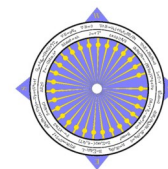


The Pendulum— Winter 23/24

Issue 20



I believe that this is the 20th edition of The Pendulum, and as we rapidly head towards the end of the winter term there is lots to report.

Congratulations to Val Nakariakov and Sandra Chapman, from the Centre for Fusion Space and Astrophysics, who were awarded the 2024 Chapman Medal by the Royal Astronomical Society and the 2024 European Geosciences Union Hannes Alfvén Medal, respectively. I was also delighted to learn that Peng Wang was named as a Highly Cited Researcher in the Clarivate's 2023 list (one of only six at Warwick) and Wing Ying Chow had won the BRSR (Institute of Physics Magnetic Resonance Society) and NMRDG (NMR Discussion Group of the Royal Society of Chemistry) prize for excellent contributions to Magnetic Resonance for her work using NMR to characterise biological systems.



We were delighted that the University agreed to honour Professor Dame Clare Grey FRS with an honorary degree. Clare has a long and ongoing association with Warwick, and as part of the celebrations she gave a colloquium focused on the development and application of Nuclear Magnetic Resonance, Magnetic Resonance Imaging and new optical methods to probe the operation and failure mechanisms of rechargeable batteries. This work showed how fundamental science is key to producing significant new developments for energy storage and conversion.

We were delighted that Professor Dame Jocelyn Bell Burnell FRS (a Warwick honorary graduate and former Physics Lecturer) visited Warwick to officially open The Marsh observatory; see more on this story later in the Newsletter.

In 2025 Warwick will be hosting the Conference for Undergraduate Women and Non-Binary Physicists (CUWiP+). The goal of this meeting is to encourage undergraduates to continue in physics by focusing on their development as a scientist and showcasing options for their educational and professional future. More on this in later newsletters.

Dr Lexie Elliot (pictured right), a physicist, former investment banker and now author (novels including *The French Girl* and *How to Kill Your Best Friend*) was a speaker at one of the Physics Cafés this term. Lexie explained to our students that physics trains you for almost every career!



All contributions to the newsletter are welcome! To help us all keep in touch please share any items of interest to physicsadmin@warwick.ac.uk.

Best wishes,

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

Awards and Grants



Dr Wing Ying Chow has been awarded the Institute of Physics excellent contribution to Magnetic Resonance Award for her contributions to NMR characterisation of biological systems. [Find out more about Ying's research and the award.](#)



Dr Peng Wang has been named as Highly Cited Researcher in the Clarivate's 2023 list. The researchers are those whose publications are most often cited in academic journals that rank in the top 1% by citations for field and year. [Find out more about Peng's work.](#)



Professor Sandra Chapman was awarded the 2024 European Geosciences Union Hannes Alfvén Medal. The medal was first awarded in 2004 and Sandra is the second female to receive the medal. [Find out more about the medal and Sandra's contribution.](#)

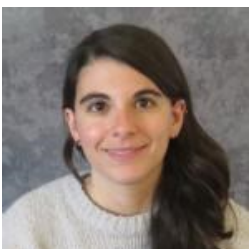


Professor Valery Nakariakov has won the Royal Astronomical Society's Chapman Medal which recognises investigations of outstanding merit in the science of the Sun, space and planetary environments.

[Read more about Valery's work.](#)



Dr James Blake has been awarded a 3-year fellowship through the Science and Technology Facilities Council (STFC) early-stage research and development scheme. James will look to develop a prototype system for providing early warning of satellites encroaching on astronomical fields of interest. [Find out more about the project.](#)



Dr Ingrid Pelisoli has received a £1.2 million grant from the Royal Society for her research into analysing binary star systems. Ingrid will work with collaborators in Sheffield and will join the BlackGEM Consortium, which hosts three state-of-the-art telescopes in Chile looking deep into space across a large of the night sky. [Find out more about the importance of Ingrid's work.](#)



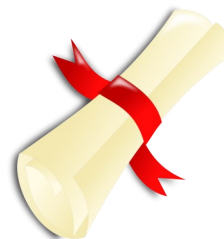
Professor Gavin Morley is the Principal Investigator of a new project which aims to levitate two microdiamonds in vacuum and put each into a quantum superposition of being in two places at the same time. The project is in collaboration with colleagues UCL, Yale, Northwestern and Groningen. [Find out more about Gavin's research.](#)

Postgraduate awards

Congratulations to all students that have been awarded a Doctor of Philosophy in Physics:

Congratulations to Christian Peyton who was awarded a Doctor of Engineering in Nondestructive Evaluation and Gongyu Ni for being awarded a Master of Science (by Research) in Physics.

Eva-Maria Ahrer	Wanbing Ge	Tom Rehaag
Xavier Barker	Keith Inight	Bryn Roberts
Chris Benjamin	David Jonas	Elizabeth Sharp
Edward Butler-Caddle	Thomas Killestein	Olly Smith
Shabaz Chaudhry	Isobel Mawby	Amani Zalzali
Chris Duffy	Catriona McDonald	
Ibrahim Elhoussieny	Ares Osborn	



Pettifer Prize 2023



The 2022/23 winner of the Pettifer Prize was Connor Johnson (Physics with Astrophysics) who was awarded the prize in November. The prize honours the memory of Dr Robert Pettifer, who was a member of the department from 1972 until his retirement due to ill-health in 2007. Pictured is Candice Pettifer (Robert's daughter) presenting the award to Connor.

Staff Anniversaries

Congratulations to the staff members who will celebrate their 10 and 20 year anniversaries working at the University this year.

Those who will celebrate their 10 year anniversary are:

Dr Claire Hurley	Dr Joseph Lyman	
Dr James McCormac	Matty Mills	
Dr Michael Pounds	Patrick Ruddy	Ryan Williams



Those celebrating their 20 year anniversary are:

Dr John Back	Professor Gary Barker	
Professor Paul Harrison	Dr Thomas Latham	
Dr Ben Morgan	Dr Yorck Ramachers	Dr Erwin Verwichte

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

Starters and Leavers

31 October—31 January

The department welcomes...

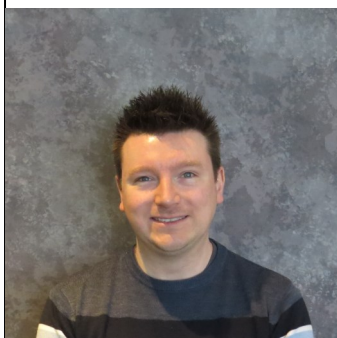
Muhammad Ahlroob
Sabur Ayinde
Sergey Belov
Ian Bucknill
Marios Hadjimichael
Tim Pearce
Noel Castro Segura
Christopher Taylor

We say thank you and good luck to...

David Anderson
Zahra Choudhury
Nisha Dhesi
Edgar Gutierrez
Ralph Hall
Arturo Hernandez
Tim Martin

Staff Profiles

Chris Taylor, Undergraduate Programmes Officer



My job involves: Supporting the administrative process for admissions and alternative arrangements for exams. I will be working on some upcoming projects including supporting neurodiverse students throughout their degree course.

Career history: I worked at Oxford Brookes University for 14 years in a variety of roles including running the International Foundation Programmes, as an international admissions officer, and as a Student Support Co-Ordinator. Most recently, I worked for two years at the University of Oxford as the Year Abroad Officer in Medieval and Modern Languages, supporting nearly 300 students across their placements in 40 different countries.

When not at work, you can find me: Settling into my new life in Kenilworth after relocating from Reading and loving the fact I no longer have to commute for an hour and a half each way.

Ian Bucknill, Finance Administrator



My job involves: Oversight of the management of department's active research projects, providing forecasts and ensuring budgets are utilised in line with funders terms and conditions and providing support and advice to Principal Investigators.

Career history: I have been at the University for a number of years, having worked in a similar role over in WBS prior to Physics.

When not at work, you can find me: At home with the family, or if last night is anything to go by helping out at my son's beaver group building a huge dragon (on wheels apparently!) from various random pieces of recycling!

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.

8 March—[International Women's Day](#)

9 March—All course OHOD

11 March—[Hidden Figures Film](#)

13 March—All course OHOD

15 March—End of Spring term

27 April—All course OHOD



Professor Dame Clare Grey Visit

On Wednesday 17 January, [Professor Dame Clare Grey](#) hosted a guest lecture titled 'Towards a Net Zero World: Developing and applying new tools to understand how batteries function and fail.'

Over 150 from across the University attended and had the opportunity to network after the lecture. Her research interests include the use of solid-state NMR and diffraction-based methods to determine structure-function relationships in materials for energy storage (batteries and supercapacitors) and conversion (fuel cells).

Clare was awarded an honorary award from the University on Thursday 18th January during a graduation ceremony with our Physics students and staff, and is pictured here with staff from the department and the Vice-Chancellor.



New Careers and Alumni webpages

We have recently developed a new set of [careers and alumni webpages](#) which are aimed at both current and prospective students to find out what they can do with their degree, and what opportunities there are here during their studies.

As part of this, we would like to have a 'Recommendations' page where staff and PG students can recommend a podcast, careers blog, newsletter or anything similar with a link to the site as well as one sentence about why you have recommended this. [Make a recommendation now.](#)

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!

2024 Scientist Experience

There are sixteen places available and applications were welcomed from Year 12 UK Physics and STEM students who identify as female. The trip gives students the opportunity to join us at the European Synchrotron Radiation Facility (ESRF), a world leading science research facility in Grenoble, France on an all-expenses paid, four day trip. In Grenoble the students will spend two days touring the ESRF facility, taking part in the ESRF [Synchrotron@Schools](#) session and talking to numerous scientists based at the ESRF and other facilities across the [European Photon and Neutron campus](#). This amazing trip offers students insights into current research activities and there is even a little bit time for sightseeing in this beautiful French city.

The primary aim of the Scientist Experience is to introduce the students to female role models and the work they do. The idea is to allow the young students to talk freely to female scientists about their work, their research, and their careers; letting them ask any questions they may have in an informal manner. The students are exposed to what life might be like as an international research scientist and they gain an inside track on how far Physics can take them. Ultimately, the programme looks to inspire and enthuse the next generation of scientists. The main benefit for the participants is being surrounded by other like-minded science enthusiasts, helping to build up confidence in their own aspirations. The initiative gives the students a positive image of a career in science, giving them something to aim for as they progress through their chosen degree.

The trip remains a wonderful way to take learning out of the classroom and into the real world. The trip will take place early July, so we will share updates after the trip.



Coaching Opportunities

The [Internal Coaching Scheme](#) (Leadership and Management Development) won the December WOW award, which celebrates amazing work, projects and achievements at the University. The scheme is designed to help staff develop their self-awareness, confidence and problem-solving skills and is available to all staff members across the University.

Stuart Croft (Vice-Chancellor), said about the win: *'It's fantastic that we can offer this opportunity to support people to grow, making a huge difference to colleagues across the University.'*

To see how coaching can help you, please contact [Ayesha Rahman](#) who is part of the internal coaching team.

The Marsh Observatory Opening

On Tuesday 7 November Dame Jocelyn Bell Burnell visited the University to mark the official opening of The Marsh Observatory.

Dame Bell Burnell also delivered a guest lecture to over 120 staff and students titled 'You are of star stuff—How the atoms in our bodies were created'. She then had a tour of the undergraduate teaching labs, meeting and speaking with some of our undergraduate students.

[Find out more about the visit and the opening of The Marsh Observatory.](#)



Dr Elizabeth Sharp attends the Global Young Scientists Summit



Dr Elizabeth Sharp was shortlisted to represent the department at the Global Young Scientists Summit in January, in Singapore.

The conference aims to bring together young researchers and top scientific minds from around the world to discuss science and technology and how research could address major global challenges from a broad range of subject areas.

Elizabeth attended the conference for five days which included site visits from higher education institutions in Singapore, plenary lectures from Nobel Prize winners, discussion panels on current issues/events in the field, student quickfire presentations and small group sessions with selected key speakers. She was also selected to display a poster of her research on the development of a prototype instrumentation device for the pressure measurement of Special Nuclear Material containment which will be trialled on a nuclear site within the coming weeks.

Elizabeth says:

“The whole conference was superb, and the organisers thought of a really great way to get the participants networking. There were lots of additional activities such as a rooftop garden dinner and an evening networking event in Clarke Quay. I really enjoyed attending talks from outside my research area and taking part in discussion panels.”

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

85 new exoplanets discovered

An international study led by Faith Hawthorn using NASA's Transitioning Exoplanet Survey Satellite (TESS) has discovered 85 possible planets outside of our solar system, with temperatures closer to those of our own Solar System planets, potentially cool enough to sustain life.

Faith says "We decided to use the way in which TESS mission observes stars in order to extract new, comparatively long-period transiting planets from it, and we were really encouraged by the number of potential planetary systems that hadn't yet been found in the existing data. It was great to have involvement from undergraduate and Masters' students over the course of the project too, and we hope that the exoplanet community will join us in the effort to confirm and discover more about these fascinating potential planets."

[Read more about the research findings.](#)

[Watch Faith talking about her research.](#)

Image: Faith Hawthorn and Sam Gill at The Marsh Observatory



Alumni as a Visiting Associate Professor

The Department welcomes an incoming Visiting Associate Professor who is also an alumnus: Dr James Cook, who in 2012 completed his PhD on fundamental processes in fusion plasmas under the supervision of Profs S C Chapman and R O Dendy in CFSA. Dr Cook then moved to research positions with the fusion start-ups First Light near Oxford followed by TAE Technologies (in association with the University of California Irvine) near San Diego. Returning to the UK in 2018, James joined the fusion energy research programme of the UK Atomic Energy Authority at Culham in Oxfordshire, where he leads several key projects exploiting high performance computation, including the development of an exascale multiphysics code based on existing high order finite element software and a SYCL accelerated particle framework. In parallel, Dr Cook has re-established his research links with CFSA, providing valued advice to recent and current PhD students.

LabCup Project

Sent on behalf of Ella Watson (Business Change Manager in IDG):

The LabCup chemical inventory software that is being implemented in the department is making great progress, we already have 6 groups that have been migrated to LabCup and using the software. Thank you for all the support and effort so far to get the chemical data ready for import. This will enable us to have much greater visibility and management of chemicals across the University.

We need all groups to update their inventory template with the drop-down locations provided, and then we will migrate the data to LabCup. At this point, we will communicate to each Group that they should now use LabCup exclusively and archive their excel template.

Please complete the 2 Moodle training modules that will provide an overview of system functionality and the compatibility guidance. Deadline to complete the training is Friday 22nd March. Training can be found online [here](#).

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

Scientific Computing Drop-in sessions

The SC RTP drop in is open to anyone with scientific computing problems, it's a weekly event to support, engage, and inform all Warwick researchers from PGR to Senior Professors in all things research computing.

[Find out more and the drop-in dates.](#)

Pint of Science Volunteers for Coventry



Pint of Science is a worldwide science festival that happens each year, and in 2024 will take place between 13-15 May. Researchers will make their way to public venues such as cafes and pubs to share their research stories with the public over a drink. The Coventry team are looking for volunteers to help run the event such as event managers, MC/hosts, communications and treasurer. If you want to get involved, [get in touch with the team.](#)

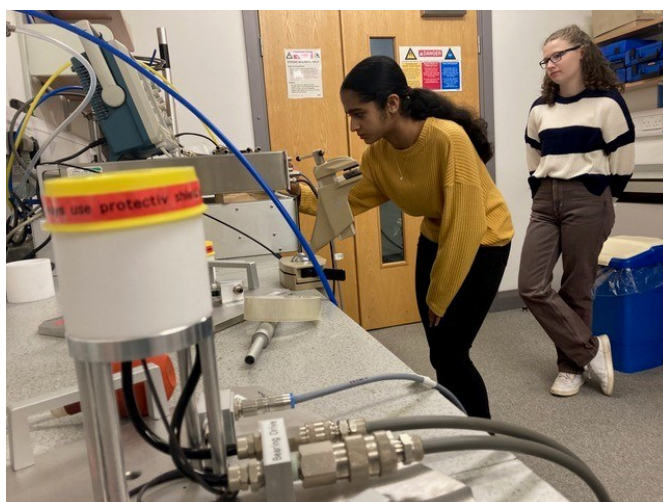
Warwick Inclusion Conference

The Social Inclusion Group and Inclusive Education Team are hosting the next [Warwick Inclusion Conference](#) on 11th June in Scarman. The call for submissions for sessions are now open and the team are seeking contributions on all topics related to inclusion that enhance knowledge, share best practice, and/or foreground action. Proposals can be submitted for 20-minute spotlight sessions, 45-minute workshops, or poster presentations. The deadline is 16 February.

Work Experience Placements

Our annual work experience will take place between Monday 25th—Thursday 28th March (inclusive). Applications are open for year 10-12 students with an interest in Physics, they will learn what it's like to work in a busy physics department and spend time with research and technical staff.

If you would like to get involved and help out, please contact physicsadmin@warwick.ac.uk



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