

The Pendulum— Summer 23

Issue 18



Another academic year has flown by, and I would like to thank everyone who has ensured the success of our teaching, exams, marking, and degree ceremony that have produced another cohort of Warwick Physics graduates. The effort this takes across the department cannot be underestimated, and I would like to thank all those involved!



I don't think that there is a quiet summer period anymore, if there ever was! We had very busy summer open days and have just completed the admissions process for the new students starting in September (welcome week is less than a month away and open days are coming up in October). The results from this year's National Student Survey (NSS) have been published by the Office for Students. The results found that 82% of Students at the University of Warwick said they would recommend their university to future students. Over the next few weeks, we will work through the detailed results for physics to make sure that we continue to improve our courses.

I hope you will join me in congratulating all the academic staff who have been promoted (Page 3), the staff and students who have won both national and university awards (Page 4), the postgraduates who have graduated and the final year undergraduate prize winners (Page 5). In this newsletter you will see many terrific examples of outreach activities delivered by members of the department. These are so important; you are never too young to develop a love of physics! Don't forget the Warwick Christmas Lectures (30th November and 7th December 2023) and if you have a moment watch the Research Culture Videos to learn about some of the exciting research that is going on in the department (Page 9).

I hope that you have all had a good summer, including some time for a well-earned holiday and enjoy the articles in this issue of The Pendulum. Please contribute to future issues by emailing your news and stories to physicsadmin@warwick.ac.uk.

Best wishes,
Mark

Do you have a story that could be included in the next newsletter? Click [here](#) to let us know!

Starters and Leavers

1 May - 31 August

The department welcomes...

Cheuk Yin Lui
Raul Iraq Rabadan Trejo
Nicole Skidmore
Adam Wright
Valeriia Zhovkovska
Tobias Rodel
Miika Pursiainen
Andrew Jackson
Helen Murray
Vedad Hodzic
Thomas Wilson

We say thank you and good luck to...

Eren Delaney
Tishtrya Mehta
Nathaniel Gallop
Theresa Harrison
Sarah Jarratt
Yuzhong Hu
Elena Cukanovaite
Rory Edwards

Staff Profiles

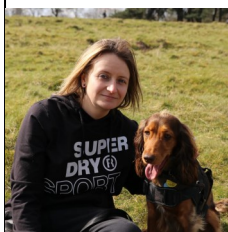


Dr Adam D. Wright, Assistant Professor

My job involves: I'll be conducting laser spectroscopy research. I'll be working with the Ultrafast & Terahertz Photonics group, researching the intersection between metal halide perovskites and polaritons.

Career history: I have just spent two years as a postdoc at Princeton University, working on polaritonic effects in gas-phase methane in Marissa Weichman's lab. Prior to that, I did my DPhil and then a postdoc at the University of Oxford in the groups of Laura Herz and Michael Johnston, where I studied electronic behaviour in metal halide perovskites. At Oxford, I was also a Junior Research Fellow at Mansfield College, and a Stipendiary Lecturer in Physics at Corpus Christi College.

When not at work, you can find me: Tending to my garden or visiting Reading, the loveliest town in the country.



Dr Nicole Skidmore, Assistant Professor (Research Focussed)

My job involves: Processing and analysing data taken by the LHCb experiment at CERN. My research focuses on searching for physics beyond the Standard Model in tree-level B meson decays. This area is particularly exciting as we enter a new precision era with Run 3 of the LHC.

Career history: After finishing my PhD in Particle Physics in 2017 I moved to Germany for three years to take post-doc roles at Ruprecht Karl University of Heidelberg and Rheinische Friedrich-Wilhelms-Universität Bonn. In 2020 moved back to the UK for a post-doc position at the University of Manchester before starting here at Warwick in August 2023. Throughout my PhD and post-doc career I have been a member of the LHCb collaboration focusing on different areas of flavour physics: CP-violation, lepton flavour non-universality tests and exotic baryon spectroscopy. I also have a long-standing involvement in the development of new data processing and analysis methods that allow us to continue to handle the enormous amount of data the LHCb experiment records.

When not at work, you can find me: Out for a run or walking my dog who is called Muon 😊

Do you have a story that could be included in the next newsletter? Click [here](#) to let us know!

Academic Promotions

Congratulations to the following staff on their promotion:

Daniel Bayliss promoted to Associate Professor as of 1 September

Sue Burrows promoted to Associate Professor (Teaching) as of 1 August 2023

Heather Cegla promoted to Associate Professor (Research) as of 1 August 2023

Paul Goddard promoted to Professor as of 1 August 2023

Grant Kennedy promoted to Associate Professor as of 1 September

Michal Kreps promoted to Reader as of 1 August 2023

James Lloyd-Hughes promoted to Professor as of 1 August 2023

Farzana Meru promoted to Reader as of 1 August 2023

Rebecca Milot promoted to Associate Professor as of 12 October

Gavin Morley promoted to Professor as of 1 August 2023

Xianguo Lu promoted to Associate Professor as of 1 Aug 2023

Peng Wang promoted to Associate Professor as of 1 December



Grants and Awards



Dr Paul Goddard has been announced as the winner of the 2023 Brian Pippard Prize from the Institute of Physics Superconductivity Group.

[The Pippard Prize](#) is named in honour of Professor Sir Brian Pippard, and is awarded on an annual basis by the IOP Superconductivity Group to a scientist working in the UK who has made a significant contribution to the field of superconductivity in the last few years.

[Find out more about Paul's work.](#)

Congratulations to members of the department who have recently won University awards:

[Dr Matthew Pearce](#) was awarded the Faculty of Science, Engineering and Medicine Thesis Award.

Ross Hunter was awarded the Springer Thesis Prize.

Sahl Rowther was awarded the Winton Thesis Prize for Astrophysics.

Cait Cullen was awarded the Physics Department Prize for outstanding MSc research.

[Dr Menglin Xu](#) was awarded a Faculty of Science, Engineering and Medicine Post Doctoral Prize.

[Dr Dmitrii Kolotkov](#) was awarded a Faculty of Science, Engineering and Medicine Post Doctoral Prize.

[Joe Cregeen](#) won the Postgraduates who teach award in the Science, Engineering and Medicine category.

[Tom Orton](#) won the Warwick Technician Commitment Award for Outstanding Achievement.

Do you have a story that could be included in the next newsletter? Click [here](#) to let us know!

Upcoming Dates

Anyone can add an event to the Physics [calendar](#). The calendar can also be used so that when you are planning an event, you can check for any potential clashes.

[Prof Chad Markin RSC Prize Lecture](#)—Wednesday 30 August

Welcome Weekend—Thursday 21 September—Sunday 24 September

Welcome Week—Monday 25 September—Sunday 1 October

Term 1—Monday 2 October

Open Day—Saturday 7 October

Open Day—Saturday 21 October

Christmas Lectures—Thursday 30 November

Christmas Lectures—Thursday 7 December



Congratulations to Postgraduates

Congratulations to everyone has been awarded a Doctor of Philosophy in Physics:

Rebecca Webb	Patrick Cronin-Coltsmann	Sahl Rowther
Eleanor Jones	Flavia Cicala	Aiman Khan
Pedram Jahandar	Alun Rees	Aisling Bergin
Ross Hunter	Tom Lord	Chris Bloomer
Katie Kosak	Raphael Bendahan-West	Tishtrya Mehta
Yashna Lekhai	Zainab Rehman	Jamie Friel
Lewis Mills	Eric Hu	Andy Morris
Simon White		

Congratulations to Cait Cullen and Amena Faruqi who have been awarded their Master of Science (by Research) in Physics.

Share your news and research

Continue to share your news stories, updates and successes by emailing physicsadmin@warwick.ac.uk. You can also share your research news by creating a [research nugget](#) or by creating a news item on the website. This is how the website news sections are populated so keep them coming!

Do you have a story that could be included in the next newsletter? Click [here](#) to let us know!

Graduation, July 2023

On Wednesday 26 July, we welcomed over 300 graduates and their families to join us for our annual graduation lunch. It was great to catch up with everyone and the prize winners were announced and presented by Mark with the following awards:

Excellence in Final Year of the BSc in Physics (Seymour Prize) - Justin Guo

Excellence in Final Year of the BSc in Maths and Physics (Rowlands Prize) - Ignas Silickas

Excellence in Final Year of the BSc in Physics with Astrophysics—Juliet Johnson

Excellence in Final Year of the MPhys (Styles Prize) - Henry Davenport

Excellence in Final Year of the MMathsPhys - Matt Sexton

BSc 3rd Year Project Prize—Kaylen Darnbrook

MPhys/MMathPhys 4th Year Project Prize - Jamie Dunsmore



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Coding with Sophie outreach activities

56 primary school students from two local primary schools have recently completed their six-week coding programme with Dr Rebecca Nealon from the Astronomy and Astrophysics group. The '[Coding with Sophie](#)' programme has been designed by Dr Rebecca Nealon and Dr Farzana Meru with the aim to improve coding literacy and to inspire children to consider coding (and more broadly STEM) in their future, as well as empowering teachers and parents to support children in their coding journey.

Ally Caldecote (Outreach Officer) who leads the department's outreach activities says:

"We encourage children of all ages to explore the STEM related careers open to them. It's valuable for the students to meet real life scientists and gain a window into their world and to help them navigate their future options."

Some of the schools we work with don't get the opportunity for many visitors from outside of the school community so this gives students and teachers alike the chance to visit the university and meet real-life scientists.

Find out more about [Manor Park Primary School](#)'s visit and [Limbrick Wood Primary School](#) afterschool coding club.



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Sixth Form students visit the Department



During the spring term, Ally has been hosting various local sixth form students studying Physics with the view to raise aspirations, to find out about the University and what it's like to study Physics at University. The students spend the day in the department meeting academics and technicians running experiments and explore the university campus. Ally says: "I'm so grateful to colleagues for giving their time and enthusiasm to deliver these workshops. It's great for visiting students to meet academics, but also researchers, and students because it helps them see the bigger picture of what we do. The teachers also go away

with a better insight into what happens in the department which in turn allows them to advise students considering their future choices."

[Read more about President Kennedy Sixth form visit.](#)

Big Bang Fayre

A team from the Astronomy and Astrophysics group led by Dr Lauren Doyle attended the Big Bang Fair in Birmingham in June and were one of the most popular stands with students returning again and again to engage with their stall. The Physics department was represented at the Big Bang Fair by the Astronomy and Astrophysics group (Dr Lauren Doyle, Dr Bec Nealon, Dr Conor Byrne, Dr David O'Neill, Faith Hawthorn, Mairi O'Brien, Ginger Frame and Toby Rodell) who had a stand on the show



floor showcasing their brand-new Astro Table! The touch table runs the software Stellar Playground allowing users to experience and explore stellar life cycles, gravitational/orbital mechanics, and the advancement of civilizations by dragging and dropping stars and other exotic celestial objects. Through exploration and play, users can visualise the research the team work on but also experience the physics which drives objects in space.

Dr Lauren Doyle says:

"Our stall was one of the most popular on the show floor with students coming back again and again throughout their session. We were able to showcase the research within the Astronomy and Astrophysics group and talk to the students about what it is like to pursue a Physics degree at Warwick. This showed the students what opportunities were available to them to study Physics where we had a lot of questions about the degree programme but also to engage with teachers where they were interested in the Outreach that we do for the department and the events we take part in."

[Find out more about the Big Bang Fair.](#)

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Science Museum Visit

In May, Alan Burton (Senior Research Group Technician), Daisy Ashworth (Research Technician), Ryan Williams (Research Technician) and Ally Caldecote (Outreach Officer) visited the science museum. It was great to see that 'University Technician' was being highlighted as a career suggestion in the museum just showing the importance of the team.



Windmill Hill Observatory

On Friday 6 July after the Physics BBQ, the team opened the Observatory for members of the department to drop in where they had the solar telescope set up as well as links to the remote telescope facilities, and were able to show visitors the progress that has been made.

The team have been making steady progress at the new Windmill Hill Observatory. A new Alcor all-Sky camera has been installed on the terrace for continuous monitoring of the sky above the observatory. They have also installed a new Vaisala weather station and cloudwatcher mid-IR cloud sensor that will help us track meteorological conditions.

Over the summer two Undergraduate Research Support Scheme (URSS) students, Davina Nwachukwu and Baidandri Saha have been working at the Windmill Hill Observatory undertaking a range of tasks to help in the operations of the observatory. The students have updated documentation, created content for the website and social media, and used the solar telescopes for day-time observing. They have also used the few clear nights over this summer to operate the main 0.4m telescope for imaging a wide range of objects including galaxies, a supernova, star clusters, nebulae, and an eclipsing binary star.



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Scientist Experience Trip, 2023

As part of the XMaS project outreach commitment, we run an annual nationwide competition for Year 12 female students to come on an all-expenses paid four day trip to the European Synchrotron Radiation Facility (ESRF). After building on the social media impact of the previous trip we quadrupled the number of applicants from previous years with a wider nationwide reach.

The ESRF is the world's brightest X-ray source and a centre of excellence for fundamental and innovation-driven research in condensed and living matter science. Located in Grenoble, France, the ESRF owes its success to the international cooperation of 21 partner countries.

We spent two days touring the ESRF facility, taking part in the ESRF Synchrotron at Schools session and talking to lots of female scientists based at the ESRF, learning what life looks like as a researcher and gaining the inside track on how far Physics can take you as a career. They were inspired by all the examples of how far a career in Science can take you and encouraged to view themselves as the next generation of change. The girls looked at conducting light into a mechanical signal, how to measure diffraction patterns of crystals and how this helps drug companies to analyse protein molecules, chrystallography techniques for beamline analysis.

We also had time for a quick bit of souvenir shopping and a ride on the Téléphérique de Grenoble Bastille, the world's first urban cable car. Linking the city centre with the Bastille, a former fortress overlooking the city, it offered a spectacular view of Grenoble and of the ESRF itself.

The competition is a wonderful way to take learning out of the classroom and into the real world. We will be launching our next competition early in 2024 so if you have any contacts with Science Teachers, we'd be really happy to add them to our email list.



Research Culture Videos



Our research culture project, filming and developing a collection of short videos to showcase the diversity within physics research, is now complete. The videos star some of our post-doctoral research assistants, fellows and postgraduates discussing their work across a wide range of fields. We have eleven videos in total which can be found in the new research culture page below. The project was a resounding success, with everyone enjoying the filming process and enhancing their media skills, with the unexpected bonus of meeting and networking with researchers from different groups. A big thank-you to everyone who took part!

Watch the [Research Culture videos](#).

Do you have a story that could be included in the next newsletter? Click [here](#) to let us know!