MSc in Mathematics – an Introduction

Prof. Ian Roulstone
Head of Department
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

UK Success Stories in Industrial Mathematics

Applied and Computational Measurable Dynamics

Symmetry, Phase Modulation and Nonlinear Waves

INVISIBLE IN THE STORM
THE ROLE OF MATHEMATICS IN UNDERSTANDING WEATHER

IAN ROULSTONE & JOHN NORBURY
See https://blogs.surrey.ac.uk/mathsresearch/
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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