



THE  
OPERATIONAL  
RESEARCH  
SOCIETY

# Graduate Career Opportunities in Operational Research



# The OR Society's Careers Open Day

Find out about the best careers in operational research (OR), analytics and data science at the next free Careers Open Day organised by The OR Society.

- Listen to talks on OR featuring interesting, real-world case studies.
- Enjoy free lunch and refreshments.
- Find out how maths and science could help create a future career in OR and analytics that is right for you.
- Discuss postgraduate courses with the course providers.
- Meet employers and discuss opportunities in OR and analytics careers.
- Ask graduates about their experiences of working in OR and analytics.

To receive more information and to register for this exciting, free event, please visit The OR Society's website [www.theorsociety.com/CareersOpenDay/](http://www.theorsociety.com/CareersOpenDay/)



**THE OR SOCIETY'S ANNUAL CAREERS OPEN DAY #stemjobs**



Actica Consulting is an expanding management and technical consultancy working on some of the most nationally critical technology projects. We specialise in delivering complex projects to challenging timescales. Some of our customers include the Cabinet Office, the Home Office, Ministry of Defence, HM Treasury, the Ministry of Justice, police, fire services and the NHS, as well as a range of companies across the private sector. We help our customers to determine and resolve their most important management and technical issues and embrace change and harness technology to achieve improvements within their business.

Our focus on an organisation's people, processes and technology gives us a real edge and we always keep the client at the heart of every engagement. We are looking to connect with like-minded, high-calibre graduates to join our 90-strong team of technical specialists. All of our consultants have a detailed and systematic approach to solving even the most difficult problems so, if you crave a challenge and have a numerate or OR degree, please apply at [www.actica.co.uk/Careers/](http://www.actica.co.uk/Careers/)



**Who we are:** The UK's largest team dedicated to data, analytics and technology in infrastructure. We provide our clients with intelligent, strategic insight on asset improvement and ideas to make assets more effective and efficient.

Our agile team is united by the desire to champion infrastructure around us, because 'better places' demand better asset innovations. We challenge the 'why' as much as the 'what' of how consumer behaviour and expectations are changing. As we face the challenges of ageing infrastructure, growing service demand and increasing customer expectations, how we do it makes the difference: client intimacy, detailed thinking and intelligent use of data.

At Amey Strategic Consulting, we have a strong community of motivated and talented individuals where we challenge, encourage and support each other every day.

#### What you'll do:

- Apply your brilliant analytical mind to some of the biggest infrastructure challenges we face.
- Bring your unique experiences and knowledge to a diverse team from a multitude of industries.
- Develop unique solutions to new and unsolved problems in infrastructure, and drive intelligent decision-making.
- Work closely with clients to make informed decisions that improve their outcome. As a member of our team, you'll find we don't silo our skill sets. We encourage development in a wide range of both technical and non-technical skills.

Be a part of something that is growing, challenging and tangible. Be a part of creating better places to live, work and travel.

To find out more, please visit <http://bit.ly/2Po7Fdq>



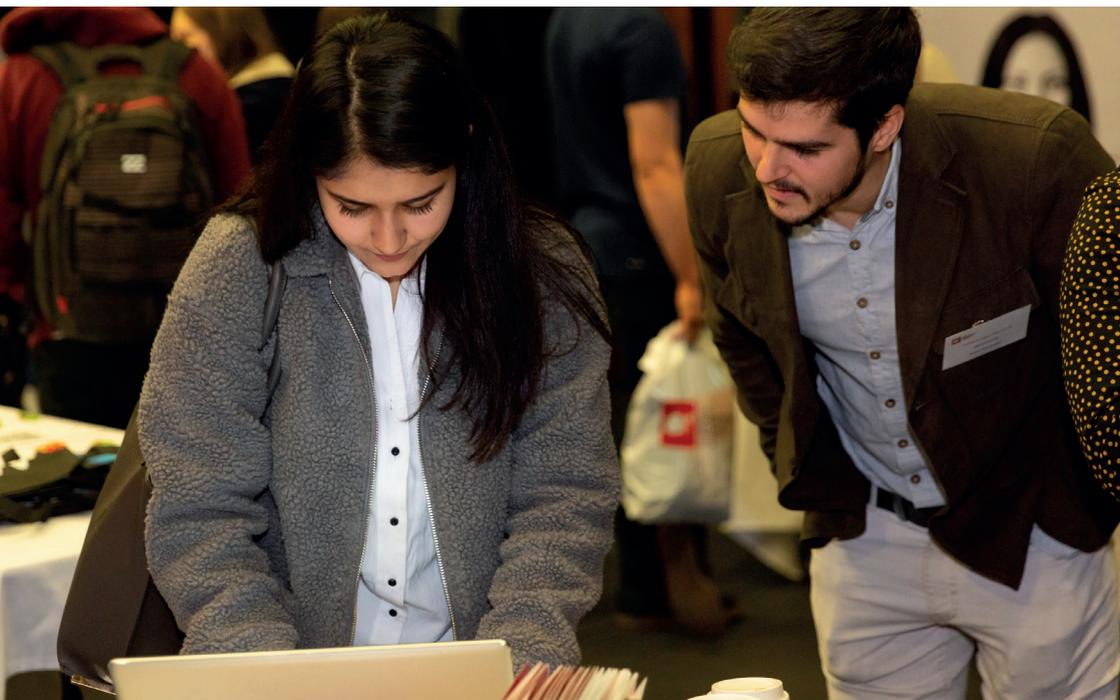
## Aston Business School

Business analytics is the fastest growing discipline in business studies and graduate business analysts are in high demand.

The new BSc in Business Analytics degree at Aston offers a unique mix of general business studies in the first year as a foundation to how more specialised business analytics tools and techniques, presented in the second and final year, can be applied in practice. You will study how analytical and computing tools can be applied in the business setting, to provide businesses with fresh insight and help tackle complex problems. The degree offers a balanced approach of teaching, hands-on practice and training in the relevant tools to prepare students for the wide variety of issues they are likely to face in their professional career.

MSc Business Analytics at Aston University will enable you to embark on a rewarding career in what is already one of the most important and influential functions within business. This course will give you the skills to extract meaningful information from data and guide commercial decision-making. These skills are in huge demand and can enhance your career prospects and earning potential. See here for more information <http://bit.ly/2PRZZwV>

The Business Analytics team at Aston is very research-active with strong consultancy background and business outreach activities and very experienced in teaching quantitative subjects (TEF Gold ranking). See here for more information <http://bit.ly/2Pi511L>



Founded in 1992, BGL Group today is organised in two divisions: Price Comparison and Insurance Distribution and Outsourcing (IDO).

In price comparison, comparethemarket.com is one of the UK's largest and best-loved price comparison sites, and in France LesFurets.com is disrupting the traditional French market.

In IDO, online life insurer, Beaglestreet.com is making life insurance accessible to more people through its easy, fast, online process, and our partnerships business, Junction, is providing insurance through some of the UK's most trusted brands including M&S Bank, O2, Lloyds and the Post Office. Our own insurance brands, Budget and Dial Direct continue to offer a range of market-leading products, tailored to our customers.

We work hard to make sure BGL Group really is a great place to work. We have a brilliant programme of activities designed to let everyone relax, have fun and celebrate. Annual fun days, awards ball, volunteering days are all great ways we come together across our six locations.

Within our data and pricing teams, research and development is at the heart of our way of working. We believe that giving individuals the freedom to be experimental and creative is the only way we'll achieve our business objectives. We're a community of experts from a variety of backgrounds: we exchange and build upon each other's ideas. We take time to learn about the latest thinking in data, including machine learning and feature extraction.

We enjoy what we do and have fun doing it. Find out more at [www.bglgroup.co.uk](http://www.bglgroup.co.uk)

### Julie Brönnimann

Senior Modelling Analyst

I finished my PhD in August 2016 in Switzerland, in combinatorial and geometric group theory. I then quickly began a change in my professional life.

I undertook a six-month internship which, supplemented by online courses, allowed me to learn data science on the job. In August 2017, I moved to the UK. I began to work at BGL Group as a price modelling analyst, and was promoted to senior modelling analyst in June 2018.

I love the work that I do. What we're doing in life insurance is quite unique, and we have to think constantly outside the box. Building new and exciting analytical models from scratch is really rewarding.

BGL has everything I was looking for; we are looked after with a great reward/benefit scheme, and an amazing corporate social responsibility programme. My work has a direct customer impact, it makes me use my brain, and is definitely not repetitive!



### Jumping on a live project straight after induction – that’s what it takes.

Airlines are complex, which means that the industry provides one of the most varied and interesting places for analytics professionals to work. Problems like determining the optimal mix of aircraft to buy for the next 20 years, or how to improve overbooking set up, require you to generate creative solutions, apply advanced analytical techniques and exploit value from current and new data sources.

As a data science and analytics graduate, you will provide crucial analytical input into the projects on our business plan. These projects cover all aspects of the airline from operations to network planning to commercial and have a big impact on the profitability of our company by increasing revenue or reducing costs.

Alongside the on-the-job learning, you will receive training to develop your data science and consultancy skills, which are highly valued and respected across the company. We run skill bytes and knowledge-sharing sessions for the whole community to further build these skills and increase your airline industry expertise.

In the year following the programme, you will have the opportunity to apply for more senior roles within central analytics. We also operate a ‘team move process’ to expand your business knowledge, help us work cross-functionally and deliver the best for British Airways.

To find out more, please visit <http://bit.ly/2yyKH9B>

#### Toby Griffiths

OR and Advanced Analytics Consultant

#### What do you do?

I advise on how to maximise global revenue. My work has included providing reports on the performance of paid upgrades and advising how we should set prices for upgrades in the future; measured the benefit of giving some of our joint business partners (American Airlines and Iberia) better availability for our seats; and provided insight into the performance of ‘special events’ (big sporting events/conferences/school holidays etc.) and how we can maximise revenue from these events.

#### What path did you take to get this job?

I did MMORSE (four year integrated masters) at the University of Warwick and did an internship at the university statistics department at the end of my second year. I then did another internship at Rolls-Royce on the manufacturing engineering scheme before joining Rolls-Royce on their graduate scheme. I stayed there for eight months before joining British Airways.

#### Advice to others

Keep it simple! People think that they have to sound really clever but it’s much better (and often more difficult) to communicate all the information in the language anyone can understand!



The University of Southampton is home to CORMSIS, the largest group of OR/MS and information systems researchers in the UK, with over 30 academics, 60 research students and a community of more than 150 master’s students on seven different MSc programmes.

Our MSc programmes are taught by academics from Mathematical Sciences, Southampton Business School and Computer Science and draw on Southampton’s world-leading expertise in optimisation, predictive analytics, health and transportation.

MSc Operational Research, MSc OR and Finance, MSc OR and Statistics and MSc Data and Decision Analytics are based within Mathematical Sciences, while MSc Business Analytics and Management Science, MSc Business Analytics and Finance and MSc Supply Chain Management and Logistics are based in Southampton Business School. Students on all seven master’s programmes have the opportunity to work on a three-month summer project with an external organisation and we typically attract around 50 external projects a year.

Throughout the year students are exposed to real-world problems from our external partners through case studies, industrial seminars and a dedicated networking and recruitment event in the autumn term. *The Times Good University Guide for 2019* ranked the University of Southampton 12th for Mathematics and 13th for Business Studies nationally.

Visit [www.soton.ac.uk/cormsis](http://www.soton.ac.uk/cormsis)



We are Datatech Analytics, a recruitment consultancy specialising in all roles related to operational research, data and analytics. Datatech is uniquely positioned to offer you unrivalled choice in your first exciting move upon graduation into the analytics arena. We recruit nationwide across sectors including retail, marketing, consultancy, insurance, healthcare and financial services. We will advise you on your CV preparation and guide you through the whole recruitment process – from identifying suitable opportunities and full interview preparation to offer and start date negotiations. We are who you need to speak with.

Please contact us as you approach the last couple of months of your degree and we will start searching for the right opportunities for you. We recruit at a graduate level throughout the year so, even if you’ve taken some well-deserved time out after graduation, we can still help you. Our service to you is free.

Visit [www.datatech.org.uk](http://www.datatech.org.uk) to find out more, send your CV to [commercial@datatech.org.uk](mailto:commercial@datatech.org.uk) or call one of our consultants on 01256314660.

We look forward to hearing from you.



### Who we are

At decisionLab, our mission is to help organisations change and grow by making better, evidence-based decisions. We aim to be thought-leaders within the business of decision-making, to shape the future of how data can be used to make enlightened choices for leading businesses.

We build models and create tools to solve challenging business problems using the latest technologies from data science, analytical modelling and operational research (mathematical optimisation and simulation). Our work has improved systems used by millions of people in the UK within the water, power, security, aerospace and defence industries.

### Interested in joining our team?

If you are passionate about operational research and analytics and are excited by the prospect of solving industry leading organisations' most challenging problems, then we want you as part of our team.

Joining decisionLab means that you will work in a technology company that recruits:

- operational researchers
- simulation experts
- mathematical modellers
- data scientists
- optimisation experts.

Opportunities at decisionLab include internships and graduate initiatives. We provide an excellent setting to gain hands-on experience in using decision-making techniques and tools and working on client projects. We'll give you:

- A challenging but rewarding career with the opportunity to take responsibility right from the start;
- Rapid professional advancement and skill development opportunities;
- Chances to create innovation and fresh ideas;
- Rewards for your hard work with company perks such as automatic rights to flexible working hours and remote working.



Are you passionate about delivering high impact analysis? Do you want to make a difference to the way defence and security operates and protects the UK from real world threats?

Dstl's defence & security analysis division supports the Ministry of Defence and wider government to ensure intelligent decision-making is at the heart of UK defence and security. We use our expertise to innovate and collaborate with industry, academia and international partners and to develop and provide a broad range of impartial evidence-based analysis. This enables us to support high priority decision-making on critical policies and to inform decisions about the design and procurement of battle-winning capabilities.

We use a range of established quantitative and qualitative analysis techniques, from modelling and simulation, data analysis and statistics through to focus groups, table top exercises and war games. We are leading in the development of cutting edge analysis techniques including data science, behavioural analytics and visualisation. We are also assessing new and emerging technologies to understand the risks and opportunities they pose to defence and security.

You will work on a dynamic collection of projects, contributing to a diverse team of specialists delivering critical scientific advice and solutions. You will support the evaluation and development of vital defence and security capabilities, using creativity and innovation to solve real-world problems for real-world customers.

We work at the forefront of defence and security research and innovation, which is a dynamic and rapidly evolving environment. Quite simply, this is work that you cannot do anywhere else.

[www.Linkedin.com/company/dstl](http://www.Linkedin.com/company/dstl)

[www.dstl.gov.uk](http://www.dstl.gov.uk)



THE WORLD'S FIRST  
CUSTOMER DATA SCIENCE PLATFORM

Whether you're looking for a valuable short-term experience or stepping into your first job, dunnhumby (dh) offers a number of opportunities tailored to smart, ambitious students and recent graduates. From summer internships to accelerated training and role rotation, we strive to make our university programmes as challenging as it is rewarding.

Your first few weeks comprise intensive, jump-start training to develop your understanding of dunnhumby's ways of working, the use of our tools and capabilities and industry and technical training on how we customise our work for our clients.

Some of the programmes we offer include:

- Graduate Development Programme (US)
- Graduate Training Programme (UK, India)
- Summer Intern Programme (UK, US, India).

We are very proud of our 18-month rotational programmes in technology and commercial teams across our Manchester and London offices.

They are designed to give graduates breadth and depth of exposure across our business areas. The knowledge and experience that comes from this sets up grads as future innovators and individuals who will be fast tracked into leadership roles within our key businesses.

Interns also gain in-depth exposure to our work, adding value in projects laid out for them over the three months. This is a great scheme to explore if dunnhumby is the place for you and be considered for a place on one of our graduate programmes.

It's a fantastic time to start your career with us. You'll be joining the world's first customer data science platform and be part of our exciting growth plans!



EY is a professional services company employing 250,000 people across 150 countries. Within EY we have a strong and growing OR and advanced analytics practice working across sectors within and beyond the UK.

With great career development opportunities and a strong support mechanism to aide your professional technical growth, we firmly believe that the EY OR and advanced analytics practice presents an exciting opportunity for those looking to pursue a career in OR and analytics.

We place our clients' needs at the heart of what we do and have a proven track record of delivering successful OR and analytics projects. You will find yourself using the full range of both operational research and data science techniques across machine learning, optimisation, simulation and general scenario modelling and, from very early on in your career, experience working closely with clients to solve challenging problems.

For further information on operational research graduate recruitment at EY please visit <https://go.ey.com/2z8JS79>



GOVERNMENT OPERATIONAL RESEARCH SERVICE

The Government Operational Research Service (GORS) supports and champions operational research (OR) across government. It has over 700 members spread throughout the UK.

OR analysts advise the government on how to make the best possible use of public money. With their skills in modelling and analysis, they objectively assess the current situation and how different changes might affect it.

OR analysts work with policy makers, senior government officials and ministers to solve tomorrow's problems today. They use their intellect and creativity to tackle complex problems when often there is no single 'right answer'. They do this by structuring the problem and exploring the key quantifiable aspects before applying appropriate techniques, ranging from quick back-of-the-envelope calculations to complicated systems dynamics models, forecasting, simulation and analytics. OR analysts are there to give objective advice on the most appropriate options for future policy implementation. Their work brings government policy to life and has an impact on everyone in the UK.

#### **Katie Gronow**

Operational Research Project Manager

#### **How did you find out about operational research (OR)?**

I discovered OR during my maths degree at Cardiff.

#### **Can you tell me about your job history?**

Between my undergraduate and master's degree, I spent 18 months working as a technical author for a medical imaging software company. On completion of my master's, I was offered a job at the Government OR Service (GORS) in the Department for Transport (DfT), where I've worked for 12 years.

#### **What skills do you use in your job?**

I started as a junior analyst, responsible for much of the number-crunching and modelling work. I progressed to a senior project manager and then to team leader for four other OR staff members. By the end of my time at DfT much of my time was spent setting up projects and leading a team to build models and carry out analysis. Right from the beginning, I was encouraged to find out as much about the client's business area as possible – it's very rewarding to talk to clients, investigate and understand their business and then help them improve their business delivery or policy-making through evidence from analytical thinking or modelling.

#### **What's the best part?**

Most rewarding of all is the genuine 'thank you' from a client at the end of a project and the conversion of that client into an OR believer!



## Home Office

The Home Office is the lead government department for immigration and passports, drugs policy, crime, counter-terrorism and police. Decision Support for Ops (DSO) provides cross-cutting evidence based analysis, advice and policy support across the full range of Home Office priority areas. We are a multi-disciplinary unit comprising operational researchers, economists, social researchers, data scientists and statisticians who come together to help solve fascinating problems of national importance. By looking closely at complex systems and developing models that capture their behaviour, our analysts bring a new perspective to the way problems are tackled. We also produce a wide range of analyses to deliver insight to decision makers across the department. Projects often involve the opportunity for front-line field work (pilots, trials, observations etc.).

DSO offers a supportive and engaging environment at the heart of government. Our staff are based mainly in our London, Croydon and Sheffield hubs but opportunities exist to work from other locations nationwide. We are regularly recruiting operational research analysts at all levels.

[www.gov.uk/homeoffice](http://www.gov.uk/homeoffice)

### Guy Griffiths

Analysis & Operational Research Programme Lead

#### What do you do?

I lead a small team responsible for gathering, assimilating and analysing external and internal data on incoming UK border flows and customs activity. We then present these in a variety of formats to stakeholders across the Home Office to inform strategic and tactical decisions related to border interventions. The role also involves extensive port visits to understand operational realities on the ground. We are also currently working with data analytics colleagues to optimise the insights our data generates and working to develop a web-based dashboard application.

#### Outside of work

Lots! The coastline, hiking, socialising with friends, cooking up a storm, volunteering with an adult learning disability charity (Gig Buddies), running, current affairs. But mainly having adventures with my awesome little daughter.

#### What path did you take to get this job?

- 2004 – Intelligence Analyst with the Metropolitan Police Service in 2004
- 2010/11 – MSc Countering Organised Crime and Terrorism
- 2012 – Senior Analyst, Principal Analyst at Dstl
- 2016 – Associate Fellow (AORS) accreditation with The OR Society
- 2017 – Analysis & Operational Research Programme Lead at the Home Office



IBM is the world's largest IT and consulting services company, operating in over 170 countries with around 20,000 employees within IBM UK alone. At IBM, work is more than a job – it's a calling: to build; to design; to code; to consult; to think along with clients and sell; to make markets; to invent; to collaborate. It is not just to do something better, but to attempt things you've never thought possible and to lead in this new era of technology and solve some of the world's most challenging problems.

Our advanced analytics and data science team is a small but fundamental part of this, essential to our clients' success. Our strategic analytics consultants are in a team of around 50 consultants who all share a passion for solving problems in the real world. IBM's advanced analytics team perform strategy consulting with an analytical twist, using data, software and strategy capabilities to come up with innovative solutions to solve client problems. We look for highly numerate graduates, especially those with scientific, engineering and mathematical backgrounds, who will become valued members of the team right from the very start of their career.

For more information on joining our team please see our graduate website at <https://ibm.co/2R8sYg0>





### **Analytics Graduate Programme**

**Winner 'Best development programme' DATAIQ Awards 2018**

#### **About**

At Jaguar Land Rover (JLR) we are continually redefining the benchmark for excellence and setting the standards that others want to follow. Analytics is set to be a key source of competitive advantage for JLR within the industry and we are at the heart of this, creating value, driving profitable growth and making JLR more efficient and agile.

#### **What to expect**

The analytics graduate programme recently won the 2018 DataIQ Award for the 'best development programme'. What our current graduates like best about the programme includes working on high-profile projects while learning from experts, investment in their development through training and dedicated development days, exposure to senior management, access to and training on best in class analytics tools and the ability to drive real change within the business.

The first year will enable you to build a strong foundation in analytics, including problem structuring, data wrangling, modelling and visualization, machine learning and analytics strategy. The second year will focus on developing a specialism within analytics (data science, data engineering, data analytics and project and programme management), completing a secondment to another business function and taking on mentoring responsibilities for new graduates.

#### **Where it will take you**

This award-winning graduate programme aims to create leading analytics professionals of the future who are excellent subject matter experts recognised by both business and industry as value-creators and innovators. This programme will establish you on a strong career path within analytics and offer up a choice of different future career tracks within JLR.



Graduates from our MSc in Business Analytics are highly prized by employers. MSc Business Analytics will equip you for careers as a management consultant, business analyst, policy analyst, marketing researcher, operations researcher or data scientist.

You will develop rigorous modelling, analytical and consulting skills to understand, manage and communicate actionable insights from 'big data' to inform business decisions and government policy.

Study at a Top-10 UK business school accredited by AACSB, EQUIS and AMBA:

- Commercial consultancy project opportunities
- SAS sponsor a student prize
- IBM teach on some modules
- Scholarships worth up to 20% fees for the best candidates
- Industry collaborators include IBM, TUI, Npower, BT, SAS & British Airways.

Find out more at [www.lboro.ac.uk/sbe/bac](http://www.lboro.ac.uk/sbe/bac)

#### **Vinisha Nambira**

MSc Business Analytics Consulting graduate

The lecturers are fantastic, they're at the forefront of their field and are well published researchers. The analytics skills, thought processes and ability to uncover insights from data really equip you to add value in the corporate world.

# movement

strategies

We've been breaking new ground in people movement consultancy and analytics for over a decade. We have a reputation for pushing the boundaries of capability and excellence in the discipline of people movement. Our work transforms the way people experience a space to drive better business performance.

We combine expertise in the collection and analysis of movement, behavioural and demographic data with a proven track record of design and operations consultancy for the built environment. Our integrated service offering of movement consulting and movement analytics, together with our movement insights SaaS product, uniquely positions Movement Strategies in this exciting and rapidly developing field. As the largest specialist in its field, our international and multi-disciplinary team includes data scientists, operational researchers, transport planners, engineers, urban planners, psychologists, criminologists, and venue and event managers.

Headquartered in London, Movement Strategies has worked with a range of high-profile clients including London 2012 Olympics, Tottenham Hotspur FC, The O2 Arena, Rugby World Cup, The All England Lawn Tennis and Croquet Club, Glastonbury, O2/Telefonica, Network Rail, Transport for London and Historic Royal Palaces.

For more information, visit [www.movementstrategies.com](http://www.movementstrategies.com)

## Jake Hamer

Consultant, Movement Strategies

I joined Movement Strategies (MS) as a consultant four months ago and have worked on a variety of projects, including stadia, transport, events and research. The broad range of projects at MS means there's always something interesting going on and the company has made it really easy for me to work across different areas and are keen to make sure everyone can work on the things that interest them.

MS have also encouraged me in my ambition to gain a professional qualification and have shown support for me in my development. They have a genuine desire to help employees develop their skills and have a promote-from-within culture with excellent career prospects in the company. Overall, I think the first stages of my career with MS have been really interesting and engaging, and I'm looking forward to future projects and opportunities with the company!

# NATS

NATS is the UK's leading provider of air traffic control services. Each year we handle around 2.5 million flights and 220 million passengers in UK airspace. In addition to providing services to 12 UK airports, we work in more than 30 countries around the world including Spain, the Middle East, Asia and North America.

The analytics team provides innovative analysis and insights into NATS air traffic, project, and business operations. Our team of analysts undertake complex work in areas including safety analysis, airspace capacity, runway capacity, environmental performance, post-operational event analysis, traffic forecasting and performance monitoring. The department undertakes a significant programme of external business around the world to a number of international clients.

Visit our website to find more about NATS, [www.nats.aero](http://www.nats.aero), and careers or industrial placements with us, [www.nats.aero/careers](http://www.nats.aero/careers)

## Fiona Roche

Research Analyst, NATS

Qualifications: MSc Operational Research (University of Southampton) and BSc Mathematics with Business Management (Aberystwyth University).

### How did you end up in your current role?

After completing my MSc in Operational Research I started work as a research analyst for NATS in the analytics safety team. Although I have only been with the company a couple of months, I have already learnt that there is extremely high demand for operational research within the business.

### What skills (both OR and non OR) do you use in your job?

I am using operational research skills on a day-to-day basis. I am coding in R and using company-specific statistical software (e.g. Excel, ArcGIS and R) to format data and to build models. I provide data analysis and interpret results for others. Good communication is essential as at times I need to explain results to people with limited knowledge of the software and/or analytics. In addition, I am working on a number of projects with different deadlines, so good time management is essential. The great thing about working for NATS is that my job will evolve over time; for example, I'll be able to learn different tools and applications for a wide range of different projects, as well as working with a wide range of people with different skill sets. This will allow me to display and teach my OR skills to others.



RBS is often featured in the media and you've almost certainly heard or read about us. But how much do you know about the great work that goes on behind the scenes? We're a UK-based bank, headquartered in Edinburgh, with a long history. We work across several UK brands including The Royal Bank of Scotland and NatWest. We serve all sorts of customers, from high street customers to wealthy individuals, entrepreneurs to corporate companies. RBS has hundreds of modellers and analysts working with data every day and these teams help RBS make better decisions.

We use OR tools to improve the customer experience, marketing and efficiency and to understand and manage risks. As our chief risk officer put it, "we manage risks for a living". We need to make sustainable decisions which are right for our customers and we need to make these decisions quickly. There are regulatory requirements that cannot be fulfilled without models. We also keep our eye on fraud, the crime fighting part of our remit!

In the past, we lost sight of our customers. We aimed to expand and become the "biggest". Now we have refocused – we're aimed firmly at the UK market and our vision is to become number one for customer service, trust and advocacy. Our modelling and analytics teams have an important part to play in achieving this vision. If you'd like to find out more about joining our teams, search 'RBS jobs' on the internet. We look forward to meeting you.

### Heather Inglis

Risk Manager, RBS

#### Can you tell me about your job history?

At the end of my degree I worked as a research assistant in the economics department. I started working at RBS in the financial crime department, which gave me the skills and business knowledge for risk modelling. As a senior analyst, I gained technical experience and progressed to manager level.

#### What skills do you use in your job?

Investigating and understanding patterns and trends within data is a huge part of what we do. A statistical background is crucial for practical applications of concepts. Understanding data and how business processes work to influence what we see in data is fundamental to building good models. As I've progressed, people skills, communication and team working have become more important.

#### How do you think your mathematics background helps you?

I use statistics knowledge daily; it underpins all the models we work with. I apply problem-solving approaches to every project.

#### Were you aware of the range of mathematics careers available?

I had a vague idea of the types of companies that would recruit but not much more than that. Once I got into RBS, I was able to see more opportunities.

# Roke

Part of the  
Chemring Group

Roke is the UK's leading provider of independent research, development and consultancy in technology. We have 60 years of experience behind us and fuel our clients' success with a forward-thinking team that combines some of the finest engineering, scientific and mathematical minds in Britain.

Roke's business is to understand our clients' key issues to provide end-to-end tailored solutions. With extensive experience in cyber security, communications systems, electronic sensors and information assurance and in both the civil and military domains, we understand the technical complexities of modern and future systems. Our team of over 350 engineering consultants develop new concepts, capabilities and systems to protect what matters most to our clients.

Whether you are developing a technology concept, analysing a critical function, prototyping for validation or demonstrating a capability, Roke has an established track record of delivering:

- Advisory Services
- Applied Analysis & Experimentation
- Big Data Exploitation
- Communications Infrastructure & Information Management
- Business Consultancy
- Cyber Security
- Electromagnetic Intelligence
- Intelligent Sensors & Unmanned Systems
- Test & Evaluation Services.

We're investing in our future, driving innovation and constantly looking for ways to better serve our customers. That's tough work and while expecting you to be brilliant, we also offer you brilliant benefits in return.

[www.roke.co.uk/careers/graduates](http://www.roke.co.uk/careers/graduates)

# STOR-i

excellence with impact

STOR-i, the EPSRC Centre for Doctoral Training in Statistics and Operational Research in partnership with Industry, is a pioneering four-year PhD programme at Lancaster University which was established in 2010. Using industrial challenge as the catalyst for mathematical innovation, the centre develops future international research leaders. Industrial partners include ATASS, BT, Morgan Stanley, Rolls-Royce, Royal Mail, Shell and Tesco. Many of our PhD projects are developed and involve substantial collaboration with our industrial partners, providing a unique research and training experience.

Our cohort-based PhD programme offers a unique style of doctoral training, which provides an opportunity to:

- be part of a diverse and exciting new group of researchers
- co-operate and interact with like-minded peers
- work directly with high-profile industry partners
- open up real potential for rapid career progression
- make significant scientific and industrial impact with your research.

Our MRes (research master's) and PhD students are leading the way in statistics and operational research, developing mathematics to solve real-world problems which can make a difference to business and society. So, if you're finishing your degree, hoping to get top results and want to make your impact through research and industrial partnerships, why not consider applying to STOR-i? Find out more at [www.stor-i.lancs.ac.uk](http://www.stor-i.lancs.ac.uk)



TUI Group is one of the world's leading international leisure travel companies, with more than 20 million customers from 31 source markets travelling to 180 countries worldwide. There is significant emphasis on using data and analytics to drive decision making across the whole business. Key areas of focus include yield management, web optimisation, customer segmentation and aviation planning.

For more information, please visit <http://bit.ly/2z0i04Y>

### Amiy Chatley

Digital Analytics Manager, TUI Travel

#### What is your job title?

I work for TUI Travel as digital analytics manager for marketing.

#### What do you do?

My job involves managing a team of other analysts, helping to look at customer interactions with our websites (attribution), with our brand (econometrics) and with the many marketing channels (Google/Facebook, etc.).

Day-to-day, I interact with senior stakeholders throughout the business, making sure that we are following the numbers and constantly increasing the number of smiles we bring to our customers.

#### What path did you take to get this job?

I started out agency-side, working on marketing campaigns, moving in to the research and analytics arm just as attribution was really taking off. About five years ago I moved over to TUI to lead the attribution function, which has since grown into the broad role I now inhabit. While the career path makes sense, from this point it certainly felt like loosely-controlled chaos at the time!

#### Advice to others

Don't be closed to opportunities in a sideways field. I studied robotics and would never have thought that marketing would hold my interest. Work is what you make it and, with enough experience, you can create your own space within any organisation.

University of  
South Wales  
Prifysgol  
De Cymru

Widely recognised for its excellence in teaching, graduate employability and professional accreditations, mathematics at the University of South Wales (USW) offers a stimulating and supportive environment. The Institute of Mathematics and its Applications (IMA) also accredits our BSc (Hons) and MMath (Hons) courses.

If you have an analytical mind, can think logically and enjoy the challenge of problem solving, mathematics at USW will allow you to develop a wide range of skills that are sought-after in many professions. With modules including operational research, management science, applied statistics, algorithms and software tools, our graduates are highly prized by employers who value their logical thinking, problem-solving skills and expertise in specialist industry-standard software tools. You can also spend up to a year in the workplace as part of your course.

The results of the National Student Survey 2018 found USW is rated joint top in the UK for student satisfaction in mathematics and statistics, so you'll be taught by approachable and enthusiastic tutors. Students frequently praise the friendly atmosphere and the high level of guidance and support they receive from all staff.

Our small class sizes mean you will get all the support you need. Our mathematics lecturers have an open-door policy and our staff are available from both an academic and pastoral standpoint, and care about the entire student experience.

When studying these high-level aspects of mathematics, you can be assured you are not only being taught by experts in their field, but mathematicians who are passionate about their areas of study.

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**Since September 2014, The OR Society has offered free membership to students. There are many benefits to our membership package, including:**

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THE  
OPERATIONAL  
RESEARCH  
SOCIETY

## WHAT IS OR?

Operational research (OR) is the science of better decision-making and OR people work to find effective approaches to real-world problems by using maths and science. The OR Society is the home of the operational research and analytics community. We promote the understanding and use of operational research in all areas of life, including industry, business, government, health and education.

The society is a registered charity which offers professional training and accreditation, encourages students to engage with STEM subjects and facilitates pro bono consultancy services.

## WHAT IS OR IN SCHOOLS?

The OR in Schools (ORiS) project supports teachers, lecturers and educators to promote operational research (OR) in education.

We aim to raise awareness of the real-world applications of OR, maths and science and highlight potential careers. We do this with the help of our invaluable volunteers who visit schools, colleges and universities to give talks, attend careers fairs, run interactive workshops and give presentations on recent projects.

We maintain a library of free teaching resources, case studies and career profiles and regularly work with similar organisations to promote STEM.

Seymour House  
12 Edward Street  
Birmingham  
B1 2RX

**Phone:** +44 (0) 121 233 9300

**Email:** [schools@theorsociety.com](mailto:schools@theorsociety.com)

**Twitter:** @TheORSociety @ORinSchools @ProBonoOR

**[www.theorsociety.com](http://www.theorsociety.com)**