysis and computations
Harald Garcke, University Regensburg, Germany
- 16:30 - 17:00 On weakly harmonic maps from Finsler to Riemannian manifolds
Heiko von der Mosel, RWTH Aachen, Germany
- 17:00 - 17:30 The uniformization method for quasilinear elliptic equations
Friedrich Sauvigny, Brandenburgische Technische Universität Cottbus, Germany
- 17:30 - 18:00 On surfaces with prescribed mean curvature and partially free boundaries
Frank Müller, Brandenburgische Technische Universität Cottbus, Germany

**SS38: Nonlinear Analysis, Trends and Applications,
Special Session Celebrating the Sixtieth Birthday of J.R.L. Webb**

Organized by **Messoud Efendiev, Gennaro Infante, K.Q. Lan**

Room: P.310

- 16:00 - 16:30 A class of maps related to the semilinear spectrum and its applications
Wenying Feng, Trent University, Canada
- 16:30 - 17:00 Existence results for differential equations on unbounded domains
Daniel Franco, Universidad Nacional de Educacion a Distancia, Spain
- 17:00 - 17:30 Switching in a nematic liquid crystal device
Michael Grinfeld, University of Strathclyde, Scotland
- 17:30 - 18:00 Iterative Solutions for Zero of Accretive Operators
Genaro Lopez acedo, University of Seville, Spain

SS44: Differential equations, dynamical systems and related applications

Organized by **Chao-Nien Chen, Yung-Sze Choi**

Room: P.06

16:00 - 16:30 Nonexistence of eventually positive solutions of quasilinear elliptic systems

Hiroyuki Usami, Hiroshima University, Japan

16:30 - 17:00 Note on the embedding properties for Weighted Sobolev spaces in unbounded domains

Hirokazu Ohya, Waseda University, Japan

17:00 - 17:30 Singular deformation of domains and solution structure of elliptic system

Shuichi Jimbo, Hokkaido University, Japan

SS45: Nonlinear water waves: phenomena and modelling

Organized by **Annalisa Calini, Roberto Camassa**

Room: P.314

16:00 - 16:30 The formation of rogue waves in NLS models: persistence of homoclinic orbits

Annalisa M. Calini, College of Charleston, USA

16:30 - 17:00 Large internal waves in stratified fluids

Roberto Camassa, University of North Carolina, USA

17:00 - 17:30 The Zakharov- Kuznetsov equation as a model for Rossby Waves

Gustavo Cruz-pacheco, National University of Mexico, Mexico

17:30 - 18:00 An internal splash: Levitation of Falling Spheres in Stratified Fluids

Richard M. McLaughlin, University of North Carolina, USA

SS47: Applications of Dynamical Systems: Celestial Mechanics and Beyond

Organized by **Marian Gidea, Josep Masdemont**

Room: A.161

16:00 - 16:30 Outer Solar System on the Edge of Chaos

Wayne B. Hayes, Computer Science, University of California, Irvine, USA

Tuesday, June 27, 2006

SS1: Mathematical Aspects of Wave Propagation

Organized by **Ivan Victorovich Andronov, Boris Belinskiy, Anjan Biswas, Peter Caithamer**

Room: P Amphi VI

09:00 - 09:30 Modeling light trapping in nonlinear periodic structures

Alejandro B. Aceves, The University of New Mexico, USA

09:30 - 10:00 Convectons

Edgar Knobloch, University of California at Berkeley, USA

SS8: Biomathematics and cancer modelling

Organized by **Didier Bresch, Emmanuel Grenier, Benjamin Ribba**

Room: A.151

08:00 - 08:30 Long period oscillations in chronic myelogenous leukemia

Fabien Crauste, University of Pau, France

08:30 - 09:00 A Topology Game for Tumoral anti-angiogenesis

Abderrahmane Habbal, INRIA and University of Nice, France

09:00 - 09:30 Blow-up estimates for some chemotaxis model

Pierre-emmanuel Jabin, Lab. Dieudonné, Univ. de Nice, France

09:30 - 10:00 Effect of Internal Viscosity on Brownian Dynamics of DNA Molecules in Shear Flow

Roderick Melnik, WLU, Waterloo, Canada

SS9: Formation and Dynamics of Patterns in Evolution EquationsOrganized by **Amy Novick-Cohen, Thomas Wanner****Room: A.150**

- 08:00 - 08:30 Nucleation in the one-dimensional Cahn-Hilliard model.
Bernhard Gawron, RWTH Aachen, Germany
- 08:30 - 09:00 On the asymptotic behaviour of nonlocal phase separation processes
Jens A. Griepentrog, Weierstrass Institute for Applied Analysis and Stochastics, Germany
- 09:00 - 09:30 Spinodal decomposition on general domains
Evelyn Sander, George Mason University, USA
- 09:30 - 10:00 Closed orbits on non-compact hypersurfaces
Robert C. Vandervorst, Vrije University Amsterdam, Netherlands

SS14: Hamiltonian systemsOrganized by **Massimiliano Berti, Luigi Chierchia, Amadeu Delshams****Room: P.108**

- 08:00 - 08:30 Nonlinear oscillations in Hamiltonian PDEs
Massimiliano Berti, Università Federico II di Napoli, Italy
- 08:30 - 09:00 Periodic solutions of Birkhoff-Lewis type for the nonlinear wave equation
Luca Biasco, Università Roma Tre, Italy
- 09:00 - 09:30 Collisionless symmetric minimizers for the n -body Lagrangian functional
Davide L. Ferrario, University of Milano-Bicocca, Italy
- 09:30 - 10:00 periodic solutions for regularizing NLS equations in d dimensions
Michela Procesi, università di Roma 3, Italy

SS17: Reaction-Diffusion Systems and the Dynamics of PatternsOrganized by **Danielle Hilhorst, Hiroshi Matano****Room: A Amphi 501**

- 08:00 - 08:30 Spatially segregating patterns arising in competition-diffusion systems
Masayasu Mimura, Meiji University, Japan
- 08:30 - 09:00 Discrete Precipitation in a Reaction-Diffusion System
Rein Van der hout, University of Leiden (NL), Netherlands
- 09:00 - 09:30 Simulation analysis of Liesegang-like precipitation patterns
Daishin Ueyama, Hiroshima University, Japan
- 09:30 - 10:00 On the vanishing viscosity convergence of travelling-front speeds for reaction-diffusion equations with non-convex flux
Elaine Crooks, Oxford University, England

SS18: Concepts, architecture and dynamics of non-standard computationsOrganized by **Ruedi Stoop****Room: P.05**

- 08:00 - 08:30 Message passing in loopy networks: From fixed points to vortex excitations
Thomas Ott, Institute of Neuroinformatics ETH Zurich, Switzerland
- 08:30 - 09:00 Determining directionality of weak coupling between neuronal oscillators from time series: Phase dynamics modeling versus partial directed coherence
Dmitry Smirnov, Russian Academy of Sciences, Russia
- 09:00 - 09:30 Loopy belief propagation: Introduction, benefits, and pitfalls on Ising-like systems
Norbert Stoop, Department of Physics, ETH Zuerich, Switzerland
- 09:30 - 10:00 Neocortex minimizes its total connection length
Ruedi Stoop, Insitute of Neuroinformatics ETHZ/UNIZH, Switzerland

SS19: Qualitative Properties of Evolution EquationsOrganized by **Jong-Shenq Guo, Mokhtar Kirane, Arnaud Rougirel**

Room: P.RC1

- 08:00 - 08:30 Asymptotic behaviour for 1D radiative and reactive flows.
Ducomet Bernard, CEA, France
- 08:30 - 09:00 On attractor dimension estimate for 2D shear flow of micropolar fluid with free boundary
Mahdi Boukrouche, Laboratory of Mathematics, University of Saint-Etienne, France
- 09:00 - 09:30 Attractors for the 3D Navier-Stokes system
José Valero, Universidad Miguel Hernández, Spain
- 09:30 - 10:00 Null controllability for degenerate parabolic equations and Carleman estimates
Fatiha Alabau-boussouira, Université Paul-Verlaine Metz, France

SS24: Optimization and Optimal Control with ApplicationsOrganized by **K.L. Teo, L. Caccetta, C.C. Lim****Room: P.122**

- 08:00 - 08:30 Optimal Paths in Time Constrained Networks
Louis Caccetta, Curtin University of Technology, Australia
- 08:30 - 09:00 Hopf bifurcation and structural instability in an open economy with Keynesian rigidity
Edgardo D. Jovero, Universidad Complutense de Madrid, Spain
- 09:00 - 09:30 Applications of the fourth order Cumulant to Direction Finding with a Circular Array
Julian Sorensen, Defence Science and Technology Organisation, Australia
- 09:30 - 10:00 Knot-Optimizing Spline Networks (KOSNETS) for Nonparametric Regression
Song Wang, The University of Western Australia, Australia

SS38: Nonlinear Analysis, Trends and Applications,**Special Session Celebrating the Sixtieth Birthday of J.R.L. Webb**Organized by **Messoud Efendiev, Gennaro Infante, K.Q. Lan****Room: P.310**

- 08:00 - 08:30 The spectrum of the periodic p -Laplacian
Bryan Rynne, Heriot-Watt University, Scotland
- 08:30 - 09:00 Recent results in nonlinear spectral theory
Alfonso Vignoli, Dipartimento di Matematica Università di Roma tor Vergata, Italy
- 09:00 - 09:30 Projection Algorithms for Solving the Multiple-Set Split Feasibility Problem
Hong-kun Xu, University of KwaZulu-Natal, South Africa

SS41: The Navier-Stokes equations and related problemsOrganized by **Eduard Feireisl****Room: P.RC3**

- 08:00 - 08:30 Regularity for the Navier–Stokes Equations with Slip Boundary Condition
Hyeong-ohk Bae, Ajou University, Korea
- 08:30 - 09:00 Stability problems for a spherical model of gaseous star
Ducomet Bernard, CEA, France
- 09:00 - 09:30 Navier’s Slip and Evolutionary N-S equations with temperature dependent viscosity
Miroslav Bulicek, Mathematical Institute of Charles University, Czech Rep.
- 09:30 - 10:00 Numerical investigation of cavitation in multi-D compressible flow
Kris Jenssen, Dept. Math. Penn State University, USA

SS42: Modeling and analysis of predators-preys systems : stability, bifurcation, chaos and complexityOrganized by **Aziz-Alaoui M.A., Bai-Lian Li****Room: P Amphi II**

- 08:00 - 08:30 Stability, bifurcation, chaos and complexity of predator-prey systems: an overview
Bai-lian L. Li, University of California at Riverside, USA

- 08:30 - 09:00 Architectural Organization of Food Webs
Ernesto Estrada, University of Santiago de Compostela, Spain
- 09:00 - 09:30 Allee Effect and Bistability in a Spatially Heterogeneous Predator-Prey Model
Junping Shi, College of William and Mary, USA
- 09:30 - 10:00 Statio-temporel dynamics of a modified michaelis-menten model
Baba issa Camara, Le Havre university, France

SS43: Non-linear Dynamics and ApplicationsOrganied by **Wenzhang Huang, Weishi Liu****Room: P.301**

- 08:00 - 08:30 Dynamics of two-strain influenza with isolation and partial immunity
Zhilan Feng, Purdue University, USA
- 08:30 - 09:00 Geometric Singular Perturbation Analysis of a Model for Infectious Diseases
Michael Li, University of Alberta, Canada
- 09:00 - 09:30 Global attractivity for scalar delayed differential equations
Jose J. Oliveira, Universidade do Minho, Portugal
- 09:30 - 10:00 Multiple solutions for Poisson-Nernst-Planck systems with permanent charges
Weishi Liu, University of Kansas, USA

CS2: ODEs and Applications

Chair

Room: P.011

- 08:00 - 08:30 Homoclinic Solutions to the damped Duffing's equation
Fahir T. Akyildiz, Ondokuz Mayıs University, Turkey
- 08:30 - 09:00 A Necessary and Sufficient Condition for the Existence of Periodic Solutions of Linear Impulsive Differential Systems with Distributed Delay
Jehad O. Alzabut, Cankaya University, Turkey
- 09:00 - 09:30 Asynchronous methods for nonlinear Differential Algebraic Equations
Malika M. El kyal, National school of applied Sciences (ENSA), Morocco
- 09:30 - 10:00 New discrete analogue of neural networks with nonlinear amplification function and it's periodic dynamic analysis
Xilin Fu, Shandong Normal University, Peoples Rep of China

CS3: Delay and Difference Equations

Chair

Room: P.314

- 08:00 - 08:30 Reduction principle in the theory of stability of difference equations
Andrejs Reinfelds, Institute of Mathematics, Latvia
- 08:30 - 09:00 Geometry of the Stability Regions of a Closed Loop Dynamics in Time Delay vs. PID Gains
Rifat Sipahi, Université de Technologie de Compiègne, France

CS4: Modelling and Math BiologyChair **W. Feng****Room: P.015**

- 08:00 - 08:30 Dynamics of a 3-species ecological system with delay effects
Wei Feng, UNCW, USA
- 08:30 - 09:00 Modelling and simulating the aggregative behavior in phytoplankton cells
Nadjia El saadi, The National Institute of Planning and Statistics INPS, Algiers, Algeria
- 09:00 - 09:30 Some features of the steady state of a SIR model with age structure and immigration.
Andrea M. Franceschetti, University of Trento, Italy
- 09:30 - 10:00 Model of neurotransmitters transport dynamics in axon terminal of presynaptic neuron
Piotr Kalita, Jagiellonian University, Poland

CS6: Control and OptimizationChair **Room: P.06**

- 08:00 - 08:30 Remarks and Results on Steering Solutions of Some Functional Differential Equations to a Desired State
Hassane Bouzahir, Ibn Zohr University of Agadir, ENSA, Morocco
- 08:30 - 09:00 Use of differential equations for mathematical description of water-supply network pumps drive system-simulation tests
Jacek Bartman, University of Rzeszow, Poland
- 09:00 - 09:30 On null controllability with vanishing energy
Ovidiu Carja, University of Iasi, Romania
- 09:30 - 10:00 Solve the Vehicle Routing Problem with Time Windows via a Genetic Algorithm
Yaw Chang, UNC-Wilmington, USA

CS8: Abstract dynamical systemsChair **Room: P.109**

- 08:00 - 08:30 Fixed Points and Complete Lattices
Paula Kemp, Missouri State University, USA
- 08:30 - 09:00 Nonlinear Electron and Hole Dynamics in Semiconductor Superlattices
Ghader Darbandi, urmia university, Iran
- 09:00 - 09:30 The positive entropy kernel for some families of tree maps.
David Juher, Universitat de Girona, Spain
- 09:30 - 10:00 A class of discrete spectral systems using Hilbert spaces
Khiredine A. Krim, University of Bejaia, Algeria

CS9: PDEs and ApplicationsChair **Room: P.121**

- 08:00 - 08:30 Blowup in a shadow system
Fang Li, University of Minnesota, USA
- 08:30 - 09:00 Limit ODE and invariant manifolds in a nonlinear wave equation
Marta Pellicer, Universitat de Girona, Spain
- 09:00 - 09:30 Determination of Thermophysical properties in 2D Nonstationay Heat Problems
Raid R. Al-momani, Qatar University, Qatar
- 09:30 - 10:00 Exact Solution of an Axisymmetric Deformation of a Double-Layered Elastic Cylinder in AxialCompression
Belkacem Kebli, National Polytechnic Institute of Algiers, Algeria

CS9: PDEs and ApplicationsChair **Room: P.RC2b**

- 08:00 - 08:30 On some stochastic fractional integro-differential equations
Mahmoud Mohammed M. El-borai, University Alexandria Egypt, Egypt
- 08:30 - 09:00 Mathematical analysis of the peridynamic model in non-local elasticity theory
Etienne Emmrich, TU Berlin, Institut für Mathematik, Germany
- 09:00 - 09:30 Positive solutions of the fully nonlinear cooperative system of parabolic equations with Dirichet boundary conditions.
Juraj Foldes, University of Minnesota, USA
- 09:30 - 10:00 A survey of mathematical models for fixed bed adsorption of gases
Marguerite Gisclon, Université de Savoie, France

CS10: Bifurcation and chaotic dynamicsChair **Room: A.157**

- 08:00 - 08:30 Chaotic behavior in a hybrid dynamical system that arises from electronics

- Fatima El guezar**, INSA Toulouse & University Ibn Zohr of Agadir, Morocco
 08:30 - 09:00 Bifurcation Analysis of Predator-Prey Systems with Constant Rate Harvesting Using Non-Standard Discretization
Hussian Erjaee, Qatar university, Qatar
 09:00 - 09:30 When the stock market bubbles like a chaotic rossler system
James M. Haley, Point Park University, USA
 09:30 - 10:00 An other strange attractor from chen system
Nasr-eddine Hamri, University of Constantine, Algeria

10h00-10h30: **Break**

Plenary Sessions

Room: Amphi J

Chair

- 10h30-11h15 Title: Modelling Challenge of Reaction-Diffusion Equations to Far from Equilibrium Systems
 Speaker: **Masayasu Mimura**, Université Meiji, Japon
 10h15-12h00 Title: The delay equation approach to structured population models
 Speaker: **Odo Diekman**, Université d'Utrecht, Hollande

12h00-13h30: **Lunch**

SS1: Mathematical Aspects of Wave Propagation

Organied by **Ivan Victorovich Andronov, Boris Belinskiy, Anjan Biswas, Peter Caithamer**

Room: P Amphi VI

- 13:30 - 14:00 Solvable model for Helmholtz resonator
Boris S. Pavlov, The University of Auckland, New Zealand
 14:00 - 14:30 Trapped modes in steady flow problems
Dario Pierotti, Politecnico di Milano, Italy
 14:30 - 15:00 Form methods for damped wave equations
Delio Mugnolo, University of Ulm, Germany, University of Bari, Italy

SS2: Semigroups, Evolution Equations, and Boundary Conditions

Organied by **G. Goldstein, J. Goldstein**

Room: A.152

- 13:30 - 14:00 Evans Functions, Jost Functions, and Fredholm Determinants
Yuri Latushkin, University of Missouri-Columbia, USA
 14:00 - 14:30 Some classes of higher order differential operators on hilbert spaces
Silvia Romanelli, Dipartimento di Matematica, Università degli Studi di Bari, Italy
 14:30 - 15:00 Quadratic optimal control problems for degenerate differential systems
Angelo Favini, Department of Mathematics, University of Bologna, Italy
 15:00 - 15:30 $C^{(n)}$ -almost periodic solutions of some evolution equations
Gaston N'guerekata, Morgan State university, USA

SS4: Global and Exponential Attractors for Dissipative Dynamical Systems

Organied by **Maurizio Grasselli**

Room: P.RC1

- 13:30 - 14:00 Long time behavior of semilinear wave and plate equation with nonlinear dissipation and critical exponents on the boundary.
Irena Lasiecka, University of Virginia, USA

- 14:00 - 14:30 Attractors for a Cattaneo Model
Joerg Haerterich, Free University Berlin, Germany
- 14:30 - 15:00 Attractors for doubly nonlinear equations
Giulio Schimperna, University of Pavia, Italy
- 15:00 - 15:30 Generalized semiflows and global attractors for evolution systems without uniqueness
Antonio Segatti, University of Milano, Italy

SS6: Direct and Inverse Problems in Phase Field Systems and Related Subjects

Organized by **Davide Guidetti, Gianni Gilardi**

Room: P Amphi IV

- 13:30 - 14:00 A class of doubly nonlinear systems for phase transitions
Nobuyuki Kenmochi, Chiba University, Japan
- 14:00 - 14:30 Convergence to a stationary state for solutions of semilinear parabolic inverse problems
Davide Guidetti, Université di Bologna, Italy
- 14:30 - 15:00 Well-posedness results for a model of contact with adhesion
Giovanna Bonfanti, University of Brescia, Italy
- 15:00 - 15:30 Generators of Feller semigroups with coefficients depending on parameters
Silvia Romanelli, University of Bari, Italy

SS7: Differential inclusions

Organized by **Alain Pietrus**

Room: P.01

- 13:30 - 14:00 Differential inclusions governed by subdifferentials of primal lower nice functions
Sylvie Marcellin, Université Antilles-Guyane, Guadeloupe
- 14:00 - 14:30 Existence of Fixed Points in Epilipschitz Sets on Hilbert Spaces
Marc Quincampoix, laboratoire de Mathématiques, France
- 14:30 - 15:00 Gradient flows of non convex functionals: existence and long-time behaviour results
Riccarda Rossi, Dipartimento di Matematica - Università di Brescia, Italy
- 15:00 - 15:30 Multivalued exponential analysis and reachable sets of differential inclusions
Alberto Seeger, University of Avignon, France

SS8: Biomathematics and cancer modelling

Organized by **Didier Bresch, Emmanuel Grenier, Benjamin Ribba**

Room: A.153

- 13:30 - 14:00 Dynamic and control of cell population : age structured model
Philippe Michel, Ecole Normale Supérieure Ulm / Paris Dauphine, France
- 14:00 - 14:30 A simplified model of TCA cycle
Christine M. Nazaret, Université de Bordeaux 2, France
- 14:30 - 15:00 Contribution to the study of periodic chronic myelogenous leukemia
Laurent Pujo-menjouet, Institut Camille Jordan - Université Claude Bernard, France
- 15:00 - 15:30 Mathematical modelling of apoptosis
Nancie Reymond, ENS LYON CNRS UMPA, France

SS13: Shapes and Free Boundaries

Organized by **Michel Pierre, Pierre Cardaliaguet**

Room: A.157

- 13:30 - 14:00 What is the optimal shape of an axon?
Antoine Henrot, Institut Elie Cartan Nancy, France
- 14:00 - 14:30 Using the shape Hessian to recover the geometry of an inclusion
Marc Dambrine, Université de Technologie de Compiègne, France
- 14:30 - 15:00 On the existence of a complete non-planar free boundary graph
Daniela De Silva, Johns Hopkins University, USA

15:00 - 15:30 Instability of graphical strips and a positive answer to the Bernstein problem in the Heisenberg group H^1
Donatella Danielli, Purdue University, USA

SS14: Hamiltonian systems

Organized by **Massimiliano Berti, Luigi Chierchia, Amadeu Delshams**

Room: P.108

13:30 - 14:00 Dynamics near a homoclinic orbit to a saddle-center of Hamiltonian system
Oksana Koltsova, Nizhny Novgorod State University, Russia

14:00 - 14:30 Effect of Plasma Sputtering on Dust Grain Dynamics in Planetary Magnetospheres
James E. Howard, University of Colorado, USA

14:30 - 15:00 On the dynamics of a multiple pendulum. Non-integrability, topological properties.
Vladimir N. Salnikov, Moscow State Lomonosov University, Russia

15:00 - 15:30 On the stability of linear potential gyroscopic systems
Tatiana V. Salnikova, Moscow State Lomonosov University, Russia

SS17: Reaction-Diffusion Systems and the Dynamics of Patterns

Organized by **Danielle Hilhorst, Hiroshi Matano**

Room: A Amphi 501

13:30 - 14:00 Allen-Cahn and Cahn-Hilliard models for stress and electromigration induced surface diffusion with applications to epitaxial growth and void evolution
Harald Garcke, University Regensburg, Germany

14:00 - 14:30 Applications of the Cahn-Hilliard equation
Amy Novick-cohen, Technion-IIT, Haifa, Israel

14:30 - 15:00 Formation of singularities in the crystalline curvature flow
Piotr Rybka, Warsaw University and University of Paris XI, France

15:00 - 15:30 Energy estimates for electro-reaction-diffusion systems with partly fast kinetics
Annegret Glitzky, Weierstrass Institute for Applied Analysis and Stochastics, Germany

SS19: Qualitative Properties of Evolution Equations

Organized by **Jong-Shenq Guo, Mokhtar Kirane, Arnaud Rougirel**

Room: A.161

13:30 - 14:00 On the Fractal Hamilton-Jacobi-KPZ equations
Grzegorz Karch, Uniwersytet Wroclawski, Poland

14:00 - 14:30 Entropy Methods for spatial inhomogeneous coagulation-fragmentation models with diffusion
Klemens Fellner, University of Vienna, Austria

14:30 - 15:00 Nonlinear-diffusive logistic equations with spatial heterogeneity
Shingo Takeuchi, Kogakuin University, Japan

15:00 - 15:30 Solvability of some volterra type integral equations in Hilbert spaces
Onur alp Ilhan, Ministry of Education of Republic of Turkey, Turkey

SS21: Dynamical Systems and Control in Biology

Organized by **Bedr Eddine Ainseba, Odo Diekmann, Pierre Magal, Shigui Ruan**

Room: P.121

13:30 - 14:00 From molecules to cellular regulation: Mathematical pathway analysis
Markus A. Kirkilionis, University of Warwick, England

14:00 - 14:30 Dynamic analysis for a competitive periodic stage structured system
Mahiéddine Kouche, Université Bordeaux 2 (France), France

14:30 - 15:00 The effects of random dispersion in competing species models
Julián López-Gómez, Universidad Complutense de Madrid, Spain

15:00 - 15:30 A Model of Antibiotic Resistant Bacterial Epidemics in Hospitals
Pierre Magal, University of Le Havre, France

SS23: New Developments in Nonlinear Partial Differential Equations and Control TheoryOrganized by **Irena Lasiecka, Grozdna Todorova****Room: Amphi J**

- 13:30 - 14:00 Control of Elastic Systems with Restricted Nonlinearities
David L. Russell, Virginia Tech, USA
- 14:00 - 14:30 Solutions to the hyperbolic-parabolic system modeling fluid-structure interaction in blood flow
Suncica Canic, University of Houston, USA
- 14:30 - 15:00 Null and Approximate Controllability of Stochastic Semilinear Parabolic Equations
Xu Zhang, Academia Sinica, Peoples Rep of China
- 15:00 - 15:30 Stability of a nonlinear intrinsic shell model
Catherine G. Lebedzik, Wayne State University, USA

SS24: Optimization and Optimal Control with ApplicationsOrganized by **K.L. Teo, L. Caccetta, C.C. Lim****Room: P.122**

- 13:30 - 14:00 An Address Sequencer for Matrix Computing Machines
Adam Burdeniuk, The University of Adelaide, Australia
- 14:00 - 14:30 Second Order Nonlinear Impulsive Time-Variant Systems with Unbounded Perturbation and Optimal Control
Xiaoling Xiang, Department of Mathematics, Guizhou University, Peoples Rep of China
- 14:30 - 15:00 Controlling Nonlinear Evolution Equations into Stationary Solutions
Karsten Theissen, University of Muenster, Germany
- 15:00 - 15:30 Optimal control of Maxwell's system in Quasi-stationary electromagnetic field with the temperature effect
Wei Wei, Guizhou University, Peoples Rep of China

SS26: Nonlinear Parabolic and Elliptic PDEs and ApplicationsOrganized by **Ratnasingham Shivaji, Peter Takac****Room: P Amphi I**

- 13:30 - 14:00 An Improved Poincaré Inequality for the p -Laplacian
Pavel Drábek, University of West Bohemia, Czech Rep
- 14:00 - 14:30 A Variational Approach to the Fredholm Alternative for the p -Laplacian
Peter Takac, University of Rostock, Germany
- 14:30 - 15:00 Bifurcations in elliptic quasilinear problems
Petr Girg, KMA-FAV, Západočeská univerzita v Plzni, Czech Rep
- 15:00 - 15:30 Multiple positive solutions for a class of singular problems
Maya Chhetri, UNC Greensboro, USA

SS29: Dynamics of forced oscillatorsOrganized by **Rafael Ortega****Room: P.301**

- 13:30 - 14:00 Strange Non-chaotic Attractors in the oscillators dynamics
Carmen Nunez, University of Valladolid, Spain
- 14:00 - 14:30 On some forced oscillators at resonance
Denis Bonheure, Université catholique de Louvain, Belgium

SS31: Convex/Nonconvex Dynamical Systems and Computational Mechanics with Applications in Physics and EngineeringOrganized by **Zhaosheng Feng, Claire David, David Y. Gao****Room: P.109**

- 13:30 - 14:00 asymptotic behavior of the Burgers-Korteweg-de Vries equation
Zhaosheng Feng, University of Texas-Pan American, USA
- 14:00 - 14:30 On the accurate modeling of film flows down inclined planes
Christian Ruyer-qual, Université Pierre et Marie Curie (Paris 6), France
- 14:30 - 15:00 Second order optimality conditions in optimal control with applications to spaceflight mechanics
Emmanuel Trélat, Université Paris-Sud, France
- 15:00 - 15:30 Special Bäcklund transformations and nonlinear superpositions for nonintegrable ϕ^4 field model
Sen Yue Lou, Shanghai Jiao Tong University, Peoples Rep of China

SS32: Magnetohydrodynamics in Astrophysics and Geophysics: advances in dynamo theory

Organied by **Emmanuel Dormy, Manuel Nunez**

Room: A.150

- 14:00 - 14:30 Entropy satisfying approximate Riemann solvers for compressible MHD built via Suliciu relaxation
Francois Bouchut, CNRS & ENS Paris, France
- 14:30 - 15:00 A High-Order Godunov Scheme with Constrained Transport and AMR for Ideal MHD
Romain S. Teyssier, CEA Saclay, France
- 15:00 - 15:30 Magnetohydrodynamics in a finite cylinder
Laurette Tuckerman, LIMSI-CNRS, France

SS33: Nonlinear Elliptic and Parabolic Problems

Organied by **Filippo Gazzola, Hans-Christoph Grunau**

Room: P Amphi II

- 14:00 - 14:30 Nodal solutions of a semiclassical nonlinear Schrödinger equation
Thomas Bartsch, University of Giessen, Germany
- 14:30 - 15:00 A priori Bounds for Positive Solutions of Semilinear Elliptic Systems
Bernhard Ruf, Università di Milano, Italy
- 15:00 - 15:30 A-priori bounds for semilinear elliptic equations in Lipschitz domains
Wolfgang Reichel, Institut für Mathematik, RWTH-Aachen, Germany

SS37: Dynamical Systems of Multiple Time Scales

Organied by **Jianzhong Su**

Room: A.151

- 13:30 - 14:00 Ramping Through a Hopf Bifurcation: New Insights into the Memory Effect
Steven M. Baer, Arizona State University, USA
- 14:00 - 14:30 On maximum bifurcation delay in real planar singularly perturbed vector fields
Peter De maesschalck, Hasselt University, Belgium
- 14:30 - 15:00 Concentration of sample paths in stochastic slow-fast systems
Barbara Gentz, WIAS Berlin, Germany
- 15:00 - 15:30 Metastability and stochastic resonance in slow-fast systems with noise
Nils Berglund, Centre de Physique Théorique (CPT) CNRS, France

SS41: The Navier-Stokes equations and related problems

Organied by **Eduard Feireisl**

Room: P.RC3

- 13:30 - 14:00 L^p estimates of stokes and Oseen type problem arising from flow around a rotating body
Sarka Necasova, Academy of Sciences, Mathematical Institute, Czech Rep
- 14:00 - 14:30 Stability of a steady solution of a quasilinear parabolic system
Jiří Neustupa, Mathematical Institute of the Czech Academy of Sciences, Czech Rep
- 14:30 - 15:00 Singular limits in the full Navier-Stokes-Fourier system
Antonin Novotny, Université du Sud Toulon-Var, France
- 15:00 - 15:30 On the long time behaviour of solutions to the Navier-Stokes-Fourier system with a time dependent driving force

Hana Petzeltova, Mathematical Institute of the Czech Academy of Sciences, Czech Rep

SS42: Modeling and analysis of predators-preys systems : stability, bifurcation, chaos and complexity

Organied by **Aziz-Alaoui M.A., Bai-Lian Li**

Room: P.RC2a

- 13:30 - 14:00 Dynamics of Nonautonomous Delayed Predator-Prey Periodic Model
Nindjin Aka fulgence, Université de Cocody, Ivory Coast
- 14:00 - 14:30 Nonlinear delay equations with nonautonomous past
Genni Fragnelli, University of Siena, Italy
- 14:30 - 15:00 First integral of chaotic dynamical systems
Jean-marc Ginoux, Université du Sud Toulon Var, France
- 15:00 - 15:30 Periodic Orbits of Tritrophic Slow–Fast System and Double Homoclinic Bifurcations
Alexandre Vidal, Univ. Pierre et Marie Curie, Paris 6, France

SS45: Nonlinear water waves: phenomena and modelling

Organied by **Annalisa Calini, Roberto Camassa**

Room: P.314

- 13:30 - 14:00 Highly Nonlinear Soliton Gas in Shallow Water Waves
Alfred R. Osborne, Università di Torino, Italy
- 14:00 - 14:30 The formation of rogue waves in NLS models: modelling and phase singularities
Constance Schober, University of Central Florida, USA

SS47: Applications of Dynamical Systems: Celestial Mechanics and Beyond

Organied by **Marian Gidea, Josep Masdemont**

Room: P.302

- 13:30 - 14:00 A note on weak stability boundaries
Gerard Gomez, Universitat de Barcelona, Spain
- 14:00 - 14:30 The Generalized Alignment Index (GALI) method: Detecting order and chaos in conservative dynamical systems
Charalampos Skokos, Observatoire de Paris, France
- 14:30 - 15:00 Transport in the solar system - towards robust computations
Bianca Thiere, Universität Paderborn, Germany
- 15:00 - 15:30 Heteroclinic Bifurcations and Chaotic Transport in the Two-Harmonic Standard Map
Renato C. Calleja, University of Texas at Austin, USA

15h30-1600: **Break**

SS1: Mathematical Aspects of Wave Propagation

Organied by **Ivan Victorovich Andronov, Boris Belinskiy, Anjan Biswas, Peter Caithamer**

Room: P Amphi VI

- 16:00 - 16:30 Inverse problems involving smart obstacles
Francesco Zirilli, Università di Roma "La Sapienza" Roma, Italy
- 16:30 - 17:00 Boundary controllability of Maxwell's equations with heterogeneous medium and nonzero conductivity inside a general domain
Slava Krigman, MIT/Lincoln Laboratory, USA
- 17:00 - 17:30 Optimal design of an elastic string with respect to its optical length
Boris P. Belinskiy, University of Tennessee at Chattanooga, USA
- 17:30 - 18:00 Wave Propagation and Energy Transformation in Checkerboard Spatiotemporal Microstructures
Konstantin A. Lurie, Worcester Polytechnic Institute, USA

SS2: Semigroups, Evolution Equations, and Boundary ConditionsOrganized by **G. Goldstein, J. Goldstein****Room: A.152**

- 16:00 - 16:30 Global Weak Solutions to a Generalized Hyperelastic-Rod Wave Equation
Giuseppe M. Coclite, University of Bari, Italy
- 16:30 - 17:00 Wave equation with second.order non-standard dynamical boundary conditions.
Enzo Vitillaro, Università di Perugia, Italy
- 17:00 - 17:30 Well-posedness and uniform decay rates at the L2-level for the Schrodinger equation with non-linear boundary dissipation
Roberto Triggiani, University of Virginia, USA
- 17:30 - 18:00 Long-period limit of nonlinear dispersiver waves: the BBM-equation
Hongqiu Chen, University of Memphis, USA

SS4: Global and Exponential Attractors for Dissipative Dynamical SystemsOrganized by **Maurizio Grasselli****Room: PRC1**

- 16:00 - 16:30 Trajectory and global attractors for evolution equations with memory
Vittorino Pata, Politecnico di Milano, Italy
- 16:30 - 17:00 Singular limit of differential systems with memory
Monica Conti, Politecnico di Milano, Italy
- 17:00 - 17:30 Navier-Stokes limit of Jeffreys type flows
Stefania Gatti, Dipartimento di Matematica-Università di Ferrara, Italy
- 17:30 - 18:00 Exponential attractor for ODEs with infinite delay
Dalibor Prazak, Charles University, Prague, Czech Rep

SS6: Direct and Inverse Problems in Phase Field Systems and Related SubjectsOrganized by **Davide Guidetti, Gianni Gilardi****Room: Amphi IV**

- 16:00 - 16:30 On a model for phase transitions with entropy equation and thermal memory conductivity
Pierluigi Colli, University of Pavia, Italy
- 16:30 - 17:00 Convergence of a singular phase field system with memory to phase relaxation
Gianni Gilardi, University of Pavia, Italy
- 17:00 - 17:30 On a degenerate problem in porous media
Gabriela Marinoschi, Institute of Mathematical Statistics and Applied Mathematics, Romania
- 17:30 - 18:00 Solvability for phase field systems of Penrose-Fife type associated with nonlinear diffusions
Ken Shirakawa, Kobe University, Japan

SS7: Differential inclusionsOrganized by **Alain Pietrus****Room: P.01**

- 16:00 - 16:30 Solutions set of boundary value problem for differential inclusions
Lionel Thibault, Université Montpellier II, France

SS8: Biomathematics and cancer modellingOrganized by **Didier Bresch, Emmanuel Grenier, Benjamin Ribba****Room: A.153**

- 16:00 - 16:30 Computational modeling of avascular tumor growth
Olivier Saut, Université Bordeaux 1, France

SS13: Shapes and Free BoundariesOrganized by **Michel Pierre, Pierre Cardaliaguet**

Room: A.157

- 16:00 - 16:30 Geometric viscosity solutions and minimizing movements for Bernoulli's problem
Olivier Ley, LMPT, Université de Tours, France
- 16:30 - 17:00 On a singular free boundary problem from image processing
Anna Lisa Amadori, Università di Napoli "Parthenope", Italy
- 17:00 - 17:30 Uniqueness and numerical analysis for Hamilton-Jacobi equations with discontinuities
Klaus Deckelnick, Institut fuer Analysis und Numerik, Universitaet Magdeburg, Germany

SS17: Reaction-Diffusion Systems and the Dynamics of PatternsOrganized by **Danielle Hilhorst, Hiroshi Matano****Room: A Amphi 501**

- 16:00 - 16:30 Travelling waves for a reaction-diffusion equation with periodic nonlinearity
Toshiko Ogiwara, Josai University, Japan
- 16:30 - 17:00 Mathematical analysis of a model describing tissue degradation by bacteria
Matthias Röger, Eindhoven University of Technology, The Netherlands
- 17:00 - 17:30 Speed of front propagation for a competition-diffusion system with variable coefficients
Ken-ichi Nakamura, University of Electro-Communications, Japan
- 17:30 - 18:00 On the Daniel's and Elias' solutions of the Morisita-Shigesada et al. system
Robert Kersner, University of Pecs, Hungary

SS19: Qualitative Properties of Evolution EquationsOrganized by **Jong-Shenq Guo, Mokhtar Kirane, Arnaud Rougirel****Room: A.161**

- 16:00 - 16:30 Traveling waves in the Allen-Cahn equations
Masaharu Taniguchi, Tokyo Institute of Technology, Japan
- 16:30 - 17:00 Solitary and Self-similar Solutions of Two-component System of Nonlinear Schrödinger Equations
Tai-chia Lin, Department of Mathematics, Taiwan
- 17:00 - 17:30 Kolmogorov equations and option pricing
Andrea Pascucci, University of Bologna, Italy
- 17:30 - 18:00 Boundary Stabilization of the damped wave equation with Cauchy-Ventcel dynamic boundary conditions
Marcelo M. Cavalcanti, State University of Maringa, Brazil

SS21: Dynamical Systems and Control in BiologyOrganized by **Bedr Eddine Ainseba, Odo Diekmann, Pierre Magal, Shigui Ruan****Room: P.121**

- 16:00 - 16:30 Stability and periodic oscillations in a mathematical model of hematopoiesis
Catherine Marquet, University of Pau, France, France
- 16:30 - 17:00 Fitness control by a parameter of asymmetry in a cell division model
Philippe Michel, Ecole Normale Supérieure Ulm / Paris Dauphine, France
- 17:00 - 17:30 Global analysis of Differential infectivity and staged progression models: Application to an EBOLA model
Gauthier Sallet, INRIA and Université de Metz, France
- 17:30 - 18:00 Periodic solution of a slow and fast switched system describing the dynamic of a population in a fluctuating environment.
Nadir Sari, University of La Rochelle, France
- 18:00 - 18:30 Dynamical systems methods in pathogen competition and coexistence
Horst R. Thieme, Arizona State University, USA

SS23: New Developments in Nonlinear Partial Differential Equations and Control TheoryOrganized by **Irena Lasiecka, Grozdana Todorova****Room: Amphi J**

- 16:00 - 16:30 Global and almost global existence for nonlinear wave equations in an exterior domain
Hideo Kubo, Osaka University, Japan
- 16:30 - 17:00 Degree Theory and Proper Fredholm Maps: Quasilinear Elliptic Systems
Henry C. Simpson, University of Tennessee, USA
- 17:00 - 17:30 Degenerate Ornstein-Uhlenbeck operators and invariant measures
Alessandra Lunardi, Università di Parma, Italy
- 17:30 - 18:00 When does a Schrödinger heat equation permit positive solutions
Qi S. Zhang, U. California Riverside, USA
- 18:00 - 18:30 Hadamard Wellposedness of a Two-Dimensional Boussinesq Equation with Applications to Structural Acoustic Problems
Inger M. Daniels, University of Virginia, USA

SS24: Optimization and Optimal Control with Applications

Organized by **K.L. Teo, L. Caccetta, C.C. Lim**

Room: P.122

- 16:00 - 16:30 A Nash Bargaining Solution for Partition of Jobs between Two Manufacturers
Xiaoqiang Cai, The Chinese University of Hong Kong, Hong Kong
- 16:30 - 17:00 An Unified Model for State Feedback of Discrete Event Systems I: Framework and Maximal Permissive State Feedback
Wuyi Yue, Konan University, Japan
- 17:00 - 17:30 Optimal portfolios under a risk constraint with applications to inventory control in supply chains
Cedric Yiu, The University of Hong Kong, Hong Kong
- 17:30 - 18:00 Stabilization of Vibration of Rotating Timoshenko Beam System
Shui hung Hou, Hong Kong Polytechnic University, Hong Kong

SS26: Nonlinear Parabolic and Elliptic PDEs and Applications

Organized by **Ratnasingham Shivaji, Peter Takac**

Room: P Amphi I

- 16:00 - 16:30 Fučík spectrum for Schrödinger equations and applications
Zhitao Zhang, Academy of Mathematics & Systems Science, Peoples Rep of China
- 16:30 - 17:00 On a climate model with a dynamic nonlinear diffusive boundary condition
Lourdes Tello, Universidad Politecnica de Madrid, Spain
- 17:00 - 17:30 Entire solutions of singular elliptic inequalities on complete manifolds
Marco Rigoli, Università degli studi di milano, Italy

SS29: Dynamics of forced oscillators

Organized by **Rafael Ortega**

Room: P.301

- 16:00 - 16:30 Homoclinic solutions in a differential equation arising in Nonlinear Optics
Pedro J. Torres, University of Granada, Spain
- 16:30 - 17:00 Invariant manifolds near a minimizer
Antonio J. Ureña, Universidad de Granada, Spain
- 17:00 - 17:30 Silnikov Chaos in the Semiconductor Laser Equations
Jean-michelet Jean-michel, The College of New Jersey, USA
- 17:30 - 18:00 Subharmonic bifurcations from infinity
Alexander M. Krasnosel'skii, Institute for Information Transmission Problems, Russia

SS31: Convex/Nonconvex Dynamical Systems and Computational Mechanics with Applications in Physics and Engineering

Organized by **Zhaosheng Feng, Claire David, David Y. Gao**

Room: P.109

- 16:00 - 16:30 Modelling dynamics of nonlinear thermomechanical phase transformations in multidimensional shape memory alloy samples
Roderick Melnik, WLU, Waterloo, Canada
- 16:30 - 17:00 Theoretical optimization of finite difference schemes
Claire David, Université Paris VI, France
- 17:00 - 17:30 Rapid Fluctuation of Chaotic maps on fractal sets
Yu Huang, Zhongshan (Sun Yat-Sen) University, Peoples Rep of China
- 17:30 - 18:00 Dynamic complex logistics information networks
Songdong Ju, Beijing Jiaotong University, Peoples Rep of China
- 18:00 - 18:30 DEA Analysis of Reverse Logistics of Supply Chain Integration Project Choice
Dong Mu, Beijing Jiaotong University, Peoples Rep of China

SS32: Magnetohydrodynamics in Astrophysics and Geophysics: advances in dynamo theory

Organied by **Emmanuel Dormy, Manuel Nunez**

Room: A.150

- 16:00 - 16:30 Reversals in nature and the nature of reversals
Frank Stefani, Forschungszentrum Rossendorf, Germany
- 16:30 - 17:00 Antidynamo Theorems
Ralf Kaiser, Universität Bayreuth, Germany
- 17:00 - 17:30 Effects of turbulence on the dynamo instability
Francois Petrelis, LPS-ENS, France

SS33: Nonlinear Elliptic and Parabolic Problems

Organied by **Filippo Gazzola, Hans-Christoph Grunau**

Room: P. Amphi II

- 16:00 - 16:30 Existence of radial solutions for the p -Laplacian elliptic equations with weights
Roberta Filippucci, Department of Mathematics-University of Perugia, Italy
- 16:30 - 17:00 Existence and multiplicity results for semilinear equations with measure data
Alberto Ferrero, Dipartimento di Matematica, Università di Pisa, Italy
- 17:00 - 17:30 On some differential inequalities
Dimitri Mugnai, Dipartimento di Matematica e Informatica Università di Perugia, Italy
- 17:30 - 18:00 Positive solutions for quasilinear elliptic equations with weights
Raffaella Servadei, University of Perugia, Italy

SS37: Dynamical Systems of Multiple Time Scales

Organied by **Jianzhong Su**

Room: A.151

- 16:00 - 16:30 Geometric singular perturbations for multiple turning points
Weishi Liu, University of Kansas, USA
- 16:30 - 17:00 Multimodal oscillations in systems with strong contraction
Georgi S. Medvedev, Drexel University, USA
- 17:00 - 17:30 Noisy neuronal bursting activities
Jianzhong Su, The University of Texas at Arlington, USA
- 17:30 - 18:00 Metastability and dispersive shock waves in Fermi-Pasta-Ulam system
Simone Paleari, Observatoire de la Côte d'Azur, département Cassiopée, France
- 18:00 - 18:30 Qualitative Study to A Reaction-Diffusion Equation
Zhaosheng Feng, University of Texas-Pan American, USA

SS41: The Navier-Stokes equations and related problems

Organied by **Eduard Feireisl**

Room: P.RC3

- 16:00 - 16:30 Regular solutions to steady compressible Navier–Stokes equations
Milan Pokorný, Mathematical Institute of Charles University, Prague, Czech Republic, Czech Rep
- 16:30 - 17:00 On Lyapunov functionals to the Navier-Stokes equations for compressible flow
Ivan Straskraba, Czech Academy of Sciences, Czech Rep
- 17:00 - 17:30 Two-equation model of mean flow resonances in subcritical flow systems
Sergey A. Suslov, University of Southern Queensland, Australia
- 17:30 - 18:00 On the Long-time Stability of the Implicit Euler Scheme for the 2d Navier-Stokes Equations
Florentina Tone, Indiana University, USA

**SS42: Modeling and analysis of predators-preys systems :
 stability, bifurcation, chaos and complexity**
 Organized by **Aziz-Alaoui M.A., Bai-Lian Li**
Room: P.RC2a

- 16:00 - 16:30 On a dynamics of a non-smooth prey-predator model
Hassan Deai, University of le Havre, France
- 16:30 - 17:00 On a dynamics of a non-smooth prey-predator model
M.a. Aziz Alaoui, University of Le Havre, France

SS47: Applications of Dynamical Systems: Celestial Mechanics and Beyond
 Organized by **Marian Gidea, Josep Masdemont**
Room: P.302

- 16:00 - 16:30 Skew products of symplectic maps and almost collision orbits of the 3 body problem
Sergey Bolotin, UW-Madison, USA
- 16:30 - 17:00 Hamiltonian dynamics of atom-diatom molecule complexes and collisions
Florence J. Lin, University of Southern California, USA
- 17:00 - 17:30 Dynamical Systems Approach to the Isomerization Problem of a Tri-Atomic Molecule
Frederic Gabern, Universitat Politècnica de Catalunya, Spain
- 17:30 - 18:00 Applications of invariant manifolds and variational principles in Economics
Hector E. Lomelí, Instituto Tecnológico Autónomo de México (ITAM), Mexico

Wensday, June 28, 2006

**SS10: Non-regular Dynamical Systems: Complementarity Systems, Sweeping Process
 and Applications**
 Organized by **D. Goeleven, B. Brogliato**
Room: A.151

- 08:00 - 08:30 Recent Advances in Lyapunov's stability of non-smooth dynamical systems
Samir Adly, University of Limoges, France
- 08:30 - 09:00 A Mathematical Analysis of A Dynamical Frictional Contact Model in Thermo-viscoelasticity
Oanh Chau, university of La Réunion, Reunion
- 09:00 - 09:30 Asymptotic derivable fields and complementarity problems
George Isac, Royal Military College of Canada, Canada
- 09:30 - 10:00 A Characterization of Lyapunov Pairs
Dumitru Motreanu, University of Perpignan, France

SS17: Reaction-Diffusion Systems and the Dynamics of Patterns
 Organized by **Danielle Hilhorst, Hiroshi Matano**
Room: A Amphi 501

- 08:00 - 08:30 Spreading speeds of a cooperative system
Hirokazu Ninomiya, Ryukoku University, Japan
- 08:30 - 09:00 Bifurcation structure of a 1-D Ginzburg-Landau model
Yoshihisa Morita, Ryukoku University, Japan
- 09:00 - 09:30 2d compactness of the Néel wall
Radu Ignat, University Paris 6, Lab. J.-L. Lions, France
- 09:30 - 10:00 Boundary layer similarity flow driven by power-law shear: The integral equation method
Mohammed Guedda, CNRS LAMFA, Faculté de Mathématiques et d'Informatique, France

SS19: Qualitative Properties of Evolution Equations

Organized by **Jong-Sheng Guo, Mokhtar Kirane, Arnaud Rougirel**

Room: P Amphi I

- 08:00 - 08:30 Entropy methods for the large time behavior of reaction-diffusion systems
Laurent Desvillettes, Ecole Normale Supérieure de Cachan, France
- 08:30 - 09:00 A Functional Reaction-Diffusion Problem with Hysteresis
Georg Hetzer, Auburn University, USA
- 09:00 - 09:30 Energy decay of solutions of a wave equation of p-laplacian type with a nonlinear dissipation
Benaissa Abbes, University Djillali Liabes, Algeria
- 09:30 - 10:00 Asymptotic solutions to higher-order boussinesq systems
Dé godefroy Akmel, Université de Cocody (Abidjan), Côte D'ivoire

SS41: The Navier-Stokes equations and related problems

Organized by **Eduard Feireisl**

Room: P.RC3

- 08:00 - 08:30 On Phase Transition Dynamics
Konstantina Trivisa, University of Maryland, USA
- 08:30 - 09:00 Some recent results on the analysis of fluid-structure interactions
Marius Tucsnak, Institut Elie Cartan de Nancy, France

CS2: ODEs and Applications

Chair

Room: P.015

- 08:00 - 08:30 Similarity solutions of degenerate boundary layer equations
Zakia Hammouch, LAMFA UMR CNRS 6140, France
- 08:30 - 09:00 The infinite product representation of solutions of indefinite Sturm-Liouville problems with two turning points
Aliasghar Jodayree akbarfam, Tabriz University, Iran
- 09:00 - 09:30 On (non)chaotic behaviour in homogeneous quadratic systems of ODEs in \mathbb{R}
Matej Mencinger, IMFM, Slovenia
- 09:30 - 10:00 Asymptotic Equivalence of Dynamic Equations on Time Scales
Raziye Mert, Middle East Technical University, Turkey

CS4: Modelling and Math Biology

Chair

Room: A.161

- 08:00 - 08:30 Propagating bursts in a model of the subthalamo-pallidal loop
Abdoul Kane, University of Toronto, Canada
- 08:30 - 09:00 Construction of Dengue Virus Force of Infection with Radial Basis Functions
Chulin Likasiri, Chiang Mai University, Thailand
- 09:00 - 09:30 Coexistence of solutions of chemotactic diffusion systems on Food Chain in a Flow Reactor
Xiaodong Liu, Dalian Maritime University, Peoples Rep of China
- 09:30 - 10:00 Dynamics of a Ratio-Dependent Predator-Prey Model with Harvesting of predators
Priscilla S. Macansantos, Univ. of the Philippines, Philippines

CS5: Stability

Chair **Room: P.06**

- 08:00 - 08:30 On the stability of some stochastic differential equations
Khairia El-Said A. Abd El-Fattah El-Nadi, Alexandria University, Egypt
- 08:30 - 09:00 Positive semigroups and asymptotic behaviour of structured population models
Jozsef Z. Farkas, The University of Memphis, USA
- 09:00 - 09:30 A single localized vortex trapped in an harmonic trap in the two-dimensional approximation
Richard Kollar, University of Michigan, USA
- 09:30 - 10:00 A Computational model for the interaction between Tumors cell density and immune response
Sanjeev Kumar, Agra University, India

CS6: Control and Optimization

Chair **Room: P.011**

- 08:00 - 08:30 Robust ℓ -step receding horizon control of sampled-data nonlinear systems with bounded additive disturbances with application to a HIV/AIDS model
Ahmed Elaiw, Al-Azhar University (Assiut), Egypt
- 08:30 - 09:00 Output feedback stabilization of sampled-data nonlinear systems by receding horizon control via discrete-time approximations
Ahmed Elaiw, Al-Azhar University (Assiut), Egypt
- 09:00 - 09:30 Optimal Control of a Nonlinear Model of Economic Growth
Ellina V. Grigorieva, Texas Woman's University, USA
- 09:30 - 10:00 Geometric methods in nonlinear control synthesis for electro-hydraulic servactuators
Andrei Halanay, University Politehnica of Bucharest, Romania

CS7: Scientific Computation and Numerical Algorithms

Chair **Room: P.108**

- 08:00 - 08:30 Singular Bifurcations of Differential-Algebraic Equations
Robert Beardmore, Imperial College London, England
- 08:30 - 09:00 On the computation of magnetostatic systems and beyond, with applications to controlled fusion geometry
Cedric Boulbe, Université de Pau et des Pays de l'Adour, France
- 09:00 - 09:30 Analysis of a dynamic Signorini's contact problem
M. teresa Cao, Universidade de Santiago de Compostela, Spain
- 09:30 - 10:00 Mixing Properties of a non-Newtonian Fluid
Huseyin Demir, Ondokuz Mayıs University, Turkey

CS8: Abstract dynamical systems

Chair **Room: P.109**

- 08:00 - 08:30 On the star-shaped condition on Ding's version of the Poincaré-Birkhoff theorem
Rogério F. Martins, Faculdade de Ciências e Tecnologia, UNL, Portugal

CS9: PDEs and Applications

Chair **Room: A.150**

- 08:00 - 08:30 The thermistor problem with degenerate thermal conductivity and metallic conduction
María Teresa González Montesinos, Universidad de Cádiz, Spain
- 08:30 - 09:00 Fast diffusion equations on negatively curved manifolds
Gabriele Grillo, Politecnico di Torino, Italy
- 09:00 - 09:30 Scalar conservation law with discontinuous flux in a bounded domain
Julien Jimenez, Université de Pau et des Pays de l'Adour, France
- 09:30 - 10:00 Asymptotic behavior for small width of interface in phase transitions
Angela Jimenez-Casas, Universidad Pontificia Comillas de Madrid, Spain

CS9: PDEs and ApplicationsChair **Room: Amphi J**

- 08:00 - 08:30 An Ocean Turbulence Model with a Fairly General Seabottom
Francisco Ortegón gallego, Universidad de Cádiz, Spain
- 08:30 - 09:00 The Effect of An Inert Material on the Stability of Propagating Polymer Fronts
Donna M. Comissiong, Center for Mathematics, University of Coimbra, Portugal
- 09:00 - 09:30 Finite Time Blow-up For The Nonlocal Gelfand Problem
Evangelos A. Latos, Technical University of Athens, Greece
- 09:30 - 10:00 Coupling of Scalar Conservation Laws in Stratified Porous Media
Laurent Levi, Université de Pau et des Pays de l'Adour, France

CS9: PDEs and ApplicationsChair **Room: P Amphi II**

- 08:00 - 08:30 Oscillation of nonlinear impulsive hyperbolic equations with several delays
Anping Liu, China University of Geosciences, Peoples Rep of China
- 08:30 - 09:00 Generalization of Lions Theorems for First-Order Differential-Operator Equations with Variable Domains of Operator Coefficients
Fiodar E. Lomautsau, Belarus State University, Belarus
- 09:00 - 09:30 On a Class of Elliptic Free Boundary Problems
Abdeslem Lyaghfouri, King Fahd University of Petroleum and Minerals, Saudi Arabia
- 09:30 - 10:00 Characteristics method for a transient viscoelastic flow of Oldroyd model
Ahmed M. Machmoum, Université Ibn Zohr, Morocco

10h00-10h30: **Break****Plenary Sessions****Room: A. Amphi 501**

Chair

- 10h30-11h15 Title: Coherent Structures in Dissipative Systems
 Speaker: **Björn Sandstede**, Université de Surrey, Angleterre
- 11h15-12h00 Title: Multiscale methods for pulse propagation in discrete lattices
 Speaker: **Alexander Mielke**, Institut Weierstrass, Berlin, Allemagne, Hollande

12h00-13h30: **Lunch****SS2: Semigroups, Evolution Equations, and Boundary Conditions**Organized by **G. Goldstein, J. Goldstein****Room: A.152**

- 13:30 - 14:00 On the Gibbs character of the Dirichlet-to-Neumann semigroup
Hassan Emamirad, University of Poitiers, France
- 14:00 - 14:30 A Degenerate Elliptic-parabolic Problem with Nonlinear Dynamical Boundary Conditions
Fuentsanta Andreu, Universitat de Valencia, Spain
- 14:30 - 15:00 Limited Flux Diffusion Equations
Jose M. Mazon, Universitat de Valencia, Spain
- 15:00 - 15:30 Nonexistence for the Laplace Equation with a Dynamic Boundary Condition of Fractional Type
Mokhtar Kirane, Université de La Rochelle, France

SS6: Direct and Inverse Problems in Phase Field Systems and Related Subjects

Organized by **Davide Guidetti, Gianni Gilardi**

Room: P Amphi IV

- 13:30 - 14:00 An identification problem for a degenerate differential equation of the second order
Angelo Favini, Department of Mathematics, University of Bologna, Italy
- 14:00 - 14:30 Existence and asymptotic analysis of a phase field model for supercooling
Fabio Luterotti, Università di Brescia, Italy
- 14:30 - 15:00 Nonlinear degenerate parabolic equations for a thermohydraulics model
Takesi Fukao, Gifu National College of Technology, Japan
- 15:00 - 15:30 A Transmission Problem in a Thin Layer
Giovanni Dore, Dipartimento di Matematica - Università di Bologna, Italy

SS10: Non-regular Dynamical Systems: Complementarity Systems, Sweeping Process and Applications

Organized by **D. Goeleven, B. Brogliato**

Room: A.151

- 13:30 - 14:00 A Stability Result for Differential Variational Inequalities
Joachim Gwinner, Universität der Bundeswehr München, Germany
- 14:00 - 14:30 Eigenvalue problems for nonlinear elliptic equations with unilateral constraints
Nikolaos S. Papageorgiou, National Technical University, Greece
- 14:30 - 15:00 Contribution to the Mathematical Modeling of Multipoint, Non-smooth Impact/Contact Dynamics of Human Gait
Aleksandar D. Rodic, Mihajlo Pupin Institute, University of Belgrade, Yugoslavia
- 15:00 - 15:30 BV solutions of differential inclusions associated with prox-regular sets
Lionel Thibault, Université Montpellier II, France

SS11: Nonautonomous Dynamical Systems

Organized by **Russell Johnson, Rafael Obaya**

Room: A.157

- 13:30 - 14:00 Generalized Attractor-Repeller Pairs, Diagonalizability and Integral Separation
Kenneth J. Palmer, National Taiwan University, Taiwan
- 14:00 - 14:30 On some stability properties of abstract skew-product semiflows.
Rafael Obaya, University of Valladolid, Spain
- 14:30 - 15:00 Stability in a Class of Nonautonomous Linear Delay Differential Equations
Mihály Pituk, University of Veszprém, Hungary
- 15:00 - 15:30 Bifurcation theory for nonautonomous systems
Russell Johnson, Università di Firenze, Italy

SS15: Multiscale analysis in Mathematical Physics

Organized by **Vieri Mastropietro**

Room: P.01

- 13:30 - 14:00 Quasi-periodic attractors, divergent series and Borel-summability in forced dynamical systems with strong damping
Guido Gentile, Università di Roma Tre, Italy
- 14:00 - 14:30 Borel summability and Lindstedt series
Alessandro Giuliani, Princeton University, USA
- 14:30 - 15:00 A Functional Integral Representation for Many Boson Systems
Horst H. Knörrer, ETH Zürich, Switzerland
- 15:00 - 15:30 Renormalization on Riemannian manifolds
Christoph Kopper, Ecole Polytechnique, France

SS17: Reaction-Diffusion Systems and the Dynamics of PatternsOrganized by **Danielle Hilhorst, Hiroshi Matano****Room: A Amphi 501**

- 13:30 - 14:00 Twisted Rods and Biological Membranes: Two Nonlocal Obstacle Problems
Mark A. Peletier, TU Eindhoven, Netherlands
- 14:00 - 14:30 Analysis of a pore scale model for dissolution and precipitation in porous media
Iuliu sorin Pop, Eindhoven University of Technology, The Netherlands
- 14:30 - 15:00 On the long time behavior of some singular phase change models
Giulio Schimperna, University of Pavia, Italy
- 15:00 - 15:30 Radial and nonradial steady-states with clustering layers in Allen-Cahn equations
Kimie Nakashima, Tokyo University of Marine Science and Technology, Japan

SS19: Qualitative Properties of Evolution EquationsOrganized by **Jong-Sheng Guo, Mokhtar Kirane, Arnaud Rougirel****Room: P Amphi I**

- 13:30 - 14:00 Problem of Cauchy for system which describes filtration of natural gas
Svetlin Georgiev, University of Sofia, Bulgaria
- 14:00 - 14:30 On some fractional evolution equations with nonlocal conditions
Mahmoud mohammed M. El-borai, Alexandria University, Egypt
- 14:30 - 15:00 Asymptotic stability and blow up for semilinear wave equations with dynamic boundary conditions
Said-houari Belkacem, Université Badji Mokhtar, Algeria
- 15:00 - 15:30 Boundary stabilization of solutions of a nonlinear system of Timoshenko type
Abdelaziz Soufyane, United Arab Emirates University, United Arab Emirates

SS21: Dynamical Systems and Control in BiologyOrganized by **Bedr Eddine Ainseba, Odo Diekmann, Pierre Magal, Shigui Ruan****Room: P.121**

- 13:30 - 14:00 Dynamics of semelparous populations
Stephan Van gils, University of Twente, Netherlands
- 14:00 - 14:30 A multi structured epidemic problem with direct and indirect transmissions in heterogeneous environment
Cedric Wolf, University Victor Segalen Bordeaux 2, France
- 14:30 - 15:00 Bacteriophage dynamics: an age of infection structured model
Angel Calsina, Departament de Matemàtiques, Universitat Autònoma de Barcelona, Spain

SS25: Dynamical Approach to Pattern-formation Equations, and Related TopicsOrganized by **M. A. Efendiev****Room: P. Amphi II**

- 13:30 - 14:00 Describing a class of global attractors via symbol sequences
Matthias Wolfrum, Weierstrass Institute for Applied Analysis and Stochastics, Germany
- 14:00 - 14:30 Waves in dendrites
Gabriel Lord, Heriot Watt University, Scotland
- 14:30 - 15:00 On a nonlocal viscose phase separation model
Mohammad hassan Farshbaf shaker, Weierstrass Institute for Applied Analysis and Stochastics, Germany

SS28: Delay Differential EquationsOrganized by **Hans-Otto Walther****Room: P.301**

- 13:30 - 14:00 How lasers generate new delay differential equations problems
Thomas Erneux, Université Libre de Bruxelles, Belgium

- 14:00 - 14:30 Center Manifold Theory for Functional Differential Equations of Mixed Type
Hermen jan Hupkes, Universiteit Leiden, Netherlands
- 14:30 - 15:00 On the problem of linearization for functional differential equations with state-dependent delays
Ferenc Hartung, University of Veszprem, Hungary
- 15:00 - 15:30 Event collisions in systems with delayed switches
Jan Sieber, University of Bristol, England

SS33: Nonlinear Elliptic and Parabolic Problems

Organied by **Filippo Gazzola, Hans-Christoph Grunau**

Room: A.150

- 13:30 - 14:00 The flow of a heavy fluid past fixed obstacles: linear and non linear problems
Carlo Pagani, Politecnico di Milano, Italy
- 14:00 - 14:30 Parabolic boundary value problems with inhomogeneous symbols
Robert Denk, University of Konstanz, Germany
- 14:30 - 15:00 Existence, uniqueness and approximation of a doubly degenerate nonlinear parabolic system
Klaus Deckelnick, Institut fuer Analysis und Numerik, Universitaet Magdeburg, Germany
- 15:00 - 15:30 On boundedness of solutions of reaction-diffusion equations with nonlinear boundary conditions
José M. Arrieta, Universidad Complutense de Madrid, Spain

CS2: ODEs and Applications

Chair

Room: P.015

- 13:30 - 14:00 Rigorous asymptotic expansions for critical wave speeds in a family of scalar reaction-diffusion equations
Nikola Popovic, Boston University, USA
- 14:00 - 14:30 Existence of Flames in Combustion
Abdolrahman Razani, I. Kh. International University, Iran
- 14:30 - 15:00 Periodic solutions for a DC-DC switching converter
Maria Jose Romero Valles, University of Granada, Spain
- 15:00 - 15:30 Interval oscillation criteria for second order nonlinear differential equations with damping
Yuri.V Rogovchenko, Eastern Mediterranean University, Turkey

CS4: Modelling and Math Biology

Chair

Room: A.161

- 13:30 - 14:00 Pattern formation in age-structured populations
Caterina Cusulin, Department of Mathematics, University of Trento, Italy
- 14:00 - 14:30 Stability and dynamics in the nonlinear discrete-time model of competition between two age-stage structured populations
Nikolay N. Zavalishin, A. M. Obukhov Institute of atmospheric physics RAS, Russia
- 14:30 - 15:00 Suppression of spatio-temporal chaos in the model of fibrillation in an excitable medium
Semen Vysotskiy, Moscow State University - Physics faculty, Russia
- 15:00 - 15:30 Dynamics and Hopf bifurcation analysis in a white blood cell production model
Talibi Alaoui Hamad, Université Chouaib Doukkali, Morocco

CS5: Stability

Chair

Room: P.06

- 13:30 - 14:00 A spectral gap mapping theorem and smooth invariant center manifolds for semilinear hyperbolic systems
Mark Lichtner, Humboldt University Berlin, Germany
- 14:00 - 14:30 Deterministic Dynamics in Questionnaires in Social Sciences
Charles lebon Mberi kimpolo, University of the Witwatersrand , South Africa
- 14:30 - 15:00 Global asymptotic stability of the Goodwin system with repression
Luis Sanchez, Universidad Politecnica de Cartagena, Spain

CS6: Control and Optimization

Chair

Room: P.015

- 13:30 - 14:00 Global convergence of a memory gradient method with a closed-form stepsize formula
Nora Merabet, United Arab Emirates University, United Arab Emirates
- 14:00 - 14:30 The H-J equation of the minimal time function: the constant dynamic case
Chadi Nour, Lebanese American University, Lebanon
- 14:30 - 15:00 The changes of air gap in inductive engines as vibration indicator aided by mathematical model and artificial neural network
Boguslaw Twarog, University of Rzeszow, Poland

CS7: Scientific Computation and Numerical Algorithms

Chair

Room: P.108

- 13:30 - 14:00 Use of a Computer Program in the solidification of a molten steel
Abdelwahab Kharab, King Fahd University of Petroleum and Minerals, Saudi Arabia
- 14:00 - 14:30 The application numerical methods for description phenomena in high current contacts
Bogdan Kwiatkowski, Rzeszow University, Poland
- 14:30 - 15:00 Error estimation of a class of quadratic immersed finite element methods for elliptic interface problems
Yanping Lin, University of Alberta and Dalian Maritime University, Canada

CS9: PDEs and Applications

Chair

Room: Amphi J

- 13:30 - 14:00 Finite speed of propagation in degenerate reaction-diffusion-convection processes
Luisa Malaguti, University of Modena and Reggio Emilia, Italy
- 14:00 - 14:30 On Pfaff systems with L^p coefficients
Sorin Mardare, Zürich, Switzerland
- 14:30 - 15:00 Global attractor for a lattice dynamical system without uniqueness
Francisco Gabriel Morillas jurado, Universidad politecnica de Valencia, Spain
- 15:00 - 15:30 Estimating Heat Source in Two-Dimensional Problem
Abdolsadeh Neisy, Department of Mathematics and Statistics, Iran

CS9: PDEs and Applications

Chair

Room: P.122

- 13:30 - 14:00 On positive solutions for a certain class of elliptic BVPs
Aleksandra Orpel, Faculty of Mathematics, University of Lodz, Poland
- 14:00 - 14:30 Sturm-Liouville operators with indefinite weights and parabolic equations
Illya Karabash, Donetsk National University, Ukraine
- 14:30 - 15:00 On a 2D free-boundary problem modelling the action of a limiter in the magnetic confinement of a plasma in a Stellarator
Juan francisco Padial, Universidad Politécnica de Madrid, Spain
- 15:00 - 15:30 Convergence of scattering operators for the Klein-Gordon equation with a nonlocal nonlinearity
Hironobu Sasaki, Department of Mathematics, Hokkaido University, Japan

CS9: PDEs and Applications

Chair

Room: P.309

- 13:30 - 14:00 Combined effects of singular nonlinearities and convection terms in the generalized Lane-Emden-Fowler equation
Vicentiu Radulescu, Universit  de Craiova, Romania
- 14:00 - 14:30 Dissipative quasi-geostrophic equation and mild solution
Gala Sadek, EDP, Algeria
- 14:30 - 15:00 Ground State Energy of the Polaron Model in Relativistic Quantum Electrodynamics

Itaru Sasaki, Hokkaido University, Japan
 15:00 - 15:30 Separation of variables for nonlinear equations
Alexander Shermenev, Wave Research Center of Russian Academy of Sciences, Russia

CS10: Bifurcation and chaotic dynamics

Chair **Room: P.310**

13:30 - 14:00 On chaotic dynamics in discrete homogeneous quadratic systems
Milan Kutnjak, University of Maribor, Slovenia
 14:00 - 14:30 Bifurcation Basins in Noninvertible Maps with Denominator
Sahari Mohamed lamine, Université Badji-Mokhtar Annaba, Algeria
 14:30 - 15:00 Master-Slave Synchronization of Lorenz Systems via Single Controller
Servilia Oancea, Dept.of Biophysics, Univ.I.Ionescu de la Brad Iasi, Romania

15h30-1600: **Break**

SS2: Semigroups, Evolution Equations, and Boundary Conditions

Organied by **G. Goldstein, J. Goldstein**
Room: A.152

16:00 - 16:30 The semigroup of film casting: Elliptic constraints and linear transport
Thomas Hagen, The University of Memphis, USA

SS6: Direct and Inverse Problems in Phase Field Systems and Related Subjects

Organied by **Davide Guidetti, Gianni Gilardi**
Room: P Amphi IV

16:00 - 16:30 Phase field models for multicomponent alloy solidification
Harald Garcke, University Regensburg, Germany
 16:30 - 17:00 The Heat Equation with Dynamic Linear and Nonlinear Boundary Conditions
Gisele R. Goldstein, University of Memphis, USA
 17:00 - 17:30 Critical constants and nonexistence
Jerome A. Goldstein, University of Memphis, USA

SS10: Non-regular Dynamical Systems: Complementarity Systems, Sweeping Process and Applications

Organied by **D. Goeleven, B. Brogliato**
Room: A.151

16:00 - 16:30 Well-posedness results for non-autonomous dissipative complementarity systems
Bernard Brogliato, INRIA, France
 16:30 - 17:00 Necessary conditions of asymptotic stability for a class of unilateral dynamical systems
Daniel Goeleven, IREMIA, Université de La Réunion, Réunion

SS15: Multiscale analysis in Mathematical Physics

Organied by **Vieri Mastropietro**
Room: P.01

16:00 - 16:30 Two perturbative proofs of the analyticity of the dipole gas model
Jacques Magnen, CPHT Ecole Polytechnique, France
 16:30 - 17:00 Infrared-finite algorithms in QED
Alessandro Pizzo, ETH-Zuerich, Switzerland
 17:00 - 17:30 Renormalization Group approach to PDE
Vieri Mastropietro, Università di Roma "Tor Vergata", Italy

SS17: Reaction-Diffusion Systems and the Dynamics of PatternsOrganized by **Danielle Hilhorst, Hiroshi Matano****Room: A Amphi 501**

- 16:00 - 16:30 Traveling waves through a Penrose pattern
Hiroshi Matano, University of Tokyo, Japan
- 16:30 - 17:00 Front propagation in the Fisher equation with degenerate diffusion
Elisabeth Logak, Université de Cergy-Pontoise, France
- 17:00 - 17:30 Travelling waves of a mean curvature flow equation in periodic media
Bendong Lou, Tongji University, Peoples Rep of China

SS19: Qualitative Properties of Evolution EquationsOrganized by **Jong-Shenq Guo, Mokhtar Kirane, Arnaud Rougirel****Room: P Amphi I**

- 16:00 - 16:30 Blow-up results for some nonlinear delay differential equations
Mustapha Jazar, Lebanese University, Lebanon

SS33: Nonlinear Elliptic and Parabolic ProblemsOrganized by **Filippo Gazzola, Hans-Christoph Grunau****Room: A.150**

- 16:00 - 16:30 Quasilinear Parabolic Systems with Mixed Boundary Conditions on Nonsmooth Domains
Matthias Hieber, University of Darmstadt, Germany
- 16:30 - 17:00 Heat equation with dynamical boundary conditions of locally reactive type
Enzo Vitillaro, University of Perugia, Italy
- 17:00 - 17:30 Regularization of outflow problems in unsaturated porous media
Ben Schweizer, Mathematisches Institut, Uni Basel, Switzerland

CS2: ODEs and ApplicationsChair **Room: P.015**

- 16:00 - 16:30 Types of solutions and multiplicity results for two-point nonlinear boundary value problems
Felikss Sadirbajevs, Daugavpils University, Latvia
- 16:30 - 17:00 On the unusual Fučik spectrum
Natālija Sergejeva, Daugavpils University, Latvia
- 17:00 - 17:30 Fuchik spectrum for the Sturm-Liouville boundary conditions
Tatjana Garbuza, Daugavpils University, Latvia
- 17:30 - 18:00 Existence of positive decaying solutions for nonlinear singular second order equations
Valentina Taddei, university of siena, Italy

CS4: Modelling and Math BiologyChair **Room: A.161**

- 16:00 - 16:30 Using Worldwide ReefCheck Monitoring Data to Develop Coran Reef Index of Biological Integrity
Hai yen Nguyen, University of Yamanashi, Japan
- 16:30 - 17:00 Role of nutrient and toxin producing phytoplankton in marine ecosystem:
a mathematical study supported by experimental findings
Samares Pal, Ramakrishna Mission Vivekananda Centenary College, India
- 17:00 - 17:30 Adaptive dynamics of a function-valued trait describing the transition
in a sequential hermaphrodite population
Jordi Ripoll, Università degli Studi di Trento, Italy
- 17:30 - 18:00 Impact of environmental stressors on population dynamics: mathematical modeling.
Irina Tikhonova, University of California at Davis, USA

CS7: Scientific Computation and Numerical Algorithms

Chair

Room: P.108

- 16:00 - 16:30 Numerical solution of a non-local elliptic problem modelling a thermistor with a finite element and a finite volume method
Christos Nikolopoulos, University of the Aegean, Greece
- 16:30 - 17:00 Study of an axisymmetric Problem in a complex geometry
Fatma zohra Nouri, Laboratoire de Maths Appliquées, Algeria
- 17:00 - 17:30 An Automated Method for the Analysis of a Multi-Parameter Family of Dynamical Systems
Pawel Pilarczyk, Georgia Institute of Technology and Jagiellonian University, USA
- 17:30 - 18:00 Nonlinear dynamics of systems confined to the Nosé - Hoover thermostat
Vladimir N. Salnikov, Moscow State Lomonosov University, Russia

CS9: PDEs and Applications

Chair

Room: Amphi J

- 16:00 - 16:30 Blow-up for the Euler-Bernoulli problem with a fractional boundary dissipation
Labidi Soraya, Laboratoire de mathématiques appliquées université de Versailles, France
- 16:30 - 17:00 Attractors in nonlinear diffusion involving coupled agents and application in turbulence modelling
Dmitry V. Strunin, University of Southern Queensland, Australia
- 17:00 - 17:30 Nonlinear dynamics on centre manifolds describing turbulent floods: k-omega model
Dmitry V. Strunin, University of Southern Queensland, Australia
- 17:30 - 18:00 Existence, blow up and local exponential stability for non-linear strongly damped wave equations of Kirchhoff type
Illya Karabash, Donetsk National University, Ukraine

CS10: Bifurcation and chaotic dynamics

Chair

Room: P.310

- 16:00 - 16:30 Attractors of ecosystems compartment dynamic models: qualitative behavior of open local and closed global matter cycles
Nikolay N. Zavalishin, A.M.Obukhov Institute of atmospheric physics RAS, Russia
- 16:30 - 17:00 Chaotic behaviour of differential operators on Hilbert spaces of entire functions
Alfred Peris, Universitat Politècnica de València, Spain
- 17:00 - 17:30 Julia sets of two permutable entire functions
Chung Chun Yang, The Hong Kong University of Sci.& Tech., Hong Kong