Dr. Carola-Bibiane Schönlieb

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Bio: Carola-Bibiane Schönlieb is Professor of Applied Mathematics at the University of Cambridge. There, she is head of the Cambridge Image Analysis group and co-Director of the EPSRC Cambridge Mathematics of Information in Healthcare Hub. Since 2011 she is a fellow of Jesus College Cambridge and since 2016 a fellow of the Alan Turing Institute, London. She also holds the Chair of the Committee for Applications and Interdisciplinary Relations (CAIR) of the EMS. Her current research interests focus on variational methods, partial differential equations and machine learning for image analysis, image processing and inverse imaging problems. She has active interdisciplinary collaborations with clinicians, biologists and physicists on biomedical imaging topics, chemical engineers and plant scientists on image sensing, as well as collaborations with artists and art conservators on digital art restoration.

Her research has been acknowledged by scientific prizes, among them the LMS Whitehead Prize 2016, the Philip Leverhulme Prize in 2017, the Calderon Prize 2019, a Royal Society Wolfson fellowship in 2020, a doctorate honoris causa from the University of Klagenfurt in 2022, and by invitations to give plenary lectures at several renowned applied mathematics conferences, among them the SIAM conference on Imaging Science in 2014, the SIAM conference on Partial Differential Equations in 2015, the SIAM annual meeting in 2017, the Applied Inverse Problems Conference in 2019, the FOCM 2020 and the GAMM 2021.

Carola graduated from the Institute for Mathematics, University of Salzburg (Austria) in 2004. From 2004 to 2005 she held a teaching position in Salzburg. She received her PhD degree from the University of Cambridge (UK) in 2009. After one year of postdoctoral activity at the University of Göttingen (Germany), she became a Lecturer at Cambridge in 2010, promoted to Reader in 2015 and promoted to Professor in 2018.

Title of the talk
Learned regularisation for solving inverse problems