



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!

STAFF NEWS



AutoCHERI project to address cybersecurity risks

[Dr Hoang Nga Nguyen](#) and [Professor Siraj Ahmed Shaikh](#) from the Systems Security Group at the [Computational Foundry](#), Swansea University are addressing automotive cybersecurity risks using the [Digital Security by Design \(DSbD\)](#), [Capability Hardware Enhanced RISC Instructions](#) (CHERI) with other consortium partners including [Beam Connectivity](#), [Applus+ IDIADA](#), [University of Exeter](#) and [Compound Semiconductor Applications \(CSA\) Catapult](#).

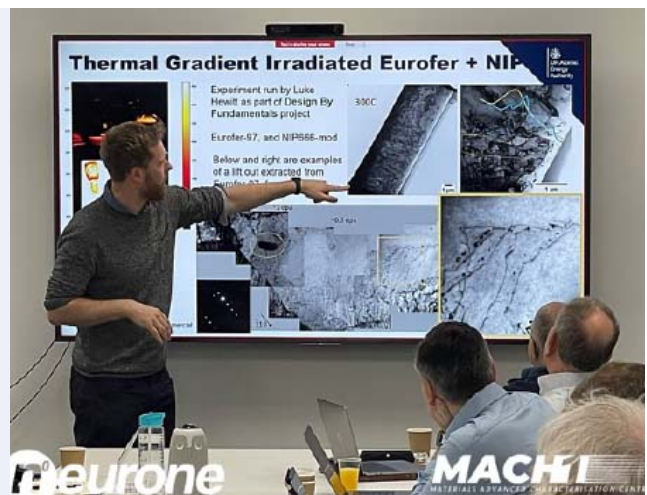
[Watch the video](#)

NEURONE consortium meeting success!

The Materials and Manufacturing Research Institute (M2RI) at Swansea University recently funded a pivotal meeting of the NEURONE consortium, comprising partners from UKAEA, Swansea University, Imperial College London, the Materials Processing Institute, Sheffield Forgemasters and the Universities of Birmingham, Oxford, Manchester, and Sheffield.

NEURONE is a £10m endeavour, funded by the UK Fusion Futures programme, to develop an industrial scale advanced steel over the next 5-years for use in the commercial fusion sector.

[Professor Nicholas Lavery](#) and Dr Stephen Jones from [MACH1](#), hosted the two-day event, and will be taking a key role in the design and prototyping of novel alloys.





Editor-in-Chief of a prestigious journal

Congratulations to [Professor Chedly Tizaoui](#), Department of Chemical Engineering, who has been appointed as Editor-in-Chief (EiC) of the journal [Ozone: Science and Engineering](#), a journal of the International Ozone Association published by Taylor & Francis. Ozone: Science and Engineering was established in the 1970s with its first issue was published in early 1979. Tizaoui is the fourth EiC of this journal since its launch. Ozone: Science and Engineering publishes research papers on the broad field of ozone and related advanced oxidation processes for water treatment, environmental remediation, agri-food industries, and medical applications.



A Swansea academic talks at Insights Wales Series

[Professor Chedly Tizaoui](#), Department of Chemical Engineering, delivered a talk on Emerging Contaminants as part of the [Insights Wales Series](#). Tizaoui defined Emerging Contaminants and highlighted their sources, fate in the aquatic environment, and the exposure risks associated with these substances. In his talk, he particularly highlighted the issue of Per- and Polyfluoroalkyl Substances (PFAS) in water and the treatment technologies his team is researching to remove Emerging Contaminants from water.



Associate Editor appointment for prestigious journal

Congratulations to [Dr Fabio Caraffini](#), Associate Professor, Department of Computer Science, who has recently been invited to serve as an associate editor for the [IEEE Transactions on Evolutionary Computation](#).

IEEE is a bimonthly peer-reviewed scientific journal and is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity.

The Learned Society of Wales promotional video

[Professor Perumal Nithiarasu](#), Associate Dean of Research, Innovation and Impact, Department of Civil Engineering, has featured in a promotional video for [The Learned Society of Wales](#). Perumal, along with other Fellows, describes how they support the Society and why their involvement matters.

Perumal said: "Being a Fellow is an honour. I am very proud of being a Fellow of The Learned Society of Wales. It has huge advantages for individuals".

[Watch the video](#)



CISM's first techniques workshop

At the start of the new year CISM ran its first techniques workshop available to members of CISM and SPECIFIC based on bay campus.

The course was run by Dr Kieran Richards and provided a basic introduction to programming in Python.

Four workshops were carried out across an eight-week span, initially focusing on the complete basics of programming in Python.

Attendees from a cohort of ~20 people progressed from basic syntax to functional programming and how to use the wealth of python libraries available to streamline and automate everyday tasks.

Due to the limited run of these workshops, a key aim was to teach users how to source information and to teach themselves using online documentation and AI tools.

It is hoped that this is the first of many skill-based workshop series based out of CISM.

Academic awarded Royal Society grant

[Dr Alper Celik](#), Department of Aerospace Engineering, has been awarded a Royal Society Research Grant worth £45k. The grant will be used to undertake research in to two fundamental physical phenomena within the aerospace industry: how does the level of incoming turbulence affect the aerodynamics of an eVTOL with a complex layout? And what fundamental interaction mechanics occur when a coherent structure interacts with multiple rotors and their wakes?

The grant will cover the acquisition of equipment necessary to build a test rig and undertake a preliminary study.



Contract with aircraft manufacturer to support PhD students

[Dr Alper Celik](#), Department of Aerospace Engineering, has successfully obtained a contract valued at approximately £85k from [Embraer SA](#), the third largest aircraft manufacturer. Swansea University will match the funding, which will support two PhD students. The aim of the funding is to investigate the impact of gusts and turbulence on the performance of multi-rotor/propeller systems, which are planned to be employed in next generation urban air mobility

vehicles in the aerospace sector. Alper will oversee initial experiments that will serve as a basis for the students' research.

Professorial Inaugural Lectures 2024

Upcoming Lectures:

[Professor Gibin Powathil](#) and [Professor Grigory Garkusha](#) - Wednesday 28th February 2024. [Register](#)

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

STUDENT NEWS

EEE students awarded UKESF Scholarships

Two students from the Department of Electronic and Electrical Engineering have been awarded the UK Electronics Skills Foundation (UKESF) Scholarships – this is the first time Swansea University students have received such an award!

The scheme has been designed in collaboration with leading employers to provide financial support for undergraduates, and to develop the skills they need to thrive in Electronics.

Students Matthias Street and Osian Jones will be undertaking work placements with industry sponsors Renesas Electronics Europe and CSA Catapult respectively and will also benefit from an annual bursary and additional support from the UKESF.

The Scholarship Scheme was awarded a prestigious Princess Royal Training Award in 2022.

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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