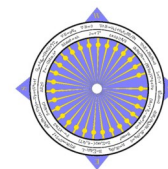


The Pendulum— Autumn 23

Issue 19



The beginning of the new academic year, when we welcomed all our new staff, undergraduate and postgraduate students, and of course also to our returning students, seems a dim and distant memory as we draw ever closer to the end of term. The start of the academic year was marked with many cases of Covid-19 and flu; at one point we had so few people in the student office it looked like lockdown had returned! It never ceases to amaze me how willing Physics staff and students are to pitch in. Despite having many colleagues off work the team pulled together and everything got done. This included two University Open Days, at each of which over 5,000 visitors arrived on campus. Not quite all came to Physics but it was wonderful to see students and staff engaging with our many visitors.



It is now over a year since we lost our sorely missed colleague, Professor Tom Marsh. In October staff and postgraduate students from the department were joined by Tom's wife Felicity, and children Tabatha and Henry, to plant a tree in Tom's memory close to the recently opened teaching observatory. Tom was equally devoted to research and undergraduate teaching, and I am pleased to confirm that the observatory has been named the Marsh Observatory. From the small beginnings it can clearly be said that astronomy is now an especially important part of the University of Warwick, and none of this would have happened without Tom's devotion.

Researchers in Physics at Warwick continue to push the boundaries of knowledge. For example, astronomers Andrew Levan, Kendall Ackley, James Munday, Ingrid Pelisoli and Danny Steeghs working in a large international team, have observed evidence of tellurium, one of the rarest elements on Earth, and infer the presence of several other elements, like iodine, that are essential to life, as a result of a kilonova (read the paper [here](#)).

Congratulations to Peng Wang who has been named as a 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, and Peng is one of the five Warwick researchers to make the [list](#). A key milestone for the STEM Grand Challenge was the submission of applications for enabling works and outline planning to Coventry City Council to create the new Science and Engineering Precinct on the main University campus.

I hope you enjoy the articles in this issue of The Pendulum and 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!

Tree planting in memory of Professor Tom Marsh

On Friday 20 October, colleagues from across the department were joined by Tom's family to plant a tree in Tom's memory.

The magnolia galaxy tree was planted at the new on campus observatory where the department's astronomy students will have opportunities to observe through the new telescope.



Grants and Awards



Dr Ravindra Desai (Centre for Fusion, Space & Astrophysics) has been awarded funding from the European Space Agency (ESA) titled 'Revealing the Orbital and Atmospheric Responses to Solar Activity' (ROARS). The project will address the growing threat of space debris with a "swarm" of satellites by distributing instruments across multiple smaller inter-linked spacecraft, a "swarm" will possess observational capabilities far in excess of a standard, large satellite. [Find out more.](#)



Professor Emma MacPherson has been announced as the first female winner of the 2024 IRMMW-THz Society Exceptional Service Award and will travel to the conference in Perth, Australia in 2024 to receive the award. The award was established in 2010 and recognises a single individual who has contributed continuously to the goals of the society over a long period of time, and to the expansion of influence and organisation of their technical community.

[Read more about Emma's award.](#)

Dr Farzana Meru appointed as a member of the University Gender Taskforce

[Dr Farzana Meru](#) has recently been appointed as a member of the University [Gender Taskforce](#). Farzana was invited by the Gender Taskforce (GTF) to become a member due to her knowledge and expertise on gender related issues. The Gender Taskforce champions and oversees the advancement, implementation, and further development of gender equality at institutional level in line with the Gender Statement of Intent catalysed by the Women in Academia workshops and reports to the university [social inclusion committee](#). [Find out more.](#)



Congratulations to our staff

Zahra Choudhury (Senior HR Assistant) passed her Human Resources (HR) Level 3 course with SCCU in September.

Ayesha Rahman (Office manager & HR Administrator) has completed the 'Coaching Professional Development Programme' and has been awarded her apprenticeship.

Paul McCarroll (Electronics Engineer) has been awarded a 1st class degree in Electronic Engineering from the Open University.

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

Congratulations to Robb Johnston

On 28th September Robb attended the Council House in Birmingham to collect his British Empire Medal. Pictured is Lord-Lieutenant Sir John Crabtree OBE and Lord Mayor of Coventry, Cllr Jaswant Singh Birdi.



James Webb Space Telescope observations of a kilonova

The James Webb Space Telescope (JWST) observed the extremely rare merger of two stars—kilonova. Professor Danny Steeghs and Professor Andrew Levan (Radboud University) observed evidence of tellurium and infer the presence of several other elements like iodine, that are essential to life.

[Find out more about the JWST observations.](#)

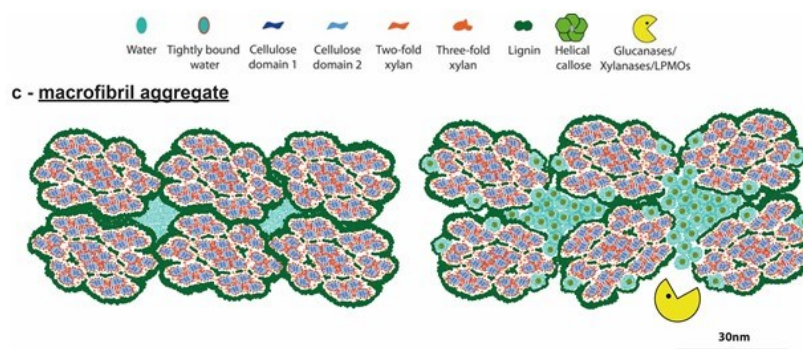
Solid state NMR shows how a wood modification boosts biomass conversion



On 1 October 2023, Professor Ray Dupree celebrated 60 years of academia whilst on holiday in Croatia (left image).

Professor Ray Dupree, Dr Rosalie Cresswell and Dr Dinu Iuga are co-authors of a recently published paper in *Nature Plants* titled '*Ectopic callose deposition into woody biomass modulates the nano-architecture of microfibrils*'. Fossil fuels are the major source of energy, chemicals and materials but are responsible for a substantial portion of greenhouse gas emissions. To reach carbon neutrality, much of what's made from fossil fuels today will have to be made from biomass tomorrow, currently chemically and energetically very demanding. Ray says "Our collaborators at the Sainsbury Lab. and Cambridge University took callose, a polymer that is naturally occurring in some cell walls of plants, and engineered it into the secondary cell walls of poplar wood. This callose-enriched poplar is much more easily converted into simple sugars and bioethanol than non-engineered wood. Why? Solid state NMR at Warwick surprisingly revealed that callose did not interact with other polymers but acted as a cell wall spacer attracting water and making it much easier for enzymes to access/breakdown the wood."

[Read the publication.](#) *Nature Plants* 9, 1530–1546 (2023) <https://doi.org/10.1038/s41477-023-01459-0>



Model of poplar macrofibril assembly without (left) and with callose deposition (right). Callose self-aggregates in between microfibrils, which explains the observed increase in secondary cell wall porosity. The range of pore size affected is 4–30 nm, which is in the size range of hydrolytic enzymes.

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

Starters and Leavers

31 August—31 October

The department welcomes...

Katarina Blow
Andrew Buchan
Maria De Juan Ovelar
Donald Evans
Siddarth Gandhi
Amir Hasanzadeh
Marina Lafarga
Kanishka Mathiarasan
Dharvi Rajput
Aditya Singh
Christopher Woodgate

We say thank you and good luck to...

Ajay Chandrarajan
Edgar Gutierrez
Arturo Hernandez
Theodoros Kapourniotis
Tim Martin
Tina Miao
Tom Orton
Marco Polin
Curtis Saxton

Staff Profiles



Kanishka Mathiarasan, Project Co-ordinator

My job involves: Looking after the Physics research projects, forecasting budgets for Principal Investigators (PIs), research grants administration, managing and monitoring financial budgets for research projects, authorising expense claims, collating timesheets on EC/UKRI funded projects and advising on funder terms and conditions, reporting requirements and final claims.

Career history: I moved within Warwick from the Centre of interdisciplinary methodologies.

When not at work, you can find me: Trying new foods.



Dharvi Rajput, Administrative Assistant, UG & PG

My job involves: My role involves with day-to-day administrative duties at the student office. In addition, my role also includes assisting with incoming enquiries.

Career history: I am a BSc Computer science graduate and lately completed my MSc in Computer Science. I have a strong background in coding and my major interests rely in Machine Learning and Big data. During lockdown, I completed my dissertation using machine learning algorithms to specifically focus on how to slow the transmission of COVID-19 in UK and compare the data with other countries ending with a first class for my project. I've always had the passion for computers, and I constantly try to learn new topics. Stepping into this role will allow me to gain new skills and broaden my knowledge in this institution.

When not at work, you can find me: Travelling to explore new cities and towns! I enjoy spending time outdoor in nature and visiting historical places.

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

Admin Staff Update

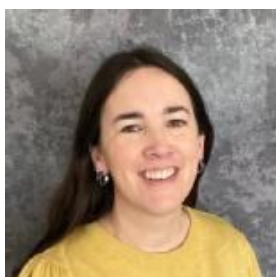
There have been a number of changes in recent months across the professional services team. The full team can be found listed by name and by duties on our [staff page](#).

In particular, we welcome Helen Murray, Liz Hall and Dharvi Rajput who have joined the Student Office, and Kanishka Mathiarasan who has joined the Finance team supporting research grants. Congratulations to Rosalind Johnstone and Abigail Meadows who have been promoted. Rosalind continues to offer support for postgraduate students; Abigail now supports the EPSRC funded Terabotics programme grant.

There are still four vacancies; three in the Finance Office to provide support for research grants and one in the Student Office to provide support across undergraduate support and admissions. While some of these vacancies are the result of staff moving to new roles, we have been successful in bidding for more resource to support the growth in volume and complexity across our teaching and research. We hope to be up to full capacity by the end of the year!



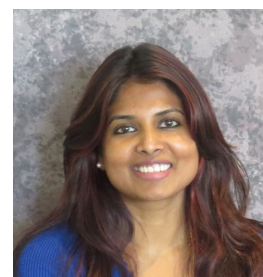
Helen Murray



Liz Hall



Dharvi Rajput



Kanishka Mathiarasan

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.

Pets As Therapy Dogs (for students led by physics society) - Wednesday 22 November

'Becoming an Astronomer—Obstacles in academia' - Tuesday 21 November, 2pm, Common Room

[Christmas Lectures](#)—Thursday 30 November

Christmas Lectures—Thursday 7 December

Departmental Christmas Lunch—Monday 18 December



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!

Sustainability grants

Both the Spectroscopy RTP and solid-state NMR facility have had an upgrade to their lighting. Over 70 old fluorescent or Arc lamp-based lights were replaced with modern LEDs. The lighting in the lab is much improved and the new units are already showing a measurable reduction in the electricity use of the building. Before the project commenced it was estimated that the running costs of new lighting would represent a saving 28500 kWh/year of electricity and over 5500 kg of CO₂ per year. The work was funded by the University Energy and Sustainability team who may be able to help with upgrading to save energy in other labs as well. The work was completed by estates quicker than anticipated with minimum disruption—thanks to Miah McCullagh and his team from estates. Ben Breeze (Spectroscopy Manager) says: “It’s great to be able to make a small change to the labs that not only improves the working conditions but also helps make them more sustainable and will help us as we hope to improve on our silver LEAF certification.”



The Royal Society of Chemistry has [sustainable laboratories grants](#) available up to £10,000.

Scientific Computing RTP Drop-In Support sessions

The Scientific Computing RTP run a Drop-In Support session that runs for 3 hours per week. This session is designed to provide a face-to-face contact point for anyone requiring support research computing, be it local python scripts to massive simulations on supercomputers. We welcome any question from 'I have this problem and I don't know where to start' to 'I need to optimise this code to run faster on this specific machine'. We can be particularly helpful if you don't know exactly what to ask and need someone to talk to.

For those of you already familiar with the drop in it will be in the usual room Zeeman A0.01 but the days are changing to either Tuesday or Wednesday afternoon. Please [see the Calander](#) for details.

Space Science Impact Fund (SSIF) Open

The [Space Science Impact Fund](#) is designed to promote and accelerate impact from existing STFC funded research or research within the [STFC remit](#). The core subject areas include astronomy, solar and planetary science, particle physics, particle astrophysics, nuclear physics, accelerator science and computational science. The fund aims to:

- Support innovation and commercialisation proof-of-concept projects
 - Strengthen industry or stakeholder engagement by funding community building workshops
 - Support inventive methods to knowledge exchange and impact
- Support industry or stakeholder secondments.

Applications are encouraged from technicians, ECRs, postdocs, senior researchers from across the University. With the available budget, we to aim to fund 2 -3 projects (SSIF budget = £50,000).

Funding is available from 1 December 2023 - 31 March 2025, taking account of the following financial periods:

- 1 December 2023 – 31 July 2024
- 1 August 2024 – 31 March 2025

Applicants must specify within which of these financial periods the award (or agreed pro-rate amounts) will be de-frayed.

We support an inclusive culture and diversity for our research project teams. We are committed to encouraging further growth from diverse groups, and we welcome applications from people of all abilities and currently under-represented groups. We currently have an underrepresentation from women, BAME, disabilities and LGBTQ communities. As such, we particularly welcome applicants from these groups. Further details and eligible costs can be found on the [Space Science Impact Fund](#) website. To discuss your application or any questions, please contact research_impact@warwick.ac.uk.

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

Can you recommend a podcast, careers blog or newsletter for students?

We are currently in the process of developing some new careers webpages for our students. 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](#). Please note the webpages are still in progress, so you won't be able to view the content at the moment, but you can still make a recommendation!

Research Project Timesheets

The imminent changes:

- The Vidatum Academic Electronic timesheet system is to become **mandatory by 1st November 2023**. This replaces excel timesheets.
- Timesheets for UKRI and EU projects must be submitted within **two months** of the period end. This will be monitored closely.
- EU declarations for staff charged at 100% contracted time, must be completed and signed at the start of the reporting period (not the end).

Who completes timesheets:

For UKRI projects, timesheets are required for Directly Incurred staff (e.g. research fellows, research assistants, technicians, administrative staff) charged at less than 100% contracted time to the project. There are more requirements for Innovate projects.

For EU projects, timesheets are to be completed by all research staff (including PIs, Co-Is, and Ph.D. Students) charged at less than 100% contracted time to the project. On ERC grants, PIs need to complete timesheets even if not charging time.

What happens if we don't do this:

Failure to provide properly completed and authorised timesheets (or equivalent justification), risks the entire amount claimed for that employee being declared ineligible. There is also a risk of other financial penalties and sanctions for the University.

Where to get help:

Further guidance on the timesheet procedure is available on [Research Finance's website](#).

Book your tickets for the 2023 Christmas Lectures

It's that time of year again to start booking tickets for our Christmas Lectures—this year they will take place on Thursday 30th November and Thursday 7th December! You can expect mind-boggling science, explosive experiments and audience participation! So, pull on your festive jumper, bring your family members or friends and join us for an evening that audiences described last year as awesome, messy and fun! [Book your tickets now!](#)



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

Millburn House to host UK's most powerful Nuclear Magnetic Resonance instrument



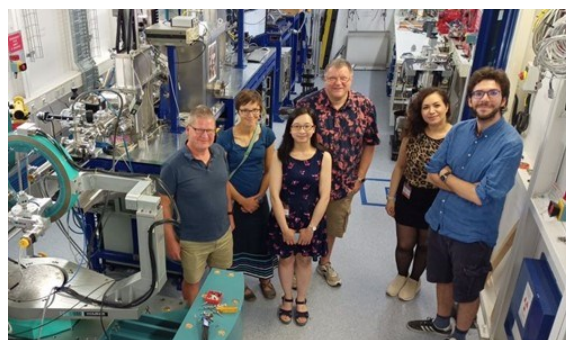
Millburn house will soon get an extension [to host UK's most powerful Nuclear Magnetic Resonance instrument \(see press release December 16th 2022\)](#). University of Warwick Estates appointed Boswell Mitchell & Johnston (BMJ) Architects, together with Couch Perry & Wilkes (CPW) Building Services Engineer, Scott White and Hookins (SWH) Structural/Civil Engineer and project consultant Quantem, to design the extension. The 347 page, recently issued, stage 3 report contains an interesting preliminary ecological appraisal that mentions a total of 24 records of bats within 1 km of Millburn House. Dinu Iuga writes that "this reminds me of an incident more than 10 years ago when a bat found its way into Magnet Hall.

Diane Holland bravely caught it and released it outside the building." Construction on site is expected to start in April 2024 and this will involve some disruptions especially on accessing the north entrance into the A wing of the building. The new £15M 1.2 GHz NMR system is scheduled to be delivered and installed by Bruker in early 2025.

EPSRC visits the XMaS beamline in Grenoble

The XMaS beamline which, based at the European Synchrotron Radiation Facility (ESRF) in Grenoble, France has been operational at the ESRF for over 25 years and is currently funded as an EPSRC National Research Facility (NRF).

[Find out more.](#)



Training Opportunities

The [Leadership and Management Development \(LMD\)](#) offer development programmes and short courses. All staff are encouraged to undertake 5 development days per year. You can register interest for any of the courses.

[Dealing Effectively With Conflict.](#)

[Developing Others.](#)

[Giving and Receiving Feedback.](#)

[Having Difficult Conversations.](#)

[Wellbeing: Leading with Emotional Awareness.](#)

[Managing Change.](#)

[Wellbeing: Managing Stress Within Your Team.](#)

[Wellbeing: Mental Health Awareness for Managers.](#)

[Motivation.](#)

[Resilience in the Workplace.](#)

The following are all booked (or have 1 or 2 spaces left) – if you are interested you can add yourself to the waitlist

[Warwick Supervisors Development Programme.](#)

[Warwick Management Development Programme.](#)

[Warwick Leadership Development Programme.](#)

[Preparing to Manage](#)

[Wellbeing: Building Happy Teams](#)

[Wellbeing: Building Resilient Teams](#)

[Empowering Your Team to Perform](#)

[Managing Upwards](#)

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

Suicide Prevention Training

A member of the Wellbeing & Student Support team joined our Welfare and Communications Group meeting and talked to the group about suicide prevention. The university hold a training session which aims to increase awareness and understanding of mental health and build confidence in responding to others experiencing mental health difficulties. You can [register for the workshop](#) or you can view [other resources](#) which may be useful.

Horizon Europe Funding



The UK and the European Commission have now agreed on the UK's re-entry into the Horizon Europe programme, with the UK to fully participate in the Horizon Europe programme on the same terms as other associated countries, including leading consortia as project coordinators.

The new arrangements kick in with the 2024 Work Programmes and will continue through to the end of the Horizon Europe programme in 2027. Any 2024 calls opening this year are also included. [Find out more.](#)

Pronouns Pledge

The University have created the [Pronouns Pledge](#) to make it as simple as possible to engage with inclusive best practice on pronouns, and to build a movement of people taking these steps together. As a department, we would like everyone to include your pronouns on your email signature and your staff page as well as anywhere else appropriate. You can collect a free pronouns badge from a box in the the Physics common room or from Senate House reception area.



Say My Name

Saying someone's name is powerful – it can create a sense of visibility, connection, and belonging. But it can be hard to know what to do when a name is unfamiliar to us. The [Say My Name project](#), led by the Community Values Education Programme (CVEP), aims to support staff and students to develop practical skills and systems where names are respected and celebrated. We encourage you to have a hyperlink on email signatures, your research profiles and anywhere else with your name so that your name can be heard and respected by others. We encourage everyone to take part to create an inclusive culture where everyone is called by their name, even if your own name and / or pronouns are rarely misused.



Active Bystander Updates

Active bystanders prevent harm in their communities, by intervening in response to harmful behaviors such as harassment, sexism, racism and LGBtQphobia. Safe and effective interventions require knowledge, skills, and confidence as a bystander. You can sign up to receive ten bitesize inbox updates to support your growth as an active bystander. [Register for updates.](#)

Physics Society Movember Run

The Physics Society took part in Movember this year, with a Leamington Charity Fun Run! It consisted of a 5k or 10k run around Newbold Comyn on Saturday 18th November. The team met at the Football Pavillion at 11.30 I. They'd love some staff to join with students and exec, and raise lots of money for a great cause. You can still [donate](#). Read about the [Physics Society Running Club](#).

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