For further information, please contact:

School of Mathematical Sciences
The University of Nottingham
University Park
Nottingham
NG7 2RD
UK

t: +44 (0)115 951 3847
e: maths-pg-admissions@nottingham.ac.uk
w: www.nottingham.ac.uk/mathematics

School of Mathematical Sciences
Postgraduate study

www.nottingham.ac.uk/mathematics

Contents

Welcome to The University of Nottingham

Choosing to undertake postgraduate study is an important decision and I am delighted that you are considering Nottingham for your next step.

Our School of Mathematical Sciences is one of the largest and strongest of its kind in the UK, with 60 full-time academic staff and a diverse community of students creating a stimulating place to work and study.

As a maths postgraduate at Nottingham you will join a thriving department where researchers are pushing traditional boundaries and making discoveries which are changing the world and improving lives. Being part of that community, as a taught or research postgraduate, is an exciting and rewarding experience that will benefit you for life.

This brochure aims to give you an overview of what we do here in the school to help you decide if Nottingham is the place for you. If you need any further information, please don't hesitate to contact us. You are also welcome to visit us at any time – please see page 21.

In the meantime, good luck with your decision-making and I hope to welcome you to Nottingham in the near future.

Professor Ian Dryden
Head of School

Catching up between lectures in the Mathematical Sciences Building, University Park.

About the University

With over 32,000 students from more than 150 countries, two overseas campuses and strong relationships with institutions around the world, Nottingham will help you develop your international perspective and connect you to a global network of leaders, academics and fellow students.

As one of the world's top 100 universities, Nottingham is renowned for ground-breaking research and continually attracts world-class academics and funding from research councils, businesses and industry.

Quality in teaching and research at Nottingham is reflected by the findings of independent assessments. In the latest Research Excellence Framework assessment Nottingham was ranked eighth in the UK for research power with more than 97% of research recognised internationally.

As well as providing world-class academic facilities, we will ensure you receive the guidance and support you need to progress once you graduate. Our Graduate School provides dedicated support for postgraduates, including the Researcher Development Programme which provides training courses for research students, and our Careers and Employability Service offers specialist careers advice and runs a calendar of events and bookable guidance sessions.

We also offer many PhD students the opportunity to spend time overseas as part of their studies. This could be at one of our partner institutions, at our own campuses in China and Malaysia, or at an international conference where you could present your own work. If you have a strong interest in international travel you will have the chance to identify opportunities with potential supervisors during the application process.

When you leave us, you will become a member of our alumni and enjoy a range of benefits including lifetime access to our Careers and Employability Service, invitations to events, and access to a huge network of former students who may prove to be an important part of your future.

Read the latest news from Nottingham at
www.nottingham.ac.uk/news

One of the world's top 100 universities, Nottingham is recognised globally for ground-breaking research and teaching excellence. The University was placed in the top 1% of all universities worldwide in the QS World University Rankings 2014/15 with a ranking of 77th in the world.
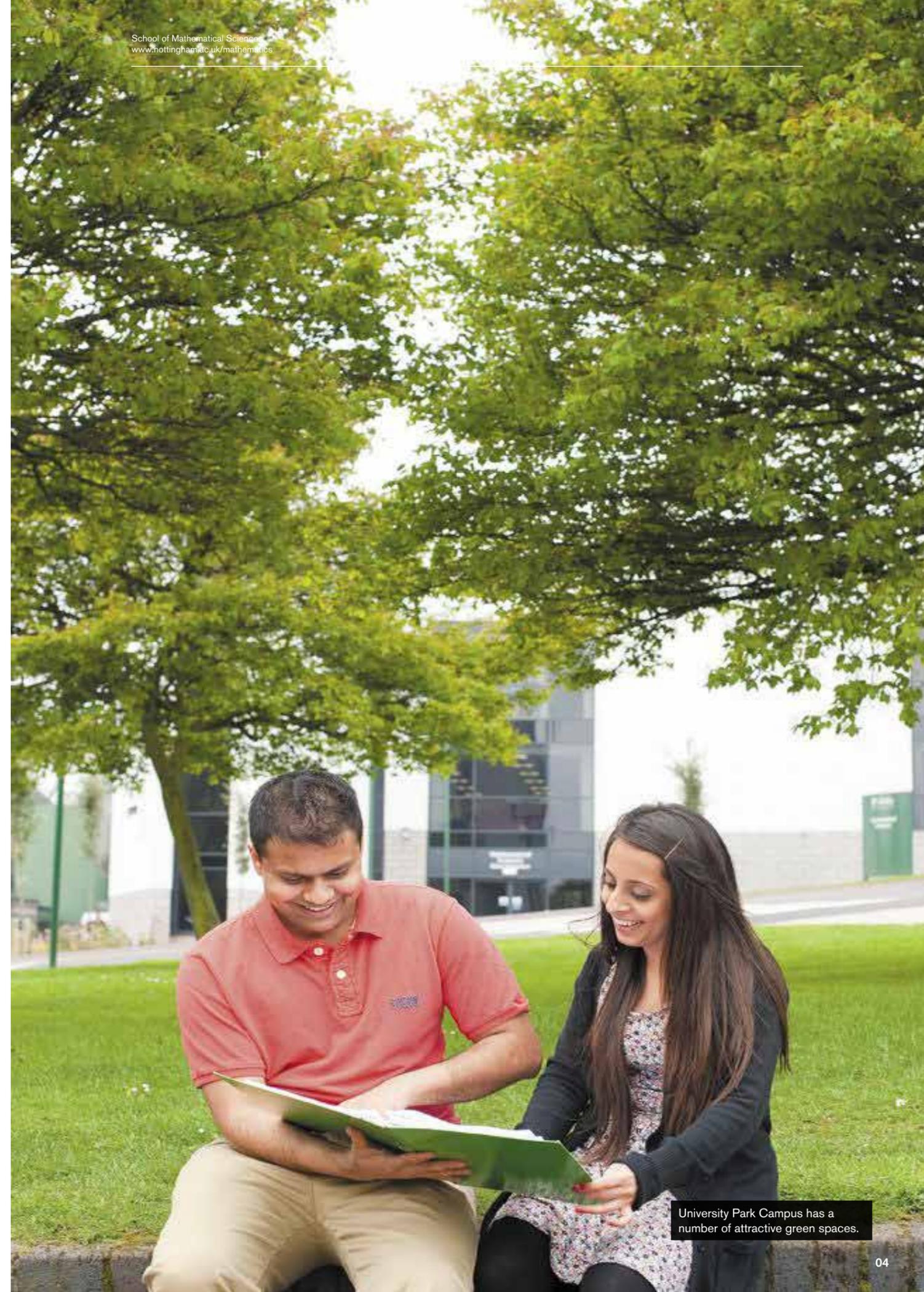
University Park Campus has a number of attractive green spaces.

About the school

Set in the heart of the stunning University Park Campus, the School of Mathematical Sciences has a rich history spanning over 125 years and is a large, dynamic place to study.

The quality of teaching and research in the school is high. In the lastest Research Excellence Framework assessment, more than 88% of research in the school was graded 'world-leading' or 'internationally excellent'. Its research environment was classified as 75% world-leading in vitality and sustainability, with the remaining 25% internationally excellent reflecting the outstanding setting the school provides for its academic staff as well as its postdoctoral and postgraduate researchers. These results place the school in the top 10 nationally within mathematical sciences for 'research power' and 'market share'.

In the 2014 National Student Survey we ranked within the top five of the Russell Group for:

• enthusiastic teaching staff
• access to IT resources and specialised equipment
• providing prompt feedback
• having a well organised course

With a welcoming academic and social community of people from all over the world, Nottingham is a first-class choice for postgraduate study.

Facilities are state of the art and located in a bespoke building that was completed in 2011. It contributes positively to the educational process by carefully integrating academics and students throughout all levels of the building, providing great opportunities for social and academic interaction.

Our masters students have a dedicated computer workroom and research students all have a share of a furnished office. All computers are equipped with specialist software. The nearby George Green science library, which is undergoing a £14m redevelopment stocks many specialist mathematical texts. You can also access free Wi-Fi across the campus.

The environment and resources for carrying out research are among the best in the country with many of our researchers using computational methods, and making good use of our high performance computing facility.

The school also has a MAGIC facility, which is a postgraduate training network comprising 18 british mathematics departments. Using video conferencing technology, you can participate in a wide range of interactive courses.

Find out more about the school at
www.nottingham.ac.uk/mathematics

"I chose the School of Mathematical Sciences at Nottingham because of its reputation for excellent teaching and research facilities. The theory behind statistics is well presented here and lecturers are always willing to help. I was able to build an online relationship with someone at the University before coming here which helped to make it a smooth transition for me from abroad. Coming to Nottingham has been a good experience to develop my career."

**Funmilayo Olaniyan, MSc Statistics
Graduated 2012**

Find out more about Funmilayo's experience at
www.nottingham.ac.uk/go/pgvideo-funmilayo
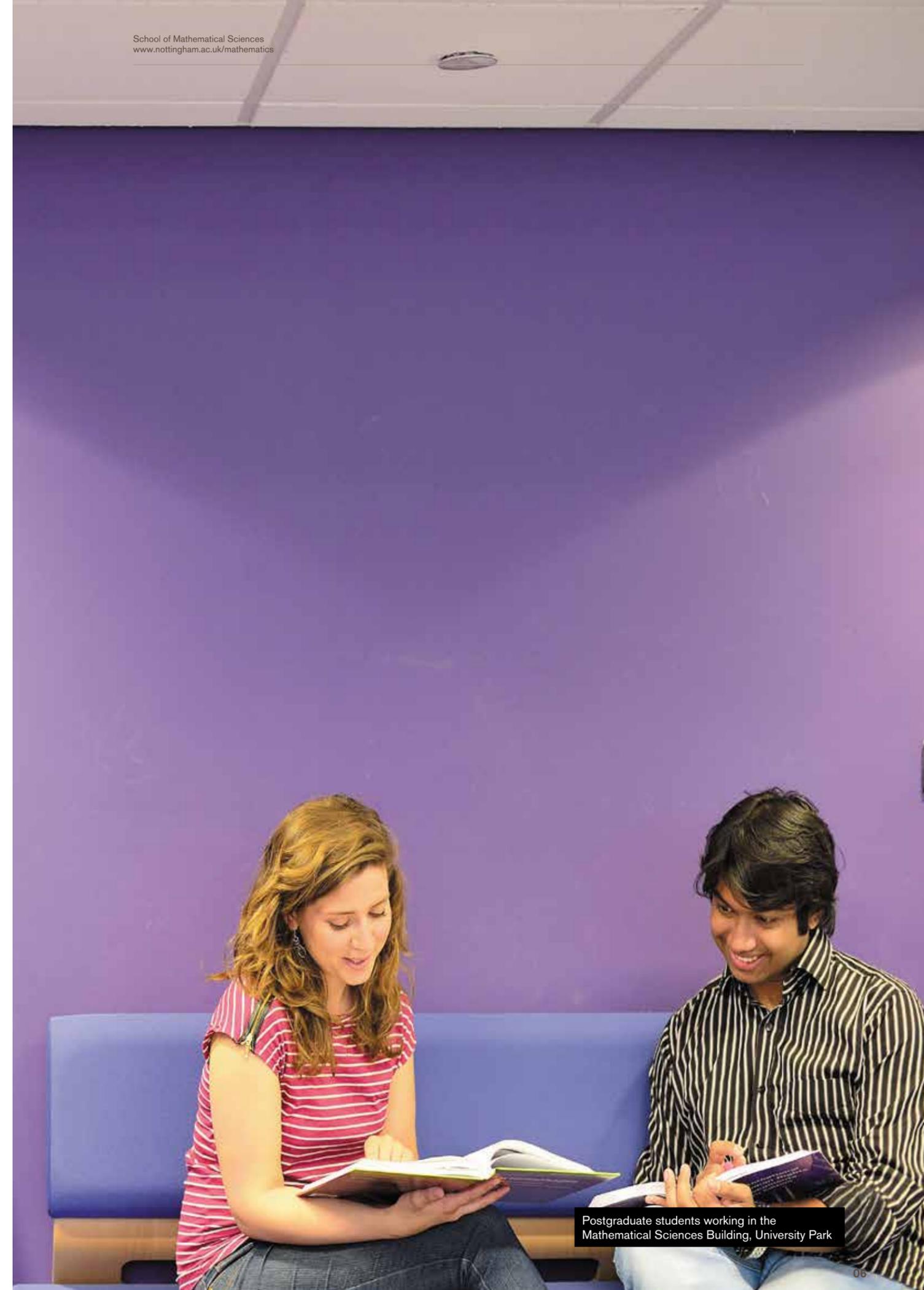
Postgraduate students working in the
Mathematical Sciences Building, University Park

Staff profile

"I did both my undergraduate Mathematics degree and Applied Mathematics PhD at The University of Leeds before taking six months out right after to work in a company that evaluated credit risk, which I really did not enjoy.

I then took a postdoctorate position at Sheffield University before taking a career break to start a family.

I joined the School of Mathematical Sciences at Nottingham nearly 11 years ago and I am now a lecturer. I started out doing part-time teaching which I did for some years as I had young kids and wasn't sure if coming back to research was what I really wanted to do.

After about four years of teaching I decided I did want to stay in academia and got myself a Daphne Jackson "Return to Research" Fellowship after which I was awarded an MRC New Investigator Grant.

My six months out of academia made me realise how much I liked the challenge of doing novel exciting research that no one had any definite answers to yet.

Also I hope outcomes from my research will contribute to a greater understanding of certain biological processes in health and disease. I also enjoy teaching – in particular teaching students about the applications of mathematics to medicine and biology.

At the heart of my enjoyment of mathematics is the challenge of solving problems. That the problems are in biology and physiology makes it even more complex and challenging. Which is even more fun!

I am a member of the Mathematical Medicine and Biology research group within the School of Mathematical Sciences and am particularly interested in understanding the physiology of asthma.

Asthma is an inflammatory disease characterised by airway hyperresponsiveness (constriction of the airways) and airway remodelling (structural changes to the airway wall).

There is no real cure for the disease and it can only be controlled or managed with regular use of inhaled medication – which in many cases does not do the job either.

My group is developing mathematical models of the airway smooth muscle cells that line the airways of lungs which contract excessively when asthmatics breathe in irritants, and how the forces generated by these cells are transmitted to the rest of the airway.

We are also developing mathematical models of the underlying inflammatory processes and the consequence of these processes such as thickening of the airway wall, which further exacerbates the problem.

The aim of this research is to understand the disease better and to come up with potential therapies. By collaborating with biologists and clinicians, we are able to develop models that are informed by biological experiments and real-world data from patients.

Future research plans are to continue to develop models of different aspects of asthma and other inflammatory diseases. In the process my aim is to understand both fundamental biology as well as pathology that arise in disease.

The School of Mathematics has a thriving research environment. But more importantly the people are what make the place – both staff and students are great to work with.

In my spare time I like running, going to live music gigs, reading contemporary fiction, eating great food, playing board games, and most of all, doing those things with my partner and kids."

Bindi Brook
Assistant Professor
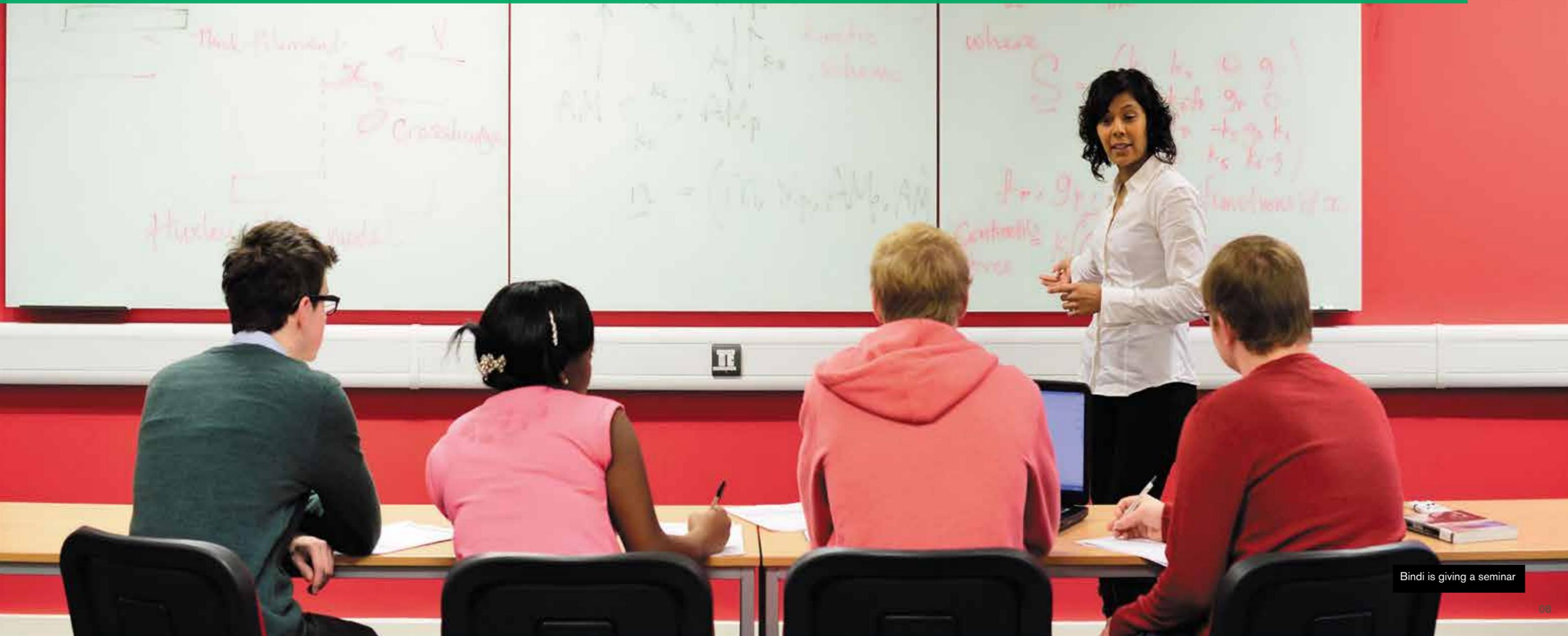
Bindi is giving a seminar

Teaching and taught courses

As a student in the School of Mathematical Sciences you will be taught by academics leading ground-breaking research.

The range and depth of expertise our teaching staff ensures the content of our masters courses is informed by the latest world-leading research. This means you will receive the most relevant and up-to-date information available. Our teaching and training will build your specialist mathematics knowledge as well as your skills in critical thinking, project planning, team-working and IT, all of which are valued by employers.

All courses consist mainly of lectures, with smaller seminar groups used to revisit more complex topics. We offer nine taught masters courses covering a range of areas. Each is taken full-time over one year and is made up of compulsory and optional modules to give you the flexibility to study topics of interest.

MSc Financial and Computational Mathematics
One year full-time
If you are thinking of a career in quantitative finance or would like to do a PhD and have a good mathematical background in mathematics, physics or engineering then this course is for you!

It is focused on stochastic modelling in finance and financial risk management as well as on computational techniques and programming in C++, which are required to enter the competitive job markets of quantitative roles in the financial industry.

Core modules are Financial Mathematics; Advanced Financial Mathematics; Scientific Computing and C++; Computational Applied Mathematics. Optional modules include, Time Series and Forecasting; Options and Futures Markets; Financial and Macro Econometrics. There is also a 12-week long dissertation on a topic related to financial mathematics/financial engineering.

Financial Mathematics and Advanced Financial Mathematics modules cover concepts of financial mathematics, such as pricing and hedging of financial instruments (forwards, futures, swaps, options in equity and fixed-income markets) and credit risk modelling. They also develop knowledge of probability, stochastic processes and stochastic differential equations. The Scientific Computing and C++ and Computational Applied Mathematics modules aim at improving and developing your knowledge of computational techniques and at learning programming in C++.

To ensure that the course keeps pace with changes in employer expectations, it has its own advisory board which consists of leading experts from the financial industry and academia.

For admission the minimum of an upper second class honours degree (equivalent to UK 2:1 or higher) in mathematics, physics or engineering with a strong mathematics background is needed.

MSc Gravity, Particles and Fields
One year full-time
This course provides an introduction to the physical principles and mathematical techniques of current research in general relativity, quantum gravity, particle physics, cosmology and the early universe, and quantum information theory.

The course is taught jointly by the School of Mathematical Sciences and the School of Physics and Astronomy. It provides training in advanced methods in mathematics and physics with applications in a wide variety of scientific domains. The MSc offers enhanced employment opportunities compared to undergraduate degrees, and it is particularly suitable for students preparing to study for a PhD and starting a research career. For those in employment, it provides a route back to academic study.

The programme includes a taught component consisting of closely related modules that provide a solid background in the key areas of the MSc. The taught part is complemented by a substantial project carried out under the direct supervision of a staff member. This allows students to develop their interest and expertise in a specific topic at the frontier of current research, and perfect their skills in writing a full scientific report.

Entry onto the course requires a least a second class honours (2:2 or higher) degree or international equivalent in physics, mathematical physics, mathematics, or joint degree containing substantial elements of mathematics or physics. Previous knowledge of quantum mechanics, special relativity, and methods of mathematical physics is also required.

MSc Mathematical Medicine and Biology
One year full-time
Mathematical Medicine and Biology is a rapidly growing field in which researchers apply mathematical concepts to gain a deeper understanding of biologically and clinically relevant questions. The goal is to establish theoretical foundations of the governing principles of e.g. human health and diseases, animal behaviour or plant development. As such Mathematical Medicine and Biology is a truly interdisciplinary field that combines various mathematical research areas with a wide range of biological and medical subjects.

The aim of the MSc in Mathematical Medicine and Biology is to equip you with sufficient knowledge to pursue a successful career in either academia or industry, e.g. with pharmaceutical companies or healthcare providers. We will train you in advanced mathematical techniques and expose you to a variety of biological and medical applications. We will focus on areas of national and international importance such as neuroscience, cardiac dynamics, cancer, inflammation and plants.

The MSc currently offers five taught modules and one dissertation. During this periond we will introduce you to key modelling concepts and numerical approaches in mathematical biology. In addition we will teach you advanced mathematical techniques that will allow you to successfully engage with today's challenges in biology and medicine. The dissertation will provide you with an exciting opportunity to study a specific topic in more detail. Here you will benefit from the wide range of interests and expertise within the Mathematical Medicine and Biology research group.

Entry onto this course requires at least a lower second class honours degree (2:2 or higher) or international equivalent in mathematics or a closely related subject with a substantial mathematics content.

MSc Pure Mathematics
One year full-time
A research-oriented course in some of the main subjects of pure mathematics, including algebra, analysis and number theory. By the end of the course you will have acquired a broad knowledge of key areas in pure mathematics. This provides tools for further study towards a research degree or a career in sectors where mathematics is crucial.

Algebra deals with structures which help model and analyse many complex situations inside and outside mathematics. Analysis is a powerful tool for understanding and quantifying processes that change according to parameters. The initial impetus for number theorem was the study of properties of rational numbers but now has fundamental applications in areas, including cryptography and computer security.

The course consists of two parts. In the first one, you will take six taught modules from a list of subjects we are offering. In the second you will work on a dissertation under the supervision of one of our staff.

For admission, a least an upper second class honours degree (2:1 or higher) in mathematics or related subject is required. A solid and broad background in pure mathematics is essential.

MSc Scientific Computation
MSc Scientific Computation with Industrial Mathematics
MSc Scientific Computation with Mathematical Medicine and Biology
One year full-time
Scientific computation is an increasingly important discipline which lies at the interface between mathematics, science and engineering. It is concerned with the design, analysis and application of numerical algorithms which can harness the power of high performance computers to simulate real-life science and engineering problems through mathematical and computational modelling. Potential applications range from predicting the weather, through modelling flow and combustion in a jet engine, to developing optimal treatment strategies for cancer.

The range of fields which benefit from scientific computation is reflected by our suite of MSc programmes. The MSc Scientific Computation focuses on the formulation and analysis of fundamental algorithms from both mathematical and computer science perspectives. Our two companion MScs concentrate on the links with industrial mathematics, particularly fluid mechanics, and mathematical medicine and biology.

We aim to provide you with a broad set of analytical and computational skills, along with exposure to a range of application areas reflecting the inherently interdisciplinary nature of the subject. You will encounter problems of both academic and industrial relevance via your taught modules and project work, preparing you either for a career in industry or for research in an area where computational methods play a significant role.

All of our courses have been designed to be accessible, not only to mathematicians, but also to anyone with a good first degree in science or engineering (equivalent to UK 2:2 or higher), as long your degree has significant mathematical content in the areas of calculus, linear algebra, differential equations and numerical methods. Experience in computer programming would also be useful.

The new Mathematical Sciences Building offers many informal study spaces.

Teaching and taught courses

MSc Statistics
**One year full-time
(accredited by the Royal Statistical Society)**
This course offers a modern advanced curriculum in statistics which will enable you to broaden and deepen your understanding of the subject and its applications. Its underlying aim is to provide you with training in specific techniques and skills suitable for a professional career in statistics in a wide variety of areas or as a solid basis for research in the area of statistics in general.

The design of the course is such that you will acquire a core knowledge in statistics, have the opportunity to pursue certain branches of statistics in greater depth and carry out practical data analysis, providing you with some experience of the type of problems encountered by a professional statistician.

The taught component of the programme consists of closely related modules that provide a solid background in the key areas of the MSc. It is complemented by a substantial project carried out under the direct supervision of a member of staff. This allows you to develop your interest and expertise in a specific topic at the frontier of current research.

The course is intended for students with at least a lower second class honours (equivalent to UK 2:2 or higher) degree in mathematics or a related subject with a substantial mathematical content. Some knowledge of probability and statistics would be helpful to start the course.

MSc Statistics and Applied Probability
**One year full-time
(accredited by the Royal Statistical Society)**
This course offers a curriculum which will enable you to broaden your knowledge in both statistics and applied probability. Its aim is to provide training in specific techniques and skills, which will be beneficial for a professional career in statistics or as a solid basis for research.

The design of the course is such that you will acquire a core knowledge in both statistics and applied probability and have the opportunity to pursue certain branches in greater depth and carry out practical data analysis, providing experience of problems encountered in a variety of applications.

The taught component consists of closely related modules that provide a solid background in the key areas . It is complemented by a substantial project carried out under the direct supervision of a member of staff. This allows you to develop your interest and expertise in a specific topic at the frontier of current research.

The course is intended for students with a least a lower second class honours (equivalent to UK 2:2 or higher) degree in mathematics or a related subject with a substantial mathematical content. Some knowledge of probability and statistics would be helpful to start the course.

To find out more about our masters courses visit
www.nottingham.ac.uk/mathematics/masters

Further enquiries can be made by emailing us at
maths-msc-admissions@nottingham.ac.uk

Research opportunities

The range of research activities within the School of Mathematical Sciences is extremely varied – from theoretical research in pure mathematics to generic, methodological research in applied mathematics and statistics. Activities within the school are organised into seven main research groups. These groups cover everything from number theory to quantum gravity, from algebra to epidemic modelling.

There are a number of research degrees available within the school. We currently have around 100 PhD students and a grant portfolio of approximately £13m. A range of both internal and external funding opportunities are available to either support your research or to enhance your curriculum vitae, including internships with industry, travel support for conferences and research visits, and organisation of student conferences. Support is also given to the school from companies and has included Rolls-Royce, Unilever, Pfizer and Network Rail.

The school undertakes multidisciplinary work that crosses our research groups with involvement in the Centre for Mathematical Medicine and Biology (CMMB) and the Centre for Plant Integrative Biology. The CMMB runs an extensive series of workshops and seminars and is home to very active groups of postdoctoral and postgraduate researchers, with substantial funding from UK research councils, the EU and industry. This cross-disciplinary engagement also includes summer schools funded by the Biotechnology and Biological Sciences Research Council and extensive work with clinicians and life scientists.

Algebra and Analysis
This research group covers a broad range of topics in pure mathematics and applied analysis. Algebra and analysis are fundamental to modern pure and applied mathematics. The group has expertise in many different research areas, including combinatorial group theory, geometric group theory, algebraic geometry, quadratic and higher degree forms, A^1-homotopy, non-associative algebras, space-time block codes, functional analysis, Banach algebras, complex analysis, meromorphic functions, dynamical systems, quasiregular mappings, calculus of variations, partial differential equations, applications to material sciences, network analysis and image processing, convexity methods, geometric data analysis.

Big Data
The school is taking the lead in a new 'Big Data' initative, which is a university-wide programme to encourage collaborations between colleagues on various projects.

Big data is generating great interest from business, government, research councils, the media and the public. At its heart it involves new ways of capturing data, extracting information and visualising insights from data, and requires an inter-disciplinary approach to tackle a wide range of new challenges.

There are many areas within the Mathematical Sciences Building for students to interact.

Research opportunities

Industrial and Applied Mathematics

Techniques such as asymptotic methods, bifurcation theory (the mathematical study of changes in the qualitative or topological structure of a given family), and uncertainty quantification (characterising and modelling uncertainties inherent in a scientific problem, and then calculating the impact of those uncertainties on key aspects of interest) are used to tackle real world problems in engineering, industry, physics, chemistry or biology described by nonlinear equations. Areas of expertise include describing the behaviour of particles, solids, fluids or electromagnetic fields, as well as the analysis of waves and patterns.

Members of IAM develop mathematical models of real world problems and analytical and computational techniques for studying these models. We have a wide range of interests, including, but not limited to, fluid and solid mechanics, wave propagation and pattern formation, mainly using ordinary and partial, stochastic and deterministic differential equations, which we solve with analytical and numerical methods. We collaborate widely with colleagues in other research groups in the school, and across the university in science, engineering and other disciplines, as well as within Industry.

Mathematical Medicine and Biology

This group develops models and analysis of biological and biomedical phenomena, in areas that include neuroscience, cancer, respiratory disorders, cardiac function, and the spread of infectious diseases. Core skills of the group include those from nonlinear dynamics and systems biology (the computational and mathematical modelling of complex biological systems).

The largest research group of Mathematical Medicine and Biology in the UK will provide you with tailored training of advanced mathematical techniques that are relevant for answering key questions in medicine and biology.

We frequently welcome medium and long-term visitors supported by various grants including those from EU networks, the Engineering and Physical Sciences Research Council (EPSRC), the National Science Foundation, the Royal Society and London Mathematical Society, as well as postdoctoral researchers funded by the EU and EPSRC.

The school offers a broad range of PhD projects and our staff serve on the editorial boards of a wide range of international journals. We enjoy a great variety of collaborative links, both nationally and internationally. In addition, we participate in the postgraduate training network MAGIC, which comprises 18 UK mathematics departments and runs a wide range of postgraduate courses in mathematics, using video-conferencing technology.

Mathematical Physics

Research in mathematical physics has at its core the investigation of quantum systems, which is the description of nature at its smallest scales, and has lot of spin-off into related areas of physics and mathematics.

One of the key areas is research into quantum information which is the science of information processing and measurements at the smallest atomic scales, with a lot of interest in new technologies and devices. We are particularly interested in understanding how quantum information fits with the usual concepts of statistics and correlations and with Einsteins theory of relativity.

The study of quantum chaos is the harnessing of surprising irregularities and unpredictability in quantum systems, which has application to other wave problems, such as vibration in mechanical or optical systems, that are described with the same mathematics.

Research in quantum gravity is the application of mathematics to nature on very sub-atomic scales, such as at the first instant of the universe. Spin-offs from this work includes the study of gravity at other scales in the universe, fluid analogues of black holes and also a lot of interesting abstract mathematics, such as non-commutative geometry, which is concerned with the geometry of elementary particles.

Number Theory and Geometry

Number theory is one of the oldest parts of mathematics. In its study of fundamental properties of numbers it uses every other part of mathematics and stimulates a variety of new developments in other areas. Number theory remains the most applicable part of pure mathematics through for example coding and cryptography and computer science.

Members of the group use structures, methods and tools of arithmetical and geometric origin to study zeta and L functions, arithmetic geometry, analytic number theory, local number theory, Iwasawa theory, higher class field theories, higher adelic analysis and geometry, higher automorphic forms, geometric and categorical theories and correspondences, computational number theory, and interaction with mathematical physics and model theory.

Scientific Computation

Scientific computation is concerned with the design and analysis of computational algorithms for solving mathematical problems arising within a wide variety of application areas, together with their implementation on high performance computers.

Scientific computation and mathematical modelling are at the heart of today's science. Our dynamic and vibrant research group has internationally recognised expertise in computational PDEs including adaptive discretisation methods, a posteriori error analysis of numerical algorithms and high-order finite element/discontinuous Galerkin methods; multiscale modelling and computation; computational cell biology; computational electromagnetics; computational fluid mechanics; Bayesian inverse problems; numerical integration of stochastic ordinary and partial differential equations; stochastic dynamics and modelling; and computational finance.

Statistics and Probability

This research group covers a very broad range of activity which includes both applied and theoretical research. Two randomly chosen examples of our research are: developing vaccination strategies based on probability models, for epidemics such as ebola or hospital infections, which is not only of obvious practical importance, but also very interesting from a theoretical point of view; and statistical modelling of plant root systems, with the ultimate aim of improving crop yield, which is sure to be an important issue in the future, as the worlds population continues to increase.

Another of our specialities is statistical shape analysis, which is concerned with the study of random shapes, and has diverse applications ranging from human face recognition to the study of the shapes of complex molecules which arise in pharmacology.

We are also interested in developing new techniques of statistical inference, e.g. methods relating to approximate Bayesian computation. It is an exciting time to be doing research in statistics and probability, with many opportunities and fascinating challenges, so please check us out if you are interested.

Uncertainty Quantification

The uncertainties may arise due to unpredictability of parameters, e.g. because in future we can have various scenarios with some probability, or we cannot observe some of the key parameters directly, or there are statistical errors in estimating parameters, or we need to aggregate a large number of factors, or a mixture of these. In addition there could be uncertainties due to the imperfection of the mathematical and statistical models we use to analyse the real-world problem.

The school has an expertise and offers research projects in the very modern area of uncertainty quantification for engineering and biological applications.

Read more about our research groups
www.nottingham.ac.uk/mathematics/research/researchgroups.aspx

Find out about research projects taking place in the school
www.nottinhgam.ac.uk/mathematics/prospective/research

Tom Wicks working in the postgraduate common room of the Mathematical Sciences Building

Funding your course

As a postgraduate in the School of Mathematical Sciences, there are a number of funding opportunities that you could be eligible for, particularly if you are applying to undertake research.

Taught (MSc) students
(UK, EU and international students)
As an MSc student, you could be eligible for funding. The school sometimes has a few scholarships which are allocated on the basis of academic merit. More information can be found at **www.nottingham.ac.uk/mathematics/mastersfunding**

Research (PhD) students
(UK and EU students only)
Applications are invited for fully-funded PhD studentships in any area of mathematics, including statistics and probability. Studentships funded by the Engineering and Physical Sciences Research Council (EPSRC) and Biotechnology and Biological Sciences Research Council (BBSRC) will cover all study fees for EU nationals. For UK nationals, or EU nationals who meet residency criteria, it will also provide a stipend for up to three-and-a-half years.

School-funded studentships and Nottingham University Research Scholarships (URS's) cover all study fees for UK/EU nationals and also provide a stipend for up to three-and-a-half years at the standard EPSRC rate.
www.nottingham.ac.uk/mathematics/researchfunding

International students – taught (MSc) and research (PhD)
The University's International Office offers a wide range of international scholarships. As an international student, you can take advantage of one of the UK's largest scholarship portfolios. Further information is available at **www.nottingham.ac.uk/internationalstudents/scholarshipsfeesfinance**

All students can find further information on funding at **www.nottingham.ac.uk/graduateschool/funding**

Student Profile
Joanne Dunster
PhD Mathematical Biology
Graduated 2012

"Throughout my PhD I investigated mathematical models of soft tissue injury repair. My research contributed to understanding musculoskeletal disorders. I studied full-time and was funded by a grant from the Engineering and Physical Sciences Research Council, topped up by a CASE award from the Health and Safety Laboratory.

I was a mature student and studied with the Open University for my original degree some time ago while working full-time in the IT industry. I applied to Nottingham for a PhD and the project supervisor had already secured the funding and offered me the position. I found the support structure within the School of Mathematical Sciences exceptional.

The cross-disciplinary nature of the research really excited me and has led me to accepting a postdoctorate at Reading University working within a laboratory environment on mathematical models of blood clots. I hope that my experience has encouraged people who are in industry to realise that a PhD can provide a sufficient income to allow for a change in career."

International students

We have a diverse community in the school, with students from many parts of the world creating a rich environment for study.

English language requirements
All courses in the school are taught and assessed in English so it is important that you have a good command of the English language.

Taught (MSc) students
International taught students need to achieve an International English Language Testing System (IELTS) score of 6.0 with no less than 5.5 in each element or a Pearson Tests of English (PTE) score of (Academic) 55 with a minimum of 51.

Students on the MSc Financial and Computational Mathematics must achieve an IELTS score of 6.5 with no less than 6.0 in each element or a PTE score of (Academic) 62 with a minimum 55.

Research (PhD) students
International research students need to achieve an IELTS score of 6.5 with no less than 6.0 in each element.

Our Centre for English Language Education (CELE) runs a number of preparatory English programmes each summer and, for extra support during your degree, you can attend its free language classes. For more information, visit **www.nottingham.ac.uk/cele**

When applying
As an international student, you are advised to submit your application as early as possible. You will need an offer from the University before you can apply for many of the scholarships that may be open to you. You will also need to have an unconditional offer of a place on your course and be able to demonstrate that you have secured funding before you can apply for your student visa.

International Office
Our International Office has an experienced team who can advise and support you during the application process and throughout your time at Nottingham. Staff can help you with arranging cultural, social and sporting events, and queries about immigration, work permits and personal or academic issues. Visit **www.nottingham.ac.uk/international.**

Student Profile
Iker Perez Lopez
PhD Mathematical Sciences

"At the beginning, I really thought the best I could do was to finish my masters and then go back home, or maybe stay in the UK. But once here, well, things change because you find it quite rewarding, you realise what it's like to stay here, to work here and you get to see lecturers, plenty of young ones in here, who really enjoy what they are doing.

I have never lived abroad and I thought it was going to be quite difficult, but here it's actually quite the opposite. From the very beginning you get plenty of socials and you've got this PGSA (Postgraduate Students' Association) all the time they're preparing things. You get to meet people from the UK and people from several other countries, from all parts of the world. So from the beginning you don't feel like home, but at the same time you feel like you're in the same situation as other people.

There's so many people here enjoying it (maths) and the level is really high, it's top rated here. The research is really good. So far all the things I've done here, I've found it really gratifying, really rewarding. So my advice is if you get the chance to come here, this is a really nice place."

Find out more about Iker's experience at **www.nottingham.ac.uk/go/pgvideo-iker**

Planning your career

According to independent research, Nottingham is one of the most targeted university by Britain's leading graduate employers* and over 2,000 companies approach the University every year with a view to recruiting our students.

Employment figures for our mathematical science graduates are high. In 2010/11, over 96% of postgraduates from the school who were available for employment went into employment or further study within six months of graduation with an average salary of £26,800.**

Graduates of our mathematics MScs have gone into industry, business, commerce, statistics (environment, forensic, government, medical), medical research, the pharmaceutical industry, biometrics and PhD study. Our PhD graduates have gone on to further research and university teaching as well as careers in banks and financial institutions.

Careers and Employability Service
Our Careers and Employability Service offers ongoing support for planning your career – and once you are a student here; you will have access to the service for life. Each year the service delivers around 100 presentations where employers visit the University to show you how their business works, how you can apply for a job with them and what they can offer you.

The service also provides:
- skills workshops led by careers advisers and employers
- careers sessions with experienced professionals
- drop-in sessions with employers
- aptitude test practice sessions
- sessions where employers hold interviews on campus
- an annual Graduate Recruitment Fair
- one-to-one careers guidance sessions
- a specialist careers adviser who works solely with research postgraduates
- a resource area containing a range of information including material on around 350 companies
- assistance in finding part-time or temporary work on or close to campus through **www.unitemps.co.uk**
- a website which is updated daily with new graduate vacancies - **www.nottingham.ac.uk/careers**

Find out more at **www.nottingham.ac.uk/careers**

* The Graduate Market in 2015, produced by High Fliers Research
**Known destinations of full-time postgraduates, 2010/11

"The course was excellent and has sparked a lifelong interest in maths developments in my spare time. The campus and halls of residence give a very supportive environment for students with the education on offer being the best in the world. The best thing for me about being a student at The University of Nottingham was the lively city life and the proximity of the Peak District. "

Colin Bolton Applied Mathematics PhD Graduated 2003

Postgraduate students relaxing in the common room of the Mathematical Sciences Building

City life

Right at the heart of England, Nottingham is a vibrant and versatile city, rich with heritage and culture, embracing creativity and originality.

Nottingham is bursting with year-round events and activities for everyone to enjoy, whatever the season: fairgrounds, festivals, fireworks, cultural celebrations, continental markets and music events.

History
Visiting the haunts of Robin Hood, Nottinghamshire's legendary outlaw, is just one way of uncovering the area's history. You can also venture into the city's caves, sit in a Victorian courtroom at the Galleries of Justice Museum or have a drink at Ye Olde Trip to Jerusalem, which claims to be the oldest inn in Britain.

Nottingham Castle is a magnificent 17th century ducal mansion built on the site of the original medieval castle, with spectacular views across the city. The castle has a turbulent past, linked to kings and conquerors, and still has a maze of original caves hidden beneath its imposing walls.

Music
Whatever your musical tastes, Nottingham has something for everyone. The Royal Concert Hall hosts opera and classical concerts, while the huge Capital FM Arena attracts the major nationwide popular music and comedy tours. The legendary Rock City showcases top rock and indie acts, while trendy venues such as the Rescue Rooms and Bodega Social Club showcase the latest alternative acts before they make it big.

Art
Nottingham Contemporary is one of the largest contemporary art spaces in the UK and offers an exciting programme of exhibitions and events. Nottingham Castle holds the first municipal art gallery outside of London, and there is also the University's own Lakeside Arts Centre on campus, a unique public arts centre that presents an eclectic programme of music, dance, theatre and visual art.

Stage and screen
Nottingham Playhouse is renowned for innovative drama, the lovingly restored 18th-century Theatre Royal showcases world-class theatre, ballet and opera, and the Royal Concert Hall attracts some of the biggest names in music, comedy and performing arts. Fans of the big screen have a choice of cinemas – from multiplexes across the city to the independent Broadway, which shows the best in arthouse and foreign language films.

See what our students think about Nottingham at **www.nottingham.ac.uk/go/pgvideo-citylife**

Shopping
If you love to shop, Nottingham offers an enticing mix of high street and vintage clothes stores. All the big names, including Zara, Topshop, Office and H&M, feature within the city centre, while one-off boutiques and treasure troves of antique furniture, jewellery and clothing can be found in the side streets and cobbled roads of the Lace Market and fashionable Hockley. Designer Sir Paul Smith hails from Nottingham and his eclectic style sets the tone for this diverse and fashion conscious city.

Sport
Nottingham has more sports facilities per head of population than anywhere else in Europe*. From ice skating at the National Ice Centre and whitewater rafting at the National Water Sports Centre, to watching Test Match cricket at the world-renowned Trent Bridge, tennis at one of Europe's largest tennis centres, or football at either of the city's famous clubs, you'll never be short of quality sport.

Location
Getting here is easy. Nottingham is less than two hours travel from London, with excellent transport links to the capital and the rest of the UK.

East Midlands Airport, one of the UK's fastest growing airports, is only 40 minutes from the city centre via a 24-hour bus service.

Frequent rail services run from Nottingham to major UK cities, including London every 30 minutes, and the completion of the Eurostar connection at St Pancras International means that passengers are only a few hours train journey from Paris.

Find out more at **www.experiencenottinghamshire.com**

*Nottinghamcity.gov.uk

"Linked forever to Robin Hood and his merry band of men in Lincoln green, Nottingham today is a dynamic mix of medieval and modern… The city boasts fashion designer Paul Smith as one of its own, while the clubs and bars are some of the liveliest in the country."

Lonelyplanet.com

Nottingham is a compact city full of cultural attractions, bars, restaurants and places to visit.

Further information and contacting us

Entry requirements

To apply for one of our MSc courses, you will need a 2:2 (or international equivalent) in a relevant degree, with the exception of our MSc Pure Mathematics and MSc Financial and Computational Mathematics where a 2:1 (or international equivalent) is required. To apply for a PhD, you will need a 2:1 (or international equivalent) in a relevant degree.

How to apply

You can apply online at **pgapps.nottingham.ac.uk**

Accommodation

We guarantee all new Nottingham postgraduate students University-arranged accommodation for one year*. We offer a wide range of accommodation that's conveniently located close to our campuses. With hundreds of self-catered rooms to choose from, you should find something to suit your budget and lifestyle. If you'd prefer to live in the private sector, we can help you find somewhere there too. For more information, visit **www.nottingham.ac.uk/accommodation**

Visit us

You are welcome to visit us at any time. All we ask is that you contact us in advance so that we can help you plan your visit. You can meet staff, view our facilities and find out if Nottingham is the place for you.

Contact us

School of Mathematical Sciences
The University of Nottingham
University Park
Nottingham
NG7 2RD
UK

Postgraduate taught (MSc)

t: +44 (0)115 951 3847
f: +44 (0)115 951 3837
e: maths-msc-admissions@nottingham.ac.uk
w: **www.nottingham.ac.uk/mathematics**

Postgraduate research (PhD)

t: +44 (0)115 951 4963
f: +44 (0)115 951 3837
e: maths-pg-admissions@nottingham.ac.uk
w: **www.nottingham.ac.uk/mathematics**

* The guarantee is for a single-occupancy room for one year. To qualify for the guarantee, you must accept your course place and return your accommodation application by 1 August of the year you are due to start your course.

Connect with us

You can find out about all of our social media channels on the Connect homepage: **www.nottingham.ac.uk/connect**

UoNMaths

@UoNMaths

If you require this publication in an alternative format, please contact us:
t: +44 (0)115 951 4591
e: alternativeformats@nottingham.ac.uk

Printed March 2015.
Design: www.campbellrowley.com

FSC
www.fsc.org
MIX
Paper from responsible sources
FSC® C112090
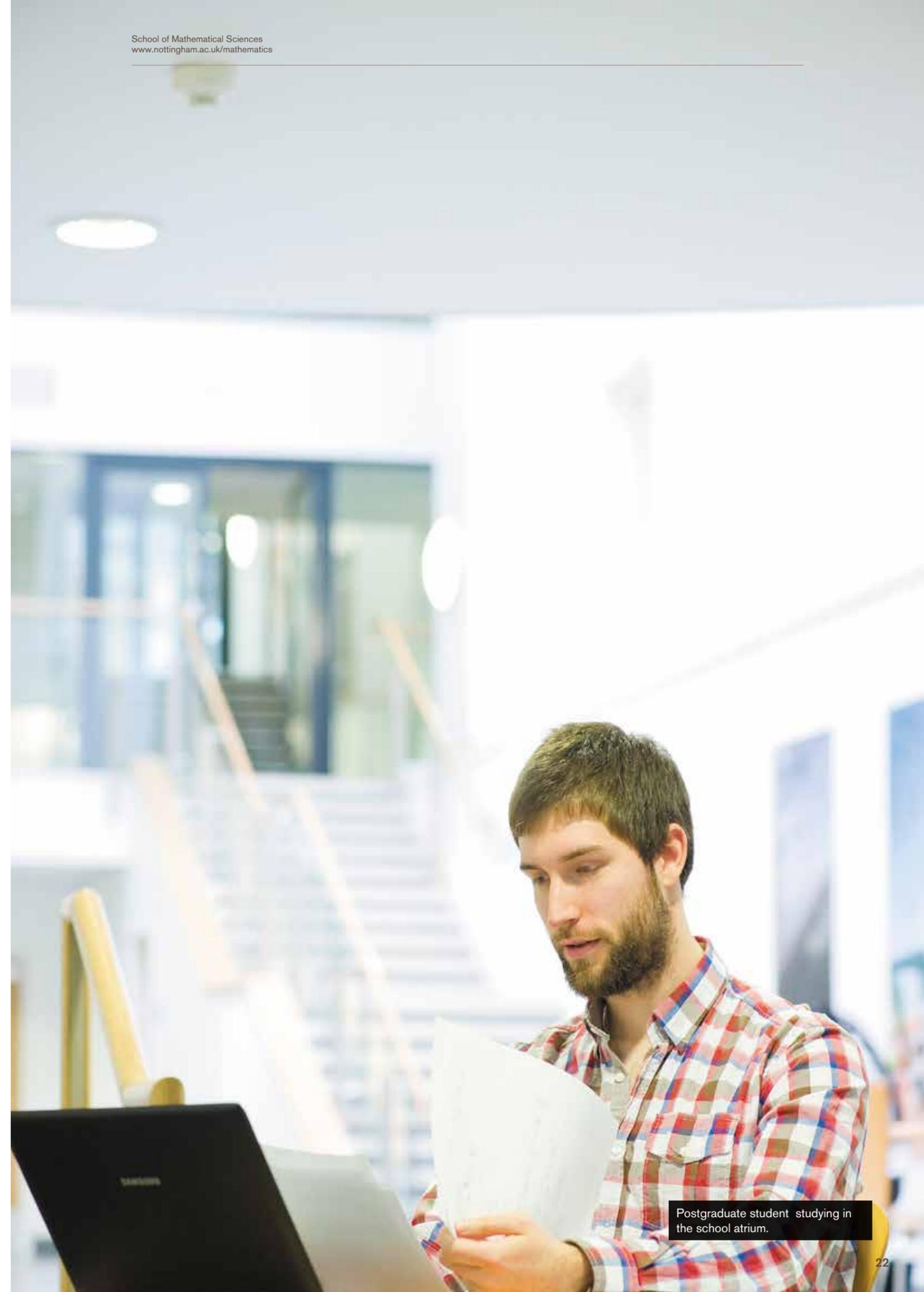
Postgraduate student studying in the school atrium.