

## Master's Scholarship Winners

For the academic year 2024/2025, we have one new master's student who is about to embark upon their studies, with the help of OR Society sponsorship.

Meet our newest scholarship student:

### **Alice Locker**



Hi, I'm Alice, and I'm thrilled to have received this year's OR Society Master's Scholarship. I am extremely grateful for this opportunity, which has made it possible for me to progress to postgraduate study, and I am determined to take full advantage of all it offers.

I moved to Edinburgh from Birmingham four years ago to study Mathematics at the University of Edinburgh, and have chosen to stay on for the MSc in Operational Research with Risk. Outside of my studies, I enjoy baking, crocheting, and, when the Scottish weather allows, playing tennis. After three years focused mainly on pure mathematics, I opted for applied courses in my final year, with the exception of Galois theory, which I couldn't resist after hearing it described as the crown jewels of undergraduate mathematics! During this year, I was able to take several modules from the OR programme, covering areas such as statistics, machine learning, and financial risk, uncertainty and optimisation. I thoroughly enjoyed these modules, and they reinforced my decision to pursue a career in OR. With such a wide range of courses on offer, having completed some in advance allows me to explore an even wider variety this year.

I was first introduced to OR techniques through a decision maths module in A-Level Further Maths. Despite finding the manual calculations tedious, the

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experience sparked a lasting curiosity about optimisation and its applications to problems we encounter in everyday life, in particular routing and scheduling problems. It is for this reason that I am particularly excited for my second semester course 'Risk and Logistics'. At the time, I was keen to apply what I had learned to find the most efficient routes between my Sixth Form classrooms, a problem that now feels trivial since discovering the power of optimisation software! I'm eager to learn more about these methods and how they can be applied to increasingly complex and meaningful challenges.

I am currently preparing job applications, and while I have not yet decided on a specific industry, I am confident that the versatility of this degree will equip me to pursue roles across a diverse range of fascinating sectors. I am deeply appreciative of the support provided by this scholarship, which has allowed me to focus fully on my studies. I look forward to attending a number of upcoming events, including Careers Week, as I continue exploring the many exciting opportunities this course and scholarship have to offer.

Other recent winners:

## **Jennifer Styles**



Hi, I'm Jay or Jennifer, and I'm very excited to receive this year's OR Society Master's Scholarship. This is a huge opportunity, and I can wait to learn more Operation Research! I'm from Hasting, a seaside town in the south of England and I like to spend my time reading or crocheting while listening to metal.

I've just completed my bachelor's degree in mathematics at the University of Southampton and I am going to continue my studies there for my masters. Three years ago, I chose to study maths because it seemed like a broad subject and I had enjoyed it at school. I didn't really know what I was getting myself into (I still have nightmares about a 24-hour exam on group theory), but luckily for me I found that I enjoyed statistics and more importantly operational research.

Having figured out the parts of maths that I liked; I still didn't really know what to do next. I considered continuing with a master's degree or getting a job or even going into teacher training. That was until I found out that the OR master's course had a lot of stats in it too. I am particularly excited for the stochastic OR part of the master's course because it will combine my stats knowledge and includes more applications for my statistical theory.

I don't have a specific job in mind for when I'm done but I would like to apply myself to sustainability and I hope to use my knowledge to better commercial practices for example reducing CO2 emissions in food or business production, optimizing supply chains and distribution to generally enable businesses to be less environmentally impactful. I wanted to focus my third-year maths project on renewable energy and specifically weather prediction. In the end, my project was about using time series to forecast temperature in Southampton. I really enjoyed working on this as I gave me a chance to learn about something

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completely independently instead of watching lectures and it served as a great introduction to a part of maths that I knew nothing about.

Last summer I did an internship for the NHS in population health management and introduced me to the world of data science. It also showed me the importance of socioeconomic factors in health, and I would like to learn more about this and apply some of what I have learnt from an operational research perspective.

I am incredible grateful to have this scholarship and I am looking forward to starting my master's learning more in depth about this fascinating area of mathematics and seeing where it takes me in my career and future.

## **Lola Gripton**

Hello, I'm Lola and I'm this year's recipient of the OR Society's Master's scholarship.

First and foremost, I would like to thank you for accepting me into the OR Society and for facilitating my studies.

I was born and grew up in Sheffield, a landlocked city built on hills. I then moved to Southampton to do my BA, during which I did a year in Hamburg as my study year abroad.

Both of these port cities offered sailing opportunities and I took full advantage. I have now moved up to Edinburgh - home to both hills and sea. Here I am very excited to be starting my Operational Research MSc at the University of Edinburgh.



However, I didn't always know that I wanted to study operational research – in fact I only decided this in October last year! So how did I arrive here?

I am, and always have been, passionate about maths. This, along with my deeply inquisitive nature and sense of adventure meant that studying mathematics and philosophy (with a study year abroad) at the University of Southampton was a perfect fit! It's been entertaining seeing people respond to this combination of disciplines – quite a lot of the time the first response is "That's a weird combination!".

Whether 'weird combination' was used to mean an 'uncommon combination', a 'strange combination' or an 'unnatural combination', I have, over time, honed my response: it's not weird at all, as the core of both disciplines consists of both logic and argumentation, which only differ in that maths produces proofs and philosophy arguments.

Throughout my studies I chose maths modules wherever possible and all the logic modules in philosophy. I even managed to use Cantor's Set theory in an essay about God's existence (the piece of work that I'm most proud of). When the time came to decide on pursuing one subject over the other, the choice was already apparent.

It was always going to be maths, but I only discovered Operational Research during the latter part of my bachelor's degree. Both the theory and the real-world applications appealed to me, and so I chose it as my dissertation topic – specifically inventory modelling for a charity supplying sanitary products. During this process I read mathematical papers for the first time and was exposed to operational research's actual applications.

I also saw and learnt about another application of optimisation during the STOR-i internship at Lancaster University, which I did this summer. Here, we undertook independent research projects, looking at the features of an instance of the Travelling Salesman Problem that influenced which was the optimal algorithm to use.

This experience was invaluable and made me feel more confident than ever that the right way forward for me is a Master's in OR. I look forward to the course and seeing what kind of weird (and wonderful) things it has to offer.

## Harvey Sturgess

As I was completing my undergraduate degree at Bristol, my interest swayed from mechanical engineering to that of data science and operational research, which led to me completing my dissertation project on a data engineering topic. Unsure of where I wanted my career path to go, I decided to gain experience and extend my degree by completing a 'year in industry'. Keen to learn more about programming and operational research I applied to the Government Operational Research Service (GORS) for a data analyst position. I was successful, and I was assigned to the Valuation Office Agency in Canary Wharf.



I completed a 10-month placement at GORS. The training I received was invaluable, and I was able to apply the training to a machine learning and sampling project (which was nominated for the GORS student award), along with several smaller side projects. It was during the placement that I decided I wanted to pursue a job that involved operational research. I had previously completed a trading internship (at Dare global), and I enjoyed the excitement of the global markets. Therefore, my target career became quantitative trading.

I began researching and it became clear that Imperial College Business School (ICBS) was a world leader in quantitative finance, therefore I applied for the MSc Finance course. Instead of returning to Bristol to complete an integrated Masters (MEng) I graduated from Bristol in July 2022 with a 1st class honours in 'BEng Mechanical Engineering with a year in industry' (graduation ceremony pending).

I begin the MSc Finance at ICBS next week, and I'm excited for the challenge that it is going to present. In particular I'm looking forward to the modelling, big data and machine learning modules and I hope to become an analyst in the quantitative division of the student investment fund.

Thank you to The OR Society for making it possible to complete my Masters. I look forward to attending University fairs, New Scientist Live and the Careers Open day at the Think Tank in Birmingham with the Society.

## Leigh Main

I cannot believe the academic year is over already! I am currently finishing my master's thesis, working with Hampshire County Council. It has been an incredible rewarding experience and I have learnt so much about what happens behind the scenes within the Council. My thesis is due in just a couple of weeks so I am just adding the final touches. For someone that has never written such a long piece of academic writing (I didn't do a dissertation during my undergraduate degree), I am very happy with my thesis and hope I achieve a good grade from it.

My master's has gone by so quickly that it still doesn't feel real! But I am definitely very proud of myself for working hard all year to achieve good grades. All being well with my dissertation, I am on track to graduate with a merit which is an amazing achievement. I have studied a wide variety of modules that have definitely improved my knowledge and skillset within Operational Research, and I am incredibly grateful to the University of Southampton for allowing me to study there.

As I mentioned in my last article for *Inside OR*, I have successfully secured a job with Rockborne in Wimbledon where I will be working from November. My first 4 months will be a rigorous training process which will allow me to work with some of their clients for the final 2 years of the graduate scheme. I will be learning how to be a data engineer and consultant with the aim of securing a job at the end of the scheme with one of the clients I will be working with.

I would finally like to say a big thank you to The OR Society for awarding me a scholarship for my master's as I would not have been able to study without it.



## Maryam Mojdehi

My first professional career was nursing in my home country of Iran, through which I have eight years' experience of analysing data to make appropriate decisions about patient care. After my international relocation almost a decade ago I pursued my life-long passion for mathematics, statistics and data analysis. This eventually culminated in my graduation with first-class BSc Honours degree in Mathematics from Manchester Metropolitan University in Summer 2019. During my studies, I undertook a wide range of units focussed on advanced analytical methods and statistical techniques which fired my interest in Operational Research. I subsequently spent a year developing my professional experience by undertaking a variety of office-based data roles, including a post at the Information Commissioners' Office and most recently the General Medical Council.



Through these experiences, and I have become committed to securing a career in OR. I am excited to be joining the MSc Business Analytics, Operational Research and Risk Analysis course at the University of Manchester. I know this experience will equip me an excellent grounding in the core areas of data analytics, risk analysis, optimization and decision making, and am confident it will provide me with excellent opportunities to explore my own research interests and support me in acquiring the necessary analytical and risk management skills required for any public sector or commercial/business environment.

I am a single parent of a teenager who begins her own university career in Medicine this year. I worked part-time during my undergraduate degree to support my daughter and my own studies and found it challenging to balance full-time study with part-time work and being a full-time mum. The support provided by The OR Society's Scholarship will enable me to stop working and focus full time on my OR studies at the UoM – when I'm not worrying about my daughter and her own exciting university life!

For more information about the OR Society's £10,000 Scholarships for master's degree students contact: [scholarships@theorsociety.com](mailto:scholarships@theorsociety.com)