UNIVERSITY OF BIRMINGHAM

College of Engineering and Physical Sciences

What do Birmingham postgraduates do?

School of Mathematics

First destinations of postgraduates

- Analysis of first employment destinations for the College of Engineering and Physical Sciences
- Employability data for Mathematics postgraduates, 2009–13
- Illustration of the range of occupations undertaken by our postgraduates

www.birmingham.ac.uk/mathematics

Foreword

I AM DELIGHTED TO INTRODUCE **'WHAT DO BIRMINGHAM POSTGRADUATES DO?'** WHICH LOOKS IN DETAIL AT THE FIRST DESTINATIONS OF OUR MATHEMATICS POSTGRADUATES AND AT EMPLOYMENT PROSPECTS FOR ALL POSTGRADUATES WITHIN THE WIDER COLLEGE OF ENGINEERING AND PHYSICAL SCIENCES.

In addition to providing accessible information on employment destinations, this publication is also designed to give an insight into the kinds of employment sectors and jobs for which a postgraduate degree at Birmingham can prepare you.

Pursuing a postgraduate degree offers you the opportunity to explore your chosen area of interest in depth, as well as developing your knowledge and understanding in a subject area about which you are truly passionate. Beyond the transferable skills that you will take with you into the workplace, your postgraduate qualification will give you the chance to engage in critical enquiry, to grow as a scholar and even to become an expert in your field.

Here, we show you how your postgraduate qualification can help you make that knowledge and expertise work for you after graduation. For the school that is most relevant to you in the College (Chemical Engineering; Chemistry; Civil Engineering; Computer Science; Electrical, Electronic and Systems Engineering; Mathematics; Mechanical Engineering; Metallurgy and Materials; or Physics and Astronomy) you will see a snapshot of the achievements of our postgraduates six months after graduation. All data is taken from the results of a 'Destinations of Leavers' survey issued to our postgraduates after this time.

You will be able to see, by school, how many of the postgraduates who replied to this survey successfully entered employment and/or further study within just six months, along with a range of the diverse and exciting career opportunities that will be open to you after studying for a postgraduate degree in the College of Engineering and Physical Sciences.

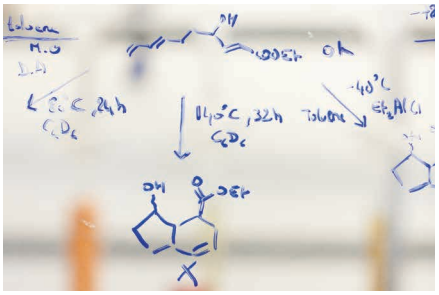
Accompanying the data are case studies in which recent postgraduate alumni share their experiences of postgraduate study at Birmingham. Here, our alumni talk about the value inherent in postgraduate study, the knowledge and skills they developed during their degrees and where their qualifications have taken them since graduation.

I hope you find the information presented here useful and our alumni stories inspiring. We very much look forward to welcoming you to our campus soon.

Director of Postgraduate Programmes
College of Engineering and Physical Sciences

'As a top employer of graduates, we recognise the important role postgraduate study can play in supporting high-calibre, motivated individuals, who are ready to enter the world of professional services.'

Lauren McCafferty,
Student Recruitment Manager, PwC.



College of Engineering and Physical Sciences

Employability

The College of Engineering and Physical Sciences is at the leading edge of modern science and engineering, transforming our understanding of the world to make life easier, healthier and more sustainable.

The College covers a broad range of world-leading research, from developing micro-engines to particle physics research at CERN. With a century of excellence in research and teaching, the College offers exciting initiatives in new fields of study and spearheads activities in strategically important STEM subjects – Science, Technology, Engineering and Mathematics.

The College of Engineering and Physical Sciences plays a significant role in creating new knowledge, training new generations of engineers and scientists, and interfacing with industry.

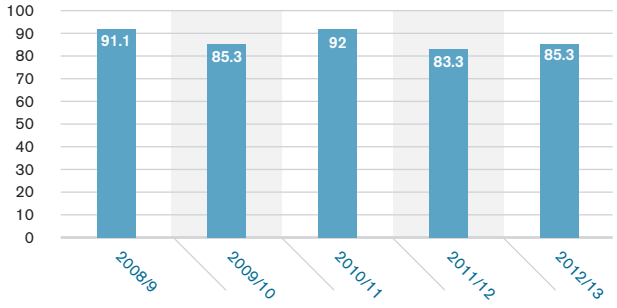
The College consists of the following nine schools:

- Chemical Engineering
- Chemistry
- Civil Engineering
- Computer Science
- Electronic, Electrical and Systems Engineering
- Mathematics
- Mechanical Engineering
- Metallurgy and Materials
- Physics and Astronomy

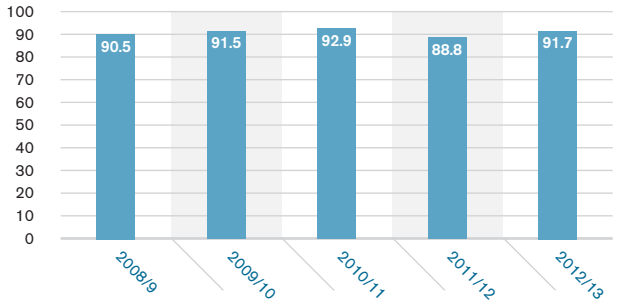
Over the last five years, 90.9% of taught postgraduates and 92.5% of research postgraduates from the College of Engineering and Physical Sciences have been in work and/or further study just six months after graduating.

The two charts to the right show the breakdown of these statistics for each year, for taught postgraduate and research postgraduate respondents.

Percentage of Engineering and Physical Sciences taught postgraduate respondents in work and/or further study six months after graduation



Percentage of Engineering and Physical Sciences research postgraduate respondents in work and/or further study six months after graduation



SOURCE: *Destinations of Leavers from Higher Education Institutions*, Higher Education Statistics Agency, 2009–13

'Studying for a Mathematics PhD at Birmingham was absolutely critical to my career. It led directly to an internship with NAG, from which my current permanent position is a direct result. My PhD involved large amounts of detailed mathematical modelling and subsequent computational implementation. The knowledge I gained in these areas is absolutely vital in my current position as a software engineer developing high accuracy numerical algorithms. It has allowed me to rapidly prototype and contribute to the company's product, both during my time as an intern and now as a professional. Aside from this, the experience I gained presenting my research at international conferences as part of my PhD has been instrumental in my current position, where I have to present the company's flagship products, and demonstrate how to use them, to a wide range of clients, both in academia and in industry.'

Geoff Curtiss, PhD Mathematics, graduated 2009
Geoff is now a Software Engineer with NAG, a globally renowned software company.

LEARN MORE
www.birmingham.ac.uk/pgprofiles

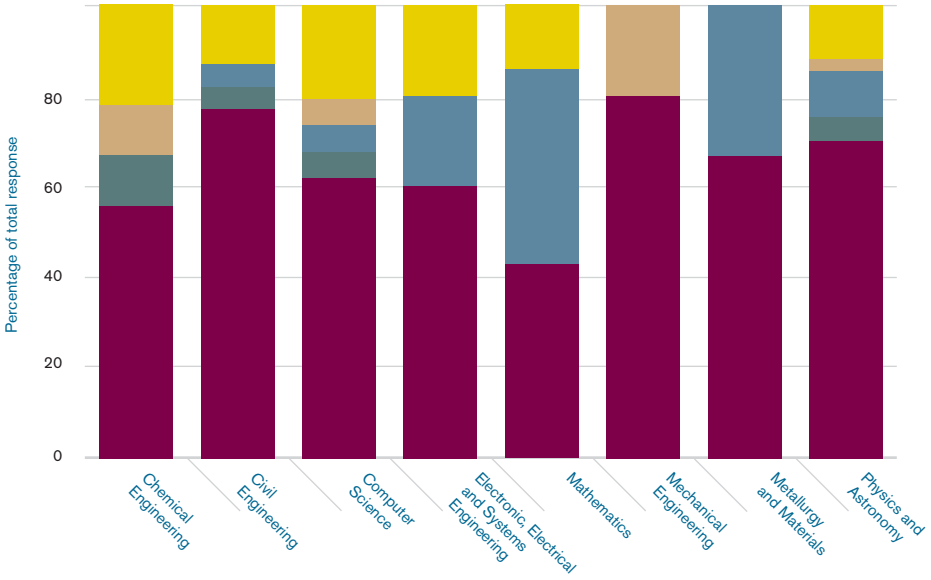
College of Engineering and Physical Sciences

Postgraduate destinations

Taught postgraduate destinations

The chart to the right summarises the destinations of Engineering and Physical Sciences taught postgraduates from the 2012/13 academic year, six months after graduation:

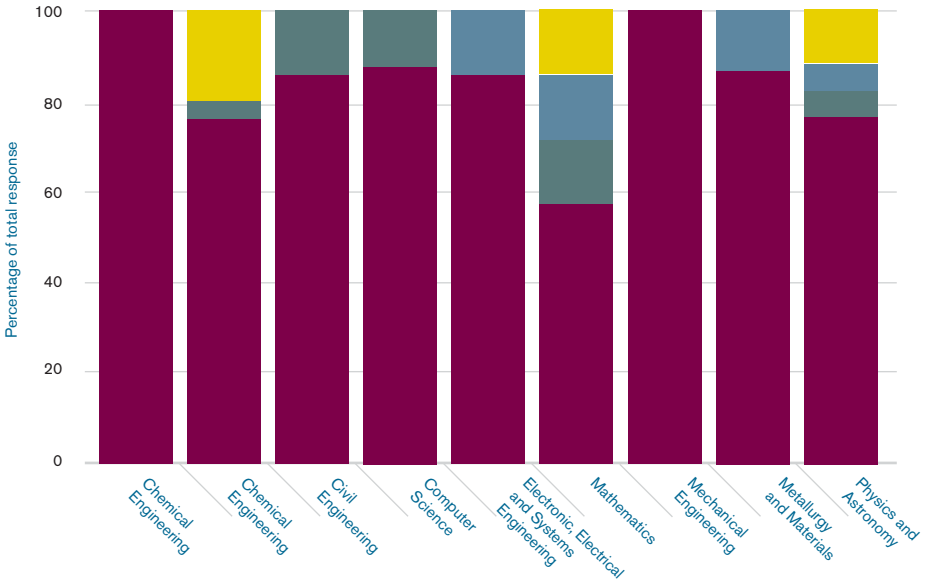
- Working
- Working and studying
- Studying
- Other
- Unemployed



Research postgraduate destinations

The chart to the right summarises the destinations of Engineering and Physical Sciences research postgraduates from the 2012/13 academic year, six months after graduation:

- Working
- Working and studying
- Studying
- Unemployed



SOURCE: *Destinations of Leavers from Higher Education Institutions*, Higher Education Statistics Agency, 2009–13

'I studied for a PhD at the University of Birmingham, in Pure Mathematics. I finished that in 2004, and since then I've come back to the University and I now work here. The time I spent doing my PhD in Birmingham made me realise that I wanted to pursue a career in academia. It really gave me a flavour of what an academic life is like and I learnt that I really enjoyed the lifestyle and doing research. I also built up all the research skills that I needed for my future career in academia, and it really was a great platform studying for my PhD at Birmingham.

'I learnt almost all the skills that I need for my present job. These include skills such as writing academic papers, giving presentations, and the skills required to do the research; the perseverance, finding the correct references and the sort of imagination you need to solve some difficult mathematical problems.

'I think doing a PhD was one of the most enjoyable experiences of my life. It's one of the best decisions I've ever made, so I'd thoroughly encourage people to think about doing a PhD. Talk to potential supervisors; picking a supervisor is a crucial choice that will really affect your PhD. Also, if possible, think about what you are hoping to do afterwards.'

Simon Goodwin, PhD Pure Mathematics, graduated 2004
Simon is now Lecturer in Pure Mathematics at the University of Birmingham.

LEARN MORE
www.birmingham.ac.uk/pgprofiles

School of Mathematics

EMPLOYABILITY

In the School of Mathematics we deliver outstanding postgraduate education that offers a range of exciting career opportunities. We have excellent links with a range of blue chip and financial companies, offering you opportunities to gain valuable employment links

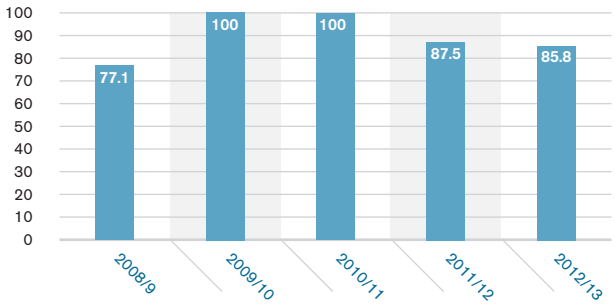
Highlights

Over the past five years:

- 87.6% of respondent postgraduates from Mathematics were in work or further study six months after graduation

Many of Birmingham's Mathematics postgraduates apply the specialist skills and expert subject knowledge acquired during their postgraduate studies to successful careers in a wide variety of industries, including banking, commerce and financial services; consultancy; IT; insurance; energy; software development; electronics; and retail. A significant number of students stay in academia to lead successful careers in teaching and research in the field of Mathematics.

Percentage of postgraduate respondents in work and/or further study six months after graduation



SOURCE: *Destinations of Leavers from Higher Education Institutions*, Higher Education Statistics Agency, 2009–13

RANGE OF OCCUPATIONS

Below is an overview of the kinds of employment sectors, organisations and professions that recent Mathematics postgraduates have entered, based on responses to 'Destinations of Leavers' surveys conducted six months after graduation.

Range of employment sectors

- Accounting, bookkeeping and auditing; tax consultancy
- Advertising agencies
- Computer programming
- Higher education
- Insurance
- Museum activities
- Profession scientific and technical activities
- Security and commodity contracts brokerage

Range of employers

- Direct Line
- Financial Services Authority
- Imperial War Museum
- Maplecroft (risk and strategic consulting)
- Npower
- Omnicom Media Group
- PwC
- Tessella
- University of Cambridge
- University of Oxford

Range of occupations

- Actuary
- Analyst Programmer
- Associate Auditor
- Finance Executive
- Lecturer
- Postdoctoral Research Associate
- Programmer
- Purchase Ledger Assistant
- Risk Manager
- Software Developer
- Teaching Fellow