

Numerical Analysis in the Era of Data Science

Thursday 11 – Friday 12 April 2024

The programme is subject to change. All times are British Summer Time (BST).

THURSDAY 11 APRIL 2024	
09.00 - 09.20	Registration and Refreshments
09.20 - 09.30	Welcome and Housekeeping
09.30 - 10.05	Peter Grindrod , University of Oxford <i>Desperately Seeking Something</i>
10.05 - 10.40	Francoise Tisseur , University of Manchester <i>Deflation Strategies for Nonlinear Eigenvalue Problems</i>
10.40 - 11.15	Andrew Stuart , California Institute of Technology <i>Gradient Flows for Sampling: Mean-Field Models, Gaussian Approximations and Affine Invariance</i>
11.15 - 11.45	Refreshments
11.45 - 12.20	Elena Celledoni , Norwegian University of Science and Technology <i>Deep learning of diffeomorphisms with applications</i>
12.20 - 12.55	Anders Hansen , University of Cambridge <i>On the consistent reasoning paradox of intelligence and optimal trust in AI: The power of 'I don't know'</i>
12.55 - 14.30	Lunch
14.30 - 15.05	Alexander Bastounis , University of Leicester <i>On Smale's 9th problem, generalised hardness of approximation and the limits of AI</i>
15.05 - 15.40	Catherine Higham , University of Glasgow <i>Deep learning algorithms for quantum imaging technology</i>
15.40 - 16.15	Ivan Tyukin , King's College London <i>The inevitability and typicality of instabilities and fragility in AI</i>
16.15 - 16.45	Refreshments
16.45 - 17.20	Brynjulf Owren , Norwegian University of Science and Technology <i>Stability of numerical methods set on Euclidean spaces and manifolds with applications to neural networks.</i>
17.20 - 17.55	Vanni Noferini , Aalto University <i>Composition of two forward stable algorithms: When is it forward stable?</i>
18.00 - 20.00	Welcome Reception, hosted at ICMS

FRIDAY 12 APRIL 2024	
09.30 - 10.05	Jesus-Maria Sanz-Serna , Universidad Carlos III de Madrid <i>A new optimality property of Strang's splitting</i>
10.05 - 10.40	Alison Ramage , University of Strathclyde <i>Multifidelity Methods for Sensitivity Analysis of a Pollutant Dispersal Model</i>
10.40 - 11.15	Peter Kloeden , University of Tübingen <i>Euler-like numerical schemes for Caputo fractional differential equations: deterministic and stochastic</i>
11.15 - 11.45	Refreshments
11.45 - 12.20	Konstantinos Zygalakis , University of Edinburgh <i>Optimization algorithms and differential equations: theory and insights</i>
12.20 - 12.55	Aretha Teckentrup , University of Edinburgh <i>Convergence rates of deep Gaussian process regression</i>
12.55 - 14.30	Lunch

