MSc in Mathematics – an Introduction

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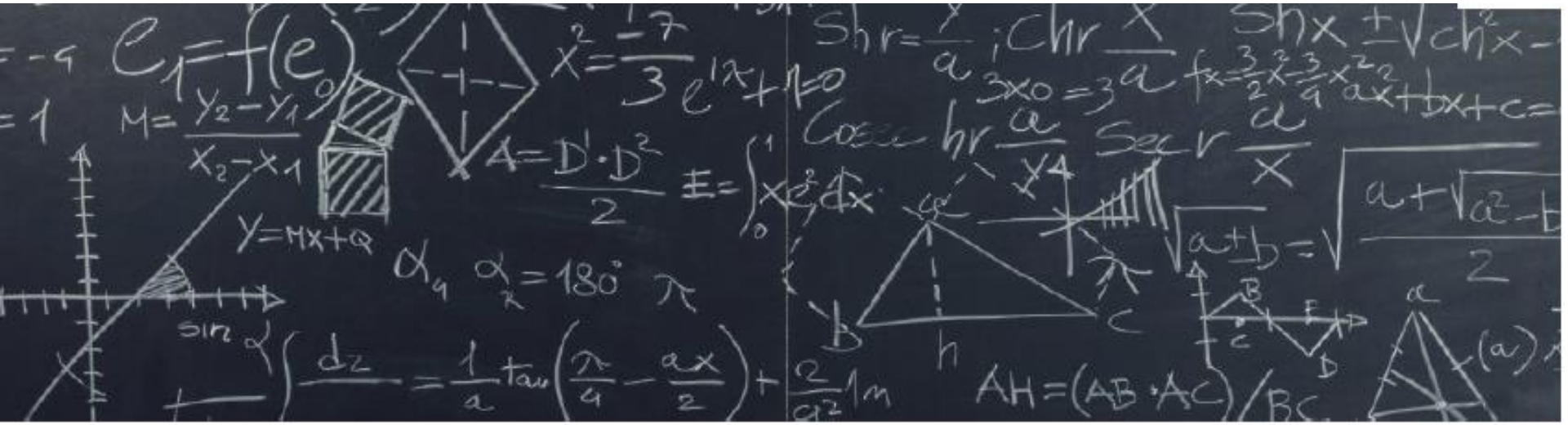
Head of Department

UNIVERSITY OF SURREY

MSc in Mathematics

https://www.surrey.ac.uk/postgraduate/mathematics-msc-2020



POSTGRADUATE COURSES >

Mathematics MSc

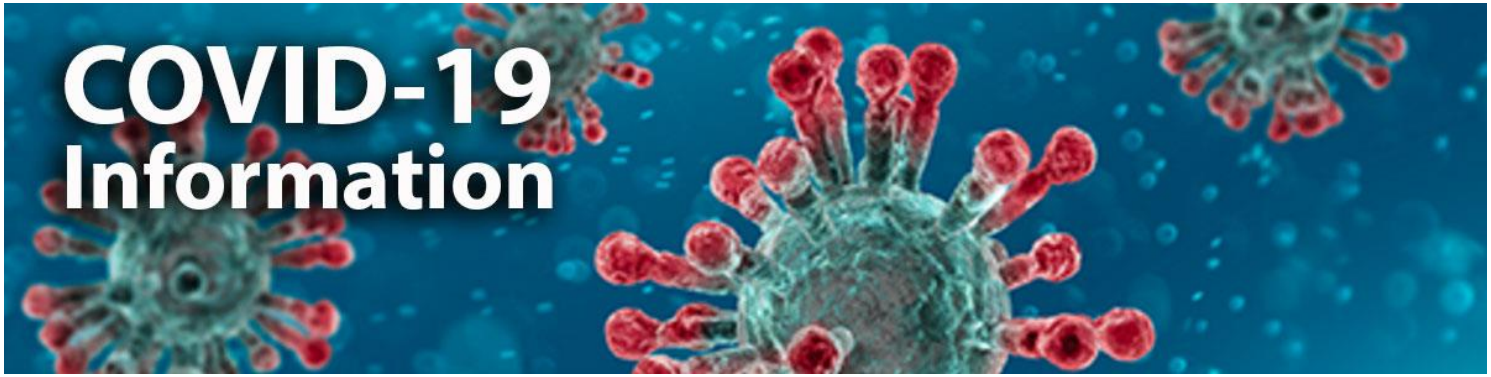
KEY INFORMATION

Start date: October 2020

Full-time: 1 year

Why choose this course?

Over the past few months the importance of mathematics has realized like never before: we are all aware of the crucial role mathematical modelling of the pandemic has played in decision-making at the highest level.



Mathematics is felt in almost every aspect of modern life, including finance, medical sciences, digital communications – even weather forecasting.

From geometry, analysis, partial differential equations and mathematical physics to fluid dynamics, meteorology and modelling in life sciences, our MSc in Mathematics offers you an extraordinary range of research opportunities, working to tackle the most crucial scientific questions of our age.

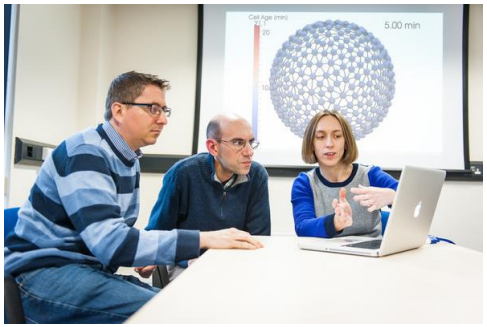
Department of Mathematics

- ~ 36 Academic and Research Staff
- ~ 20 Postgraduate Students
- ~ 400 Undergraduate Students

- Undergraduate and Postgraduate Teaching
- PhD Training
- Research:
  - *Mathematics of Life and Social Sciences (MoLSS)*
  - *Dynamical systems and PDEs (DSPDE)*
  - *Fields, Strings and Geometry (FSG)*
  - *Nonlinear Waves and Geometric Mechanics (NWGM)*
  - *Data Science and Dynamics (DSD)*

Mission

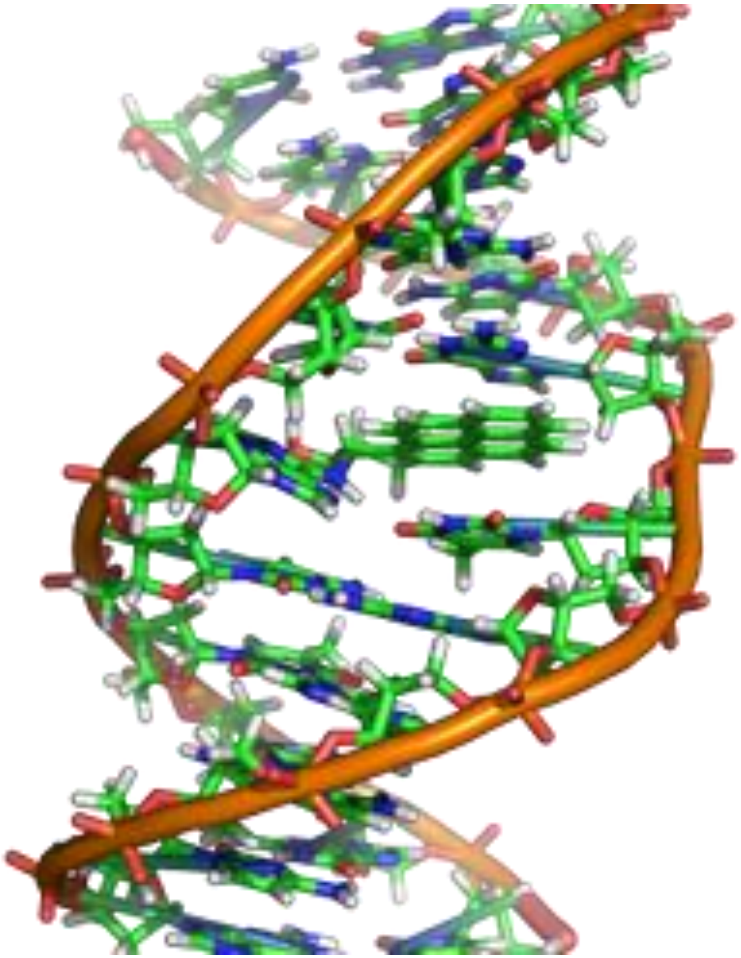
- To exploit our expertise, as one of the UK's long-established research centres in nonlinear mathematics and dynamical systems
- To sustain our reputation for excellence in teaching through a lively, innovative and stimulating learning environment
- To capitalise on our demonstrable and fundamental achievements in mathematics for collaboration across all Faculties, and with national and international partners such as Exeter, Reading, National Physical Laboratory, and Universities Global Partnership Network.



Learning Environment

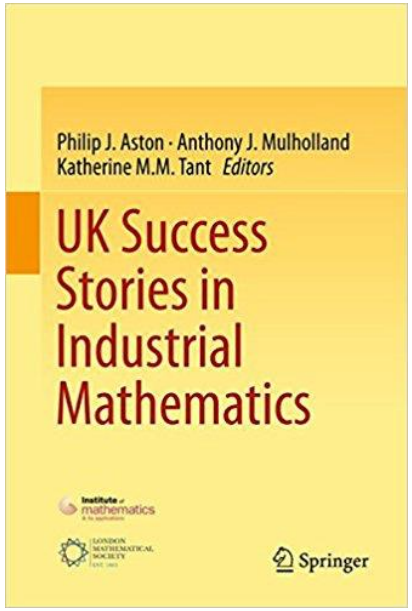
- To remain competitive in both research and teaching, our current activities and our plans for the future have to account for the changing environment in which we operate.
- Fundamental mathematics of the highest quality remains at the heart of our research and teaching strategy.

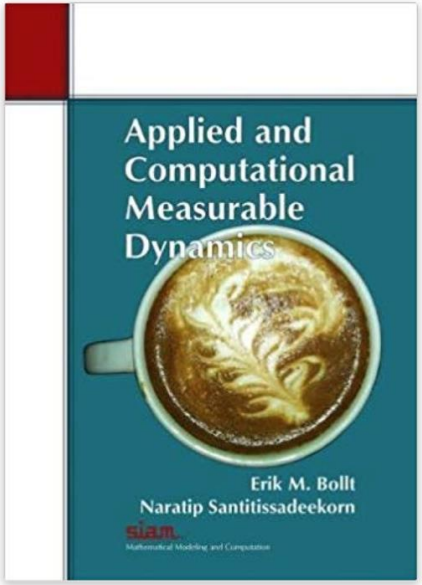
Learning Environment

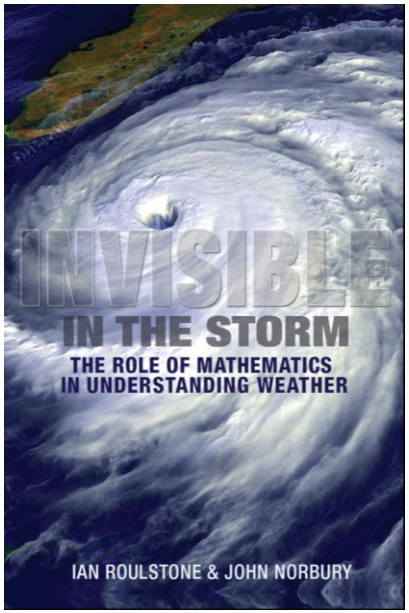


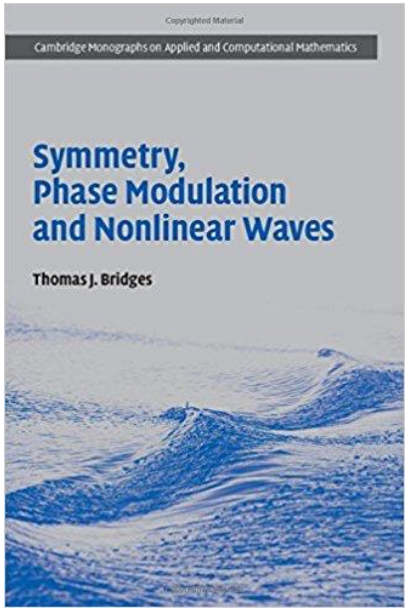
- The Department is part of the Faculty of Engineering and Physical Sciences (FEPS), but many current activities and new opportunities lie in FASS (Sociology, Criminology) and in FHMS (Mathematical and Computational Biology, Vet School, Sleep Centre).
- We work with the National Physical Laboratory (data science), the National Centre for Earth Observation, the Pharmaceutical Industry, and many other government and industrial partners

Books


Philip J. Aston · Anthony J. Mulholland
Katherine M.M. Tant Editors
UK Success Stories in Industrial Mathematics
Springer

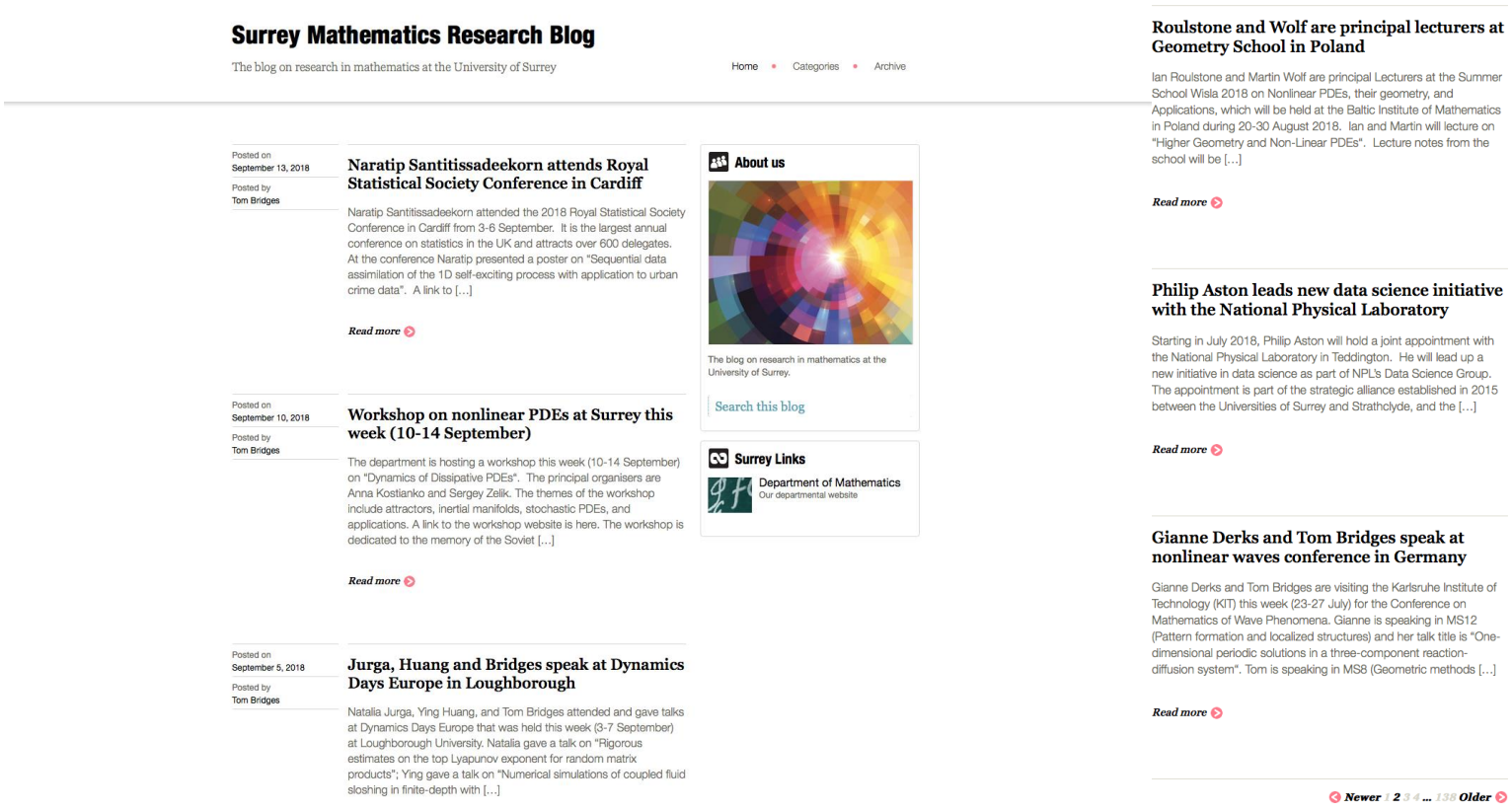

Applied and Computational Measurable Dynamics
Erik M. Bollt
Naratip Santitissadeekorn
siam


INVISIBLE
IN THE STORM
THE ROLE OF MATHEMATICS IN UNDERSTANDING WEATHER
IAN ROULSTONE & JOHN NORBURY


Cambridge Monographs on Applied and Computational Mathematics
Symmetry, Phase Modulation and Nonlinear Waves
Thomas J. Bridges

Research Blog

See https://blogs.surrey.ac.uk/mathsresearch/



Surrey Mathematics Research Blog

The blog on research in mathematics at the University of Surrey

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Posted on
September 13, 2018
Posted by
Tom Bridges

Naratip Santitissadeekorn attends Royal Statistical Society Conference in Cardiff

Naratip Santitissadeekorn attended the 2018 Royal Statistical Society Conference in Cardiff from 3-6 September. It is the largest annual conference on statistics in the UK and attracts over 600 delegates. At the conference Naratip presented a poster on "Sequential data assimilation of the 1D self-exciting process with application to urban crime data". A link to […]

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Posted on
September 10, 2018
Posted by
Tom Bridges

Workshop on nonlinear PDEs at Surrey this week (10-14 September)

The department is hosting a workshop this week (10-14 September) on "Dynamics of Dissipative PDEs". The principal organisers are Anna Kostianko and Sergey Zelik. The themes of the workshop include attractors, inertial manifolds, stochastic PDEs, and applications. A link to the workshop website is here. The workshop is dedicated to the memory of the Soviet […]

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Posted on
September 5, 2018
Posted by
Tom Bridges

Jurga, Huang and Bridges speak at Dynamics Days Europe in Loughborough

Natalia Jurga, Ying Huang, and Tom Bridges attended and gave talks at Dynamics Days Europe that was held this week (3-7 September) at Loughborough University. Natalia gave a talk on "Rigorous estimates on the top Lyapunov exponent for random matrix products"; Ying gave a talk on "Numerical simulations of coupled fluid sloshing in finite-depth with […]

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Roulstone and Wolf are principal lecturers at Geometry School in Poland

Ian Roulstone and Martin Wolf are principal Lecturers at the Summer School Wisła 2018 on Nonlinear PDEs, their geometry, and Applications, which will be held at the Baltic Institute of Mathematics in Poland during 20-30 August 2018. Ian and Martin will lecture on "Higher Geometry and Non-Linear PDEs". Lecture notes from the school will be […]

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Philip Aston leads new data science initiative with the National Physical Laboratory

Starting in July 2018, Philip Aston will hold a joint appointment with the National Physical Laboratory in Teddington. He will lead up a new initiative in data science as part of NPL's Data Science Group. The appointment is part of the strategic alliance established in 2015 between the Universities of Surrey and Strathclyde, and the […]

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Gianne Derks and Tom Bridges speak at nonlinear waves conference in Germany

Gianne Derks and Tom Bridges are visiting the Karlsruhe Institute of Technology (KIT) this week (23-27 July) for the Conference on Mathematics of Wave Phenomena. Gianne is speaking in MS12 (Pattern formation and localized structures) and her talk title is "One-dimensional periodic solutions in a three-component reaction-diffusion system". Tom is speaking in MS8 (Geometric methods […]

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Newer 1 2 3 4 ... 138 *Older*

New Directions in Teaching

- Enhanced UG portfolio: MMath Mathematics with Statistics; enhance students' skills in computation and data analysis
- MMath/MSc in Mathematics with Dynamic Data Science
- International dual PhD with the University of Milano-Bicocca – and, for the future, a dual taught MSc.

Thank you

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