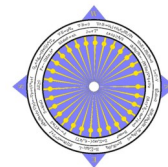


The Pendulum— Autumn 24

Issue 22



The 2024/25 academic year is in full swing, and we are now rapidly heading towards Christmas. I hope that all of our new undergraduate and postgraduate students and new staff are settled in and looking forward to the rest of the 2024/25 academic year.

It has been a summer of celebrations! In July we celebrated with over 350 graduating students and their friends and family at the Slate. The Astronomy and Astrophysics group turned 21 and colleagues and friends joined the group to celebrate the scientific legacy of Professor Tom Marsh and the many accomplishments of the group since. More about both of these events in the following pages.



The launch of the [STEM Connect programme](#) took place at the Shard in London last month. It is exciting to see enabling works now underway. We are working hard with Estates and the STEM Connect programme team to identify suitable spaces to ensure teaching and research is not disrupted with start of major building works in autumn 2025. I encourage you to explore the material on the website and sign up to a virtual reality tour to experience the new building via [this link](#).

Congratulations to Professor Ana Sanchez who has taken over as Cluster leader of the Condensed Matter research cluster, and thanks to Professors Steve Dixon and Marin Alexe who shared that responsibility for the last few years. I would like to thank all of the physics alumni who came back to help with the Physics Careers event earlier this term. The feedback is that this is tremendously useful event for alumni, employers and students and we will look to grow this and other activities and events that connect past and present physics students.

Warwick Physics is a partner in the new UK Quantum Biomedical Sensing Research Hub (QBIOMED), led by Professor Rachel McKendry (UCL) and Professor Mete Atatüre (University of Cambridge). QBIOMED brings together University College London, University of Cambridge, University of Oxford, University of Warwick, Cardiff University, and Heriot-Watt University, working in partnership with six NHS trusts, as well as charities, government, and 17 industry partners to deliver a step change in earlier disease diagnosis and treatment for diseases including cancer and Alzheimer's disease. The Hub launches in December and more news to follow.

We have opened registration for the Conference for Undergraduate Women and Non-binary Physicists (CUWiP+), taking place here in April 2025. There are still opportunities to get involved in delivery of the conference programme; contact the local organising committee via cuwip2025@warwick.ac.uk or go to the [website](#).

Looking forward, we are entering our 60th year as a department and as a University with many events planned during 2025, including an event for Physics alumni and current staff/students— more details can be found [here](#).

I cannot resist sharing a picture of Comet Tsuchinshan-ATLAS recorded with a small outreach telescope (ZWO SeeStar S30) at the Marsh Observatory by Dan Bayliss in October. Named after the Chinese observatory and South African programme that detected it in 2023, the coma, or head, measures about 130,000 miles (209,000 km) in diameter, with a tail extending 18 million miles (29 million km). The comet is not expected to return for another 80,000 years!

As ever, all contributions to the newsletter are welcome! To help us all stay connected please share any items of interest to physicsadmin@warwick.ac.uk.

Best wishes,
Mark

M. Newton



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

Professor Ana Sanchez is new Head of Condensed Matter Physics

As of 1 October, 2024 Professor Ana Sanchez has undertaken the role of Head of Condensed Matter Physics group in the Department of Physics.

Ana has worked in the department since 2009, joining as a Science City Senior Research Fellow as part of the Advanced Materials theme and she was promoted to Professor in 2018. Her scientific expertise covers high-end electron microscopy techniques and advanced functional materials in condensed matter physics and nanotechnology.



As part of the role, Ana will bring together the NanoScience and Functional Materials clusters, hoping for a closer collaboration between the different groups and with other researchers. The diversity of material systems and phenomena in the Condensed Matter Physics makes this cluster one of the largest in our department.

She said, "I am pleased to undertake this new role. We should aim to create a more dynamic and collaborative cluster, and break down some boundaries between the different areas of research. I aim to create a supportive environment to promote an effective development of our academic and research staff. I would like to work with you setting appropriate targets and move towards satisfactory career progression for everyone."

Academic and Technical Specialist Promotions

Congratulations to those who have received a promotion this year:

Fernando Abudinen, Assistant Professor (Research)	Claire Hurley, Assistant Professor (Teaching)
Maria Brunetti, Assistant Professor (Research)	Dmitrii Kolotkov, Assistant Professor (Research)
Alan Burton, Technical / Facilities Officer	Reza Kashtiban, Associate Professor (Research)
Ally Caldecote, Associate Professor (Teaching)	Joe Lyman, Associate Professor (Research)
Andy Chappell, Assistant Professor (Research)	Daniel Mayoh, Assistant Professor (Research & Teaching)
Rachel Edwards, Professor (Research & Teaching)	Karolos Potamianos, Associate Professor (Research)
Dirk Gericke, Professor (Research & Teaching)	Benjamin Richards, Associate Professor (Research)
Ben Green, Associate Professor (Research & Teaching)	Dimitri Veras, Reader (Research & Teaching)

Postgraduate awardees

Congratulations to those who have been awarded a Doctor of Philosophy in Physics:

Kiran Bal	Andrew Jackson	James March
Djena Bayo	Fynn James-Lucas	Chloe Newsom
David Bradley	Tom Jones	Will Somerset
Sophie Ding	Benjamin Kerridge	George Wood
Imogen Gullick	Nick Latham	Lawrence Wu
Faith Hawthorn	Kelvin Long	Sihui Zhong

Congratulations to those who have been awarded a Master of Science (by Research) in Physics:

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

Starters and Leavers (31 April-31 August)

The department welcomes...

Stephanie Bachmann
Oscar Barragan Villanueva
Kaiming Cui
Chukwuebuka Ekuma
Jorge Fernández
Faith Hawthorn
Harriet Nevison-Andrews
Rongrong Qi
Bowen Zhang

We say thank you and good luck to...

Jakob Van den Eijnden
Elnaz Darsheshdar
Samuel Magorrian
Jeanette Weston

Staff Profiles



Chidi Ekuma, Research Software Engineer

My role involves: Software Engineering within the Elementary Particle Physics (EPP) Group. Warwick is responsible for part of the development of the data acquisition systems (DAQ), slow control, web monitoring front-end and backend to be installed in Hyper-Kamiokande and I am focused on delivering the monitoring and control systems interfaces and supporting the installation and integration of the DAQ.

Career history: Mostly software engineering and product management and building high growth startups.

When not at work, you can find me: Reading books in the park or volunteering at Warwick Innovation helping to build a community of innovators and the support needed for a vibrant entrepreneurship ecosystem.

Upcoming Dates

Anyone can add an event to the Physics [calendar](#). If you have availability to help at one of the upcoming open days, [please let us know your availability](#).

Monday 18 November— [Research open evening](#) for prospective postgraduate students

Tuesday 19 November—[Breast Cancer - Decision Making under uncertainty—the sequel talk](#)

Monday 25 November—Warwick Christmas Lectures

Monday 2 December—Warwick Christmas Lectures

Monday 16 December— Department Christmas lunch

Thursday 23 January— Winter Degree Ceremony



Save the date for Christmas lunch

This year's staff and PhD student Christmas lunch is due to take place on Monday 16th December. Please hold this date in your diary, we will confirm timings and registration details closer to the time.

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

Summer graduation 2024

Over 350 people joined us at The Slate on Thursday 25th July to celebrate graduation. It was great to see our students joining with their friends and family to celebrate their hard work. The final year awards were also presented to the following undergraduate students:

[Seymour Prize](#) for excellence in the 3rd year graduating Physics BSc class:

Andrew Jolly

[Rowlands Prize](#) for excellence in the 3rd year graduating Mathematics and Physics BSc class:

Facundo Costa

Excellence in the 3rd year graduating Physics with Astrophysics BSc class:

Celia Moreno De Alboran torroja

Excellence in the BSc Project:

Mohammed Sultan

[Styles Prize](#) for excellence in the 4th year MPhys class:

Mohammed Sherif, Will Hoyle, Max Jackson

Excellence in the 4th year graduating MMathPhys class:

Alex Darbyshire

Marsh Prize for excellence in the 4th year Physics with Astrophysics MPhys class:

Thomas Martin

Excellence in the MPhys Project:

Alex Newing

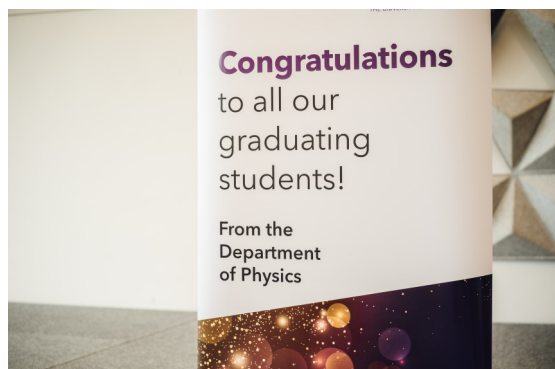
And finally, the annual Department of Physics Teaching Prize was presented to Dr Michael Pounds.



*Mark Newton (Head of Department)
welcoming everyone*



*Michael Pounds receiving his Warwick Award for
Teaching Excellence.*



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

PhD student announced second place at UK Semiconductors Conference

Areej Aljaghvani, a 2nd year PhD student from the Semiconductors Research Group was awarded second place in the Phil Buckle Research Communication Competition held during the UK Semiconductors Conference in July 2024.

Participants were tasked with delivering a compelling three-minute presentation of their PhD research aimed at a non-specialist audience. Areej's presentation, titled "Thermoelectric Generators: A Game-Changer for Energy Harvesting" captivated the judges and earned her the second-place accolade.

The presentations were evaluated by a diverse panel of judges, consisting of both specialists and non-specialists, ensuring a well-rounded assessment of communication skills. Prizes and certificates were generously arranged by the IOP Semiconductor Physics Group, highlighting their commitment to promoting excellence in research communication.

Areej says "I'm thrilled to have been recognized at the UK Semiconductors Conference. It feels great to know that my presentation on thermoelectric generators connected with both the judges and the audience. This award reassures me that I'm on the right path with my research, and it motivates me even more to keep pushing forward and sharing my work in ways that everyone can understand. I would also like to thank my supervisor, Maksym Myronov, for his invaluable guidance and support throughout this journey."

This recognition underscores Areej's exceptional ability to convey complex scientific concepts in an accessible and engaging manner, a skill that is invaluable in bridging the gap between the scientific community and the public.

Conference for Undergraduate Women and Non-Binary Physicists



The Department will be hosting the [2025 Conference for Undergraduate Women and Non-Binary Physicists \(CUWiP+\)](#).

The conference is supported by the Institute of Physics and is held at a different University each year. It's open to all undergraduate women and non-binary students studying Physics.

We are well into the planning for the conference and if you would like to get involved, please get in touch via cuwip2025@warwick.ac.uk.

The aims of the conference are to:

- Improve knowledge of physics and astronomy
- Focus on development as a scientist
- Meet inspirational women and those who identify as non-binary in physics
- Connect, build connections and share experiences with other physics students
- Increase confidence to apply for PG studies or starting a career in Physics

We aim to empower the delegates to overcome adversity, to be inspired and to learn skills to overcome challenges related to gender, neurodiversity, race, social background, stereotype threat and imposter syndrome. We want to empower delegates and provide them with skills to have a successful career in STEM.

If you have any contacts in industry that might be interested in providing sponsorship for the conference, please get in touch with Ria Wilson at cuwip2025@warwick.ac.uk for further information.

Share your news and research

Continue to share your news stories, updates and successes by emailing physicsadmin@warwick.ac.uk.

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

Training opportunities



The Department encourages all staff members to take up to five days of training and development each year. The University have just launched LinkedIn training, which is available to all staff and students. The online digital learning platform features over 20,000+ expert-led courses across a vast array of topics including personal development.

Find out more about [LinkedIn Learning](#).

You can also look for other opportunities via the:

[Leadership and Management Development \(LMD\) team](#)—Helping leaders and managers access the best development options for their career

[Training for research active staff](#)—Training available for research staff

[IT training](#)—Links to various courses

Please ensure you speak to your line manager for approval before registering to attend any training.

Following careful consideration and review of the University's usage of Mind Tools over the past year, the LMD team has taken the decision not to renew the Mind Tools contract. The contract will expire 30 September which means Mind Tools will not be available after this date. If you have saved or downloaded copies of any materials from the Mind Tools platform, such as checklists or diagnostic tools, please ensure these are deleted.

Wellbeing Support

One in four adults experience a mental health condition at some point in their lives.

- At Warwick, staff members can join the [Warwick Wellbeing Peer Support Group](#) which aims to create a safe and confidential space for members of staff who would like support with their wellbeing. The group is facilitated by professionally trained Lead Peer Support Staff and members can share lived experiences and knowledge in a safe and respectful environment.
- The [Employee Assistance Programme \(EAP\)](#) is a confidential support service designed to support staff (including GTA staff) with personal and professional problems that could be affecting your home life or work life, health and general wellbeing. This is available for you as well as immediate family members and offers services including life support, legal information, bereavement support, medical information and cognitive behavioural therapy (CBT).
- [Wisdom APP](#) provides confidential support with the option to contact via live chat, video call, helpline or request contact and offers tools such as weekly mood tracker, four week plans, mini health checks and breathing techniques.

[Find out what other support is available.](#)

The [Wellbeing team](#) offer [support to undergraduate and postgraduate students](#). Postgraduate students can also access support through the [Doctoral College](#).

A0 printer in Physics

The department now has an A0 printer, which is located in P169/P170 on the ground floor.

You will need to complete the [poster printing form](#) before printing, being sure to provide the correct cost code, and follow the instructions. We will do regular checks on the printer to ensure that the submitted forms align with the number of completed print jobs.

If you have any queries regarding the printer, please contact physicsadmin@warwick.ac.uk

The team will be able to support you, but please do not leave your printing until the last minute in case there are any technical difficulties with the printer.

[Find out more information.](#)

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

21 years of our Astronomy and Astrophysics Group

Between the 4th and 6th of September, the Astronomy & Astrophysics group held a meeting at the Faculty of Arts Building to celebrate 21 years of astronomy at Warwick and the scientific legacy of the late Prof. Tom Marsh, the group founder. More than a hundred people attended the meeting, with about half of the attendees being external delegates and coming from as far as the USA and South Africa. Tom moved to Warwick from Southampton in 2003, after the Department of Physics decided to expand the scope of its research. From its humble beginnings with only two staff members, Tom himself and Boris Gaensicke, one postdoc and a couple of PhD students, the group has now grown to more than 85 members, including 24 staff.

The first two days of the meeting were dedicated to Tom's scientific legacy. We heard about Tom's key role in developing the technique of Doppler tomography, which enabled unique insight into the structure of accreting stellar systems. Tom's contributions to the field of compact white dwarf binaries, one of the major strengths of the Astronomy & Astrophysics group, were highlighted by many of the speakers. We also heard about Tom's work in instrumentation, in particular in the development of the state-of-the-art high-speed photometers ULTRACAM, ULTRASPEC and HiPERCAM, which have enabled Warwick to be at the forefront of some fantastic discoveries, such as white dwarf pulsars and the fastest spinning confirmed white dwarf. The talks provided a pleasant mix of scientific overview and testimonial, with many people sharing pictures and anecdotes of happy moments lived with Tom.

The last day of the meeting was focussed on the history of the Astronomy & Astrophysics group at Warwick. We were joined by the Vice-Chancellor of the University of Southampton, Professor Mark E. Smith CBE, who was Pro Vice-Chancellor for Research at the University of Warwick when Tom was hired. He explained the background behind the strategic decision of expanding the Department of Physics and its research scope, which ultimately led to Tom's hiring. Prof. Boris Gaensicke provided an overview of the group's past achievements, and Prof. Don Pollacco summarised our present and discussed possible directions the group might take in the future, in particular with the soon to be built Digital Telescope Prototype, awarded £3M on an ERC Advanced Grant.

The meeting was closed with a "Share a memory" session, where all attendees were invited to share an anecdote or picture related to Tom or Warwick. We heard stories from many, from senior researchers who met Tom as a graduate student to current students who met Tom as a lecturer. Common topics in all cases were Tom's kindness, humour, and brilliant intellect. Tom was a positive influence to all who met him and will be forever missed by our group, but we can take solace from witnessing his spectacular legacy living on.



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

LabCup update

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

All Groups should now be using LabCup to manage their chemical inventories. As a result of this new software, changes have been made to the chemical order process and the waste process. Details of the changes can be found on the Physics H&S intranet: <https://warwick.ac.uk/fac/sci/physics/intranet/healthandsafety/admin/chemicals/>.



Chemical orders: All new chemical orders must reference the Labcup barcode on the internal note on Opera. On collection from Stores, a label for the item must be printed and attached to the bottle and stored appropriately. There is a meeting on Wednesday 9th October to communicate these changes & offer an opportunity to ask questions or seek advice on using LabCup.

XMaS Scientist Experience needs your help!

What is the Scientist Experience?

Every year, XMaS offers an opportunity for an all-expenses paid trip to a world-leading science research facility - the European Synchrotron Radiation Facility (ESRF), in Grenoble, France. The trip is for Year 12 female-identifying students who are keen on all things Physics and STEM. The experience offers a tour of the ESRF and the XMaS beamline, as well as the opportunity to chat to inspirational female scientists who live and work in Grenoble. And of course, fit in some site-seeing!

Why is it important?

Through this trip we take students out of the classroom and show them science in a real-world application, with the aim of sparking an enthusiasm for the wonder of science. It is a tremendous opportunity to see how far a career in science can take them. It is vital that we empower young women to pursue their aspirations in STEM and show them that they shouldn't be discouraged because of their gender. Let's get more women into STEM!

How can I get involved?

Calling all Physics PhD and Post-Docs who would like to be involved in the Scientist Experience! XMaS is looking for a female identifying PhD/Post-Doc who would like to come along as a supervisor on the trip. This outreach project is a great developmental opportunity and gives you the chance to not only oversee the students, but to also share your own experiences as a woman in Physics. In November, there will be an application process which will require you to complete an online one-page questionnaire, focusing on why you would like to be involved in this inspiring experience. To find out more information and apply – please visit the [XMaS Impact & Outreach webpage](#). More details will be shared in the upcoming weeks with application instructions.

Additionally, XMaS will be hosting a 'Women in Physics' evening before the trip – an online event where any female-identifying individual who works in Physics can give a short talk on how they got to be where they are today and their experiences as a woman in STEM, as well as touching on their research. This event is to enlighten and encourage more females to follow their goals and the possibilities and careers that they can achieve. XMaS is looking for 5/6 individuals who would like to get involved. To be part of this evening, please email:

ymas@warwick.ac.uk or have a chat to Sophie Wawman - XMaS Project Coordinator for more info.



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

Petition to make period products accessible

A petition to end period poverty has been set up by Postgraduate students, asking the University to supply all bathrooms across campus with free period products.

Scan the QR code or follow the link to sign: <https://forms.office.com/e/HKYg6q7Bpg>



Department of Physics Instagram

The Department have recently launched an Instagram account, with the aim to share information and events with current and prospective students. You can follow us on WarwickPhysics.

The account was launched in time for Welcome Week to give new students the opportunity to see some of our academics and key spaces around the department before they arrive. Thank you to those that have taken part in videos so far.

We would love to share more content about our department, so please share any ideas with physicsadmin@warwick.ac.uk

Welcome Week

We welcomed our new undergraduate cohorts at induction events on Tuesday 24 and Thursday 28 September while postgraduates had their induction on Tuesday 1 October.

Extra activities for this year included: board games in the student workroom, a quiet space for students to retreat to and a roving biscuit tin, as modelled by our Head of Department.

Also new for 24/25 is our Physics Instagram account, where new and returning students can find announcements, reminders and short films featuring Physics department staff.



Reflections on this year's Culham Plasma Physics Summer School

I am grateful to the Warwick Physics Department for enabling me to attend the 61st Culham Plasma Physics Summer School, organized by UKAEA in collaboration with CCFE and St Edmund Hall College.

The two-week-long summer school was a fantastic opportunity to learn about nuclear fusion from industry leaders and academic experts. Talks, lectures and problem sessions covered topics such as plasma dynamics magnetohydrodynamics and particle dynamics), kinetic theory, laser plasmas, industrial plasmas, experimental design of Tokamak reactors and experimental diagnostics.



Learning about all areas of fusion physics, meeting and collaborating with 70 attendees from various countries and backgrounds gave me invaluable insight into current research and inspired my future ambitions. The highlight of the school was undoubtedly the tour of JET and MAST, the two experimental Tokamaks that have led the world in fusion research over the past three decades.

I would like to thank the Warwick Physics Department for the opportunity to gain a foothold in the fusion industry and for driving my ambitions, inspiring me to explore this field further.

MPhys Physics student, Ibrahim Khan

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