

Sent on behalf of Professor Perumal Nithiarasu, Associate Dean for Research, Innovation and Impact

Dear Colleagues,

Please read below about some of the Faculty's most recent success stories. We would particularly like to see more from our Professional Services staff for the next email!

Staff News

Learning (from) Lattice Field Theory

[Professor Gert Aarts](#) (Physics) has been awarded a Leverhulme Trust Senior Research Fellowship, starting in October. The title of the research proposal is Learning (from) Lattice Field Theory. The project will address the relation between theoretical physics and Artificial Intelligence/machine learning (AI/ML), i.e. whether one can apply ML to answer pressing questions in theoretical physics and reversely, whether one can build on ideas from theoretical physics to understand ML. A particular focus will be the combination of diffusion models (a GenAI approach) and lattice field theory, describing elementary particles.

ASAB 2025 Spring Meeting



Biosciences staff [Andrew King](#) and [Ines Fürtbauer](#) attended the ASAB 2025 Spring Meeting at Liverpool John Moore's University (<https://www.asab.org/conferences-events/2025/4/23/asab-spring-2025>) with their research teams. Pictured from left to right: Lucia Pedrazzi (PhD student), Grace Balchin (final-year BSc student), Jemima Frame (PhD student), Andrew King, Layla King, Ines Fürtbauer, Oliver Davidson (MRes student), and Luca Hahn (Swansea–Exeter PhD student). All students received ASAB bursaries to attend, and Lucia, Grace, and Jemima presented their research at the meeting.

Meet in Wales



Meet In Wales, a division of the **Event Wales** team within the **Welsh Government**, responsible for developing and promoting Wales' visitor economy, has published a case study highlighting [Muneeb Ahmad](#) (Senior Lecturer in Computer Science) role in securing the 2024 International Conference on Human-Agent Interaction for Swansea, Wales.

The case study highlights Muneeb's deep passion and advocacy for Wales as a premier global conference destination, recognising the dedication and expertise that played a pivotal role in securing this prestigious event.

Wales continues to attract world-class gatherings, offering state-of-the-art facilities, rich cultural experiences, and seamless connectivity. With a thriving academic community and a strong commitment to technological advancement, it provided the perfect environment for shaping the future of human-agent interaction.

Please read more – <https://www.meetinwales.com/choose-wales/wales-for-associations>

Silver Publishers Award



[Dr Rhian Meara](#) from the Geography Department has recently been awarded the Silver Publishers Award from the Geographical Association for a series of educational videos created with [Time For Geography](#).

The prize was awarded for the [Isles of Fire series](#), a five part documentary about the 1973 Eldfell eruption in Iceland and its long-lasting impacts on the nearby community on the island of Heimaey. The videos detail the story of the eruption, including its unexpected beginning, the emergency evacuation of 5000+ people to the Icelandic mainland, the reality of fighting to save a town from lava flows, and the community recovery in the aftermath of such a traumatic event.

The videos are based on Rhian's [research](#) into the eruption, funded by Swansea University and the Coleg Cymraeg Cenedlaethol, and feature colleagues from Leicester, Liverpool and Manchester Metropolitan Universities.

In addition to the Silver Publishers award, Rhian and the team were also awarded Commendations from the Geographical Association for two Geography Revision Masterclasses, and a Resource Award from the Scottish Association of Geography Teachers.

The Enhanced Games Envision More Than Events Without Drug Testing



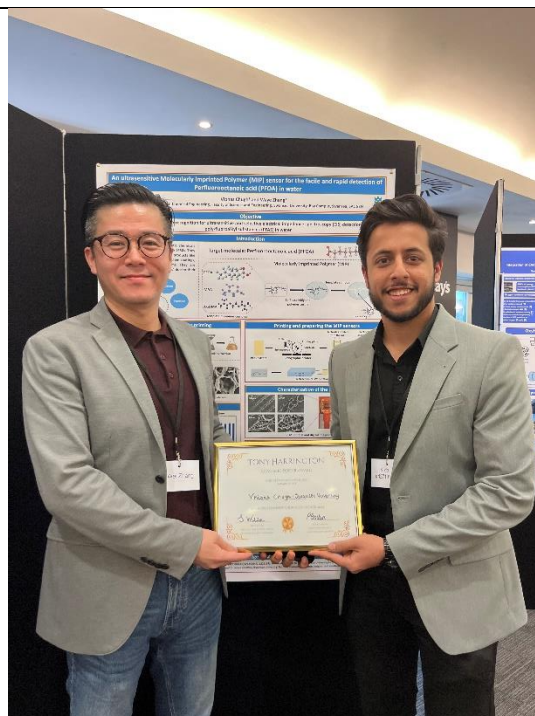
[Dr John William Devine](https://time.com/7287038/enhanced-games-las-vegas-interview/), Senior Lecturer in Ethics in the Dept. of Sport and Exercise Sciences was quoted by *Time* magazine in an article concerning the Enhanced Games entitled "'We Can Literally Invent Humans 2.0': The Enhanced Games Envision More Than Events Without Drug Testing". (<https://time.com/7287038/enhanced-games-las-vegas-interview/>).

In contrast to the Olympic Games, the Enhanced Games, will allow athletes to use performance enhancing drugs. The first such games is scheduled to be held in Las Vegas in May 2026.

Devine has been a critic of the Enhanced Games since they were announced in 2023, and, prior to the *Time* article, he has provided expert comment for CNN, *The New York Post*, and *The Sydney Morning Herald*. He has also published an ethical critique of the Enhanced Games at *The Conversation* (<https://theconversation.com/the-enhanced-games-letting-athletes-use-drugs-could-lead-to-worse-problems-than-cheating-209349>).

Student News

Tony Harrington Award at the Welsh Water Innovation Event



Per- and polyfluoroalkyl substances (PFAS) are a group of synthetic chemicals dubbed ‘forever chemicals’ given their environmental persistence. As used extensively within electronics, textiles, cleaning agents and cookware, a recent mapping exercise has confirmed the widespread extent of PFAS pollution in UK as being significant and originating from multiple sources including PFAS production, use, ineffective wastewater remediation, and/or leachate from landfill. With a current shortage of environmental testing (including for drinking water sources) within the UK, and initial human epigenetic studies showing a range of health disorders such as lower birth weight, higher cholesterol, changes in liver function, and cancers from exposure to PFAS via skin, contaminated food or water, there is an urgent need to improve the monitoring of PFAS at source, establish its water quality limit levels, and deliver remediation measures.

At Swansea University, PhD candidate Vibhas Chugh in the research team led by Dr Wayne Zhang have successfully developed low-cost miniature electrochemical sensors that can detect PFAS down to 0.1 ng/L in water, reduce the current analysis time for PFAS from three days to a few minutes, and a single test cost from £300 to a few pounds. This project sponsored by EPSRC and Dŵr Cymru Welsh Water has recently received the Tony Harrington Poster Award at 2025 Welsh Water Innovation Event for its innovative and groundbreaking work.

Best Presentation Award at the UK Vertical Lift Network Annual Workshop

Aerospace Engineering PhD student Aron Finnemore won the Best Presentation Award at the UK Vertical Lift Network Annual Workshop, held in Cheshire from 11

to 13 May. The UK VLN is a collaboration between UK academia and industry, providing leadership and promotion of the UK's vertical lift sector. Comprising universities, national aerospace institutions and industrial research bodies, the UKVLN draws on a range of experiences to achieve comprehensive responses to, and deliver a coherent vision for, future vertical lift challenges. The three-day event brought together academics, engineers, industry representatives and students from across the UK working on rotorcraft and rotor/propeller-based platforms.

Aron's research is supervised by Dr Alper Celik and Dr Yuying Xia, conducted in collaboration with Dr Ye Yuan of the University of Glasgow, and funded by Embraer SA. It explores the effects of gusts and turbulence on the aerodynamics of emerging Advanced Air Mobility vehicles, such as "flying taxi" concepts and drones, which are particularly vulnerable due to their low speeds and flight profiles.

Top Project Award by The Royal Society of Biology



Jack is a recent alumnus of Swansea University, graduating with honours in marine biology. Last May, Jack was awarded the Top Project Award by The Royal Society of Biology for his undergraduate thesis "Some Like it Hot: Assessing Temperature Preference in Whiteleg Shrimp (*Litopenaeus vannamei*)".

Whiteleg shrimp are the most cultivated prawn species globally, making up about half of all crustaceans in aquaculture. There is also increasing evidence to suggest that these animals are sentient, meaning they are capable of experiencing pain and stress etc. Despite both their popularity and the increasingly supported argument for sentience, there is little to no legislation within aquaculture that adequately protects these animals, and a lack of scientific literature to advise those legislations. Jack's dissertation aimed to contribute to the knowledge of what the optimal conditions are to rear and culture these animals by assessing environmental preference. Using video tracking and dynamic regulation technology, he was able to estimate temperature preference over a 24-hour period. His results showed that many European-based shrimp farms are keeping their shrimp in conditions that are cooler than the animal's optimal temperature preference range.

The dissertation was sent off to the Royal Society of Biology by Swansea University on behalf of Jack to be nominated for the top project award. He and winners from other universities attended the awards ceremony on the 10th of April at the House of Commons in London. He is still with the university and working as a research assistant with the FISHBEE research group.

REF2029 Canvas Hub

A reminder that a new Canvas hub has been published. Developed by the REF Officers team, this is a central repository for the REF2029 documentation, guidance, resources and news.

The joining link is <https://canvas.swansea.ac.uk/enroll/BDY36G>. Please enable notifications as this site will be updated with guidance, news, consultations etc as they are received.

Keep in Touch!

If you are aware of any recent achievements to share, either for yourself or for any members of your team, we would love to hear about them! We're interested in stories from academic and professional services communities. Please email any news to **FSE Research** (fse-research@swansea.ac.uk). **Deadline for submissions: 15th of each month.**

If you would like to promote a research event on the FSE Events webpage, please contact fse-reception@swansea.ac.uk

- [Research Support Hub](#)
- [Research at the Faculty of Science and Engineering](#)
- [Exploring Global Problems Podcast](#)
- [Upcoming Events](#)
- [Past Esteem Newsletters](#)