



Faculty of Science and Engineering Cyfadran Gwyddoniaeth a Pheirianeg

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!

STUDENT NEWS



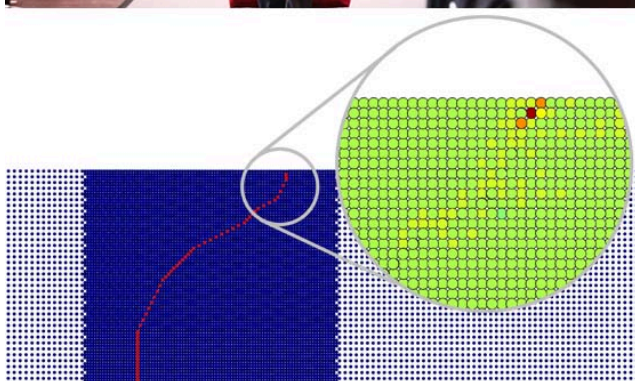
PhD student wins Roger Owen Prize

Congratulations to Dr Paulo Roberto Refachinho de Campos who was recently selected as winner of the UKACM Roger Owen Prize 2023 for his thesis '[A New Updated Reference Lagrangian Smooth Particle Hydrodynamics Framework for Large Strain Solid Dynamics and its Extension to Dynamic Fracture](#)'.

Paulo said: 'In 2018, I was fortunate to begin a PhD at Swansea University, from which I received the Best PhD Thesis award in the School of Aerospace, Civil, Electrical, General, and Mechanical Engineering in July 2023. Less than a year later, I am honoured to have been awarded the prestigious UKACM Roger Owen award, the highest achievement for a student in Computational Mechanics in the UK'.

Paulo's supervisor [Professor Antonio Gil](#) said: 'I am delighted to have had the opportunity to lead the supervision of Paulo's PhD thesis. This was a collaborative effort with the University of Glasgow and the Universitat Politècnica de Catalunya as part of a European H2020 European Training Network. Paulo has worked extremely hard on a very challenging topic and his PhD thesis and the rest of the publications from his research are a testament of his commitment'.

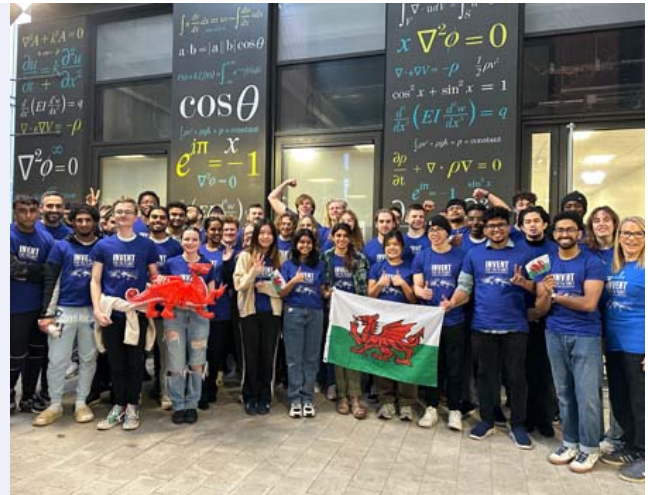
The award is in recognition of Roger Owen (1942–2020), who made significant contributions, not only to UKACM but also to the European Community on Computational Methods in Applied Sciences (ECCOMAS) and to the IACM. Apart from his time as a PhD student and post-doctoral researcher at Northwestern University, Owen spent his whole career at Swansea University.



Invent for the Planet 2024

Forty students from Swansea University took part in Invent for the Planet 2024, representing the UK as the only UK university invited to take part. Hosted by Texas A&M University, the 48-hour hackathon is an innovation-fostering global collaborative competition, where students from 35 universities come together to tackle some of the biggest challenges facing our planet.

Swansea's winning team, Pure Flow, focused on providing a clean water solution for Papua New Guinea. Supported by the Engineers in Business Competition, Pure Flow received a top prize of £1,500 and were invited to take part in the European semi-finals at Atlantic Technological University, coming in 2nd place.



STAFF NEWS



Tidal turbine successfully trialled at META

Swansea University Professor of Ocean Energy [Ian Masters](#) and a team of researchers have developed and successfully deployed a tidal turbine, capable of testing tidal energy in a realistic tidal flow.

The turbine is designed to operate in remote communities and has been trialled at Wales' Marine Energy Test Area (META), Warrior Way, Pembroke Dock - the only pre-consented, pre-commercial test facility of its kind in Wales.

Ian said: "We have gathered valuable data which we're going to share with the scientific community, providing the tidal energy community with data needed to move more quickly towards commercial viability".

Funded through the Swansea Bay City Deal and a keystone partner of the Pembroke Dock Marine Project, META offers testing in real sea conditions for wave, tidal and floating offshore wind (FLOW) technology in the Milford Haven Waterway, alongside



Offshore renewables innovation programme to continue

A programme that brings academia and industry together to co-design solutions for offshore renewable energy (ORE) has been renewed for another five years.

IDCORE, out of the University of Edinburgh, will receive £6m from the Engineering and Physical Sciences Research Council (EPSRC), as part of a £1bn.

In conjunction with the universities of Exeter, Swansea and Strathclyde, IDCORE works with ORE companies from Orbital Marine to SSE to train the engineers of tomorrow, cementing offshore renewables' place in the UK economy and contributing to net zero strategy.

The programme's research engineers help companies improve efficiencies by, for example, studying the impact of turbulence on tidal turbine generators; figuring out how to use oil and gas infrastructure for hydrogen or finding the right vessels to maintain offshore energy installations.

world class port, engineering and manufacturing facilities.

[Watch the video](#)

[Professor Ian Masters](#) said: 'As part of EPSRC Industrial Centre for Doctoral Training in Offshore Renewable Energy we will train the next generation of technical leaders in partnership with companies across Wales to develop technology that generates energy from the sea in a way that is in harmony with nature while creating jobs and opportunities'.



Academic to become member of Manufacturing and the Circular Economy Strategic Advisory Team

[Professor Cinzia Giannetti](#), Mechanical Engineering and co-lead of the Materials and Manufacturing Research Institute, has been selected to become a member of the EPSRC's Manufacturing and the Circular Economy Strategic Advisory Team (SAT) with effect from March 2024. SAT members contribute to the development of EPSRC's forward strategy and in shaping the research and training portfolio, as well as facilitating two-way communication between EPSRC and the research community. SAT members are appointed every two years through an open call.

[More about SAT](#)

Hydrogen Award winner

Congratulations to the Energy Safety Research Institute (ESRI) who recently won the Research Initiative category in the 2024 [Hydrogen Awards](#)!

Their project RICE – Reducing Industrial Carbon Emissions – is aimed at developing an electrolyser using low-cost materials, to provide the UK's first example of green hydrogen generation.

The awards reception was hosted by the Hydrogen Summit and ERA, supported by Keele University.

The award recognises excellence and innovation in the use of hydrogen across industry sectors, including sector specific research and development projects and partnerships and is sponsored by the Energy Research Accelerator's HyDEX hydrogen development programme.





Academic joins the Digital Twins Network Plus Advisory Board

Congratulations to [Professor Perumal Nithiarasu](#), Department of Civil Engineering, who has received a formal invitation to join the Advisory Board of Digital Twins Network Plus.

Perumal's role will include providing strategic guidance and insights on industry and academic trends, challenges and opportunities and to support networking, partnerships and academic and business development.

Perumal has also been elected to join the [BioMedEng Council](#). The Association of Biomedical Engineers, Medical Engineers and Bioengineers (BioMedEng Association) is a Charitable Incorporated Organisation (CIO) that advances education in biomedical engineering, medical engineering, and bioengineering.

Academic delivers talk at the Royal Scientific Meeting

[Ines Fürtbauer](#), Associate Professor in Biosciences, delivered an invited talk as part of the Royal Society Scientific Meeting "[Understanding age and society using natural populations](#)". Ines presented her research into energetic drivers of social aging in wild baboons, combining hormonal proxies of energy availability, high-resolution GPS, and accelerometry. The work suggests that age-related declines in sociality may be a by-product of a strategy to conserve energy rather than a passive consequence of restricted movement due to energetic deficiencies. Results will be published in a future issue of Philosophical Transactions of the Royal Society B.



[Find out more](#)



SEMI Talenet Event 2024

[SEMI](#) will be holding its flagship talent forum at Swansea on 1st May and hopes to attract 500 students from Swansea, Cardiff, Bristol, Leeds and Warwick. It is one of the premier events for semiconductor industry recruitment in Europe and will be sponsored by companies including KLA, Edwards, Seagate, Intel, IQE, Cadence.

The key themes this year will focus on microelectronics and a digital future.

The event will be opened by the president of SEMI Europe (Laith Altimime) and UK and Welsh Government ministers, with an address from Swansea University's VC and PVC.

[Register here](#)

Turing Fellowships announced

Congratulations to Drs [Alma Rahat](#) and [Sean Walton](#), Department of Computer Science, who have been

awarded the prestigious [Turing Fellowships](#) from The Alan Turing Institute for the next two years.

Turing Fellows are the next generation of world leading researchers and only 50 fellowships have been awarded nationally.

[The Turing Fellowship Scheme](#) aims to grow the data science and AI ecosystem in the UK by supporting, retaining and developing the careers of the next generation of world leading researchers, whilst contributing to the Institute's overarching goals.



Paper submission to Applied Ocean Research

[Professor Harshinie Karunarathna](#), Department of Civil Engineering, has co-authored a paper on '*Gaussian Process Regression Approach for Predicting Wave Attenuation Through Rigid Vegetation*' in collaboration with [Kristian Ions](#), [Alma Rahat](#) and [Dominic Reeve](#) which has been recently published in the journal Applied Ocean Research.

This successful collaboration between Engineering and Science is also one of the first to explore the application of Artificial Intelligence to coastal engineering.

[Read the paper](#)

Professorial Inaugural Lectures 2024

Upcoming Lectures:

[Professor Daniel Thompson](#) and [Professor Ian Mabbett](#) - Wednesday 11th September 2024

[Save your spot](#)

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 Anna Ratcliffe (a.c.ratcliffe@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

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