



#### **FACULTY OF SCIENCE AND ENGINEERING**

### 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!

#### **GRANTS, PRIZES AND AWARDS**



# Lecturer receives prestigious Coleg Cymraeg Cenedlaethol award

Congratulations to <u>Dr Gethin Thomas</u>, Biosciences, who was presented with The Students' Award at the Coleg Cymraeg Cenedlaethol's tenth-anniversary celebrations in Carmarthen on 13 July. Gethin has been deservedly recognised for the immeasurable support he has given to his students and for the difference he has made to their university life.

On receiving the award, Dr Thomas said: "It is an honour and a privilege to win the Students' Award from the Coleg Cymraeg Cenedlaethol, and even more so because it was the students themselves who nominated me. It's encouraging to know that the students see value in Welshmedium provision in the field of biosciences and feel that they are getting the support they need to continue their studies bilingually. I'm incredibly grateful for this recognition."



# Outreach Programme receives Outstanding Contribution award

Professor Faron Moller, Director of Technocamps, recently received a UK Research and Innovation (UKRI) STEM Inspiration Award for Outstanding Contribution to Widening Participation, Diversity and Inclusion in STEM. The award was presented by Nobel laureate Professor Sir Martin Evans who was awarded the Nobel Prize in Medicine in 2007.

Technocamps, founded in 2003, is a pan-Wales schools, community and industry outreach programme based at Swansea University. It provides hands-on workshops to primary and secondary schools, professional development training for teachers, and digital upskilling opportunities for adult learners.

Read more



# Grant awarded to help reduce construction defects

Professor Chenfeng Li, Civil Engineering, Project Lead and experts within the Faculty of Science and Engineering have been awarded £322,000 to develop digital solutions to reduce concrete construction defects.

The researchers are working with three leading organisations within the construction industry to tackle the major delays and costs incurred by flaws in large-scale concrete construction. The project aims to develop new software tools and contribute to industrial guides for improved concrete mixes, structural designs, and construction processes that will lead to enhanced efficiency, better quality, more sustainable development, and reduced cost.

Read more



#### New wildfire research published in the Reviews of Geophysics

New research published in the <u>Reviews of Geophysics</u>, highlights how the risk of wildfire is not only rising globally due to climate change, but already at a pace faster than climate models have predicted.

Lead author <u>Dr Matthew M Jones</u> said: "Wildfires can have massive detrimental impacts on society, the economy, human health and livelihoods, biodiversity and carbon storage. These impacts are generally magnified in the case of forest wildfires."

The study assessed 500 previous research papers and includes a re-analysis of state-of-the-art datasets from satellite observations and models.



### Wildfire paper published in The Conversation

<u>Professor Stefan Doerr</u>, Department of Geography, has recently had a paper published in <u>The</u> <u>Conversation</u> on climate change and wildfire risk.

The paper outlines the causes of global warming which is resulting in more frequent bouts of hot and dry conditions, or 'fire weather' causing dangerous wildfires. These extreme conditions are also increasing at a faster pace than predicted using previous climate models.

#### Frontiers in Bioengineering and Biotechnology

Frontiers in Bioengineering and Biotechnology (Switzerland) has published an article titled: "No Chit Chat!" A Warning From a Physical Versus Virtual Robot Invigilator: Which Matters Most? By Dr Muneeb Ahmad and Reem Refik from Computer Science.

#### IN THE NEWS



## Swansea wildfire expert interviewed by Al Jazeera

The <u>Al Jazeera</u> news channel recently interviewed <u>Professor Stefan Doerr</u> for their Inside Story programme about the unprecedented UK/European heatwave, wildfires and the role of climate change. Stefan is the Director of Wildfire Research, Department of Geography and was part of a panel of three, interviewed by reporter Bernard Smith.



#### The Climate of Cymru

<u>Professor Mary Gagen</u>, Department of Geography, recently appeared on Wales This Week to discuss the frequency of extreme weather, our environment and the climate crisis. Mary was interviewed together with Elen Jones from Sustainable Wales by Andrea Byrne.

#### Watch the interview



### Swansea wildfire expert interviewed by Euronews

#### Professor Stefan Doerr, Director of Wildfire Research,

Department of Geography, was recently interviewed by Helena Humphrey for Euronews on the potential for more frequent extreme fire weather events. Stefan talked about how reducing carbon emissions and better land management can help mitigate the frequency and impact of wildfires.

Watch the interview



#### Celebrating the 10th Anniversary of the Higgs Boson

Professors Maurizio Piai and Chris Allton, Physics, were interviewed on the BBC Wales Science Cafe programme by Adam Walton about the 10th anniversary of the Higgs discovery. Professor Lyn Evans (Swansea alumnus and former LHC project leader) was also interviewed on the programme. The discussion asks what the discovery tells us about the universe and what future research may reveal.

Listen to this interview

#### **VISITORS TO SWANSEA**



# Minister for Education visits the History of Computing Collection

Jeremy Miles, the Minister for Education, in the Welsh Government, recently visited the University's History of Computing Collection. He was immediately struck with one of the special exhibits and had a photograph taken on his own phone - which he promptly tweeted!

The computer in the photograph is a Commodore PET in Swansea University's History of Computing Collection. It was bought by teacher and educationalist Janner Herd in Swansea in 1978, who donated it to the Collection.

The History of Computing Collection is a part of the University Research Collections, which is particularly strong in industrial heritage. It is co-located with the Faculty of Science and Engineering's Outreach Centre in the Margam Building on the Park Campus.



#### Conference success!

Professor Perumal Nithiarasu,
Civil Engineering, was one of the
co-chairs at the 7th International
Conference on Computational and
Mathematical Biomedical
Engineering (CMBE22) ) 27-29
June. The conference took place
at Politecnico di Milano, one of the
most prestigious universities in
Italy and attracted more than 220
participants from 26 countries.

The conference brought together fellow researchers and academics, specialists of several disciplines, practitioners and graduate students with a common interest, to discuss the current state of the art of Computational Biomedical Engineering research.



# Swansea to host major international food pest control conference

Swansea University is to host a major international conference which will bring together experts in integrated pest management.

The conference will focus on the urgent challenge of feeding a growing population while reducing the environmental impact is an urgent challenge. Delegates will discuss new approaches to managing insect pests which will cut reliance on harmful chemical insecticides.

The event organiser <u>Professor</u> <u>Tariq Butt</u>, Biosciences, said "This conference will provide an opportunity for representatives from all of these stakeholders to communicate and build productive relationships. This will help us develop a new approach to IPM, which is essential if we are to succeed in protecting our food and our environment."

Read more



### Al delegates share expertise

Doctoral researchers and academics linked to two Centres of Doctoral Training (CDT) in Artificial Intelligence (AI) and Data Science came together to share ideas at the 2022 Artificial Intelligence Conference.

The free two-day event, at Swansea University's Computational Foundry, was attended by doctoral researchers, supervisors, Research Council and commercial partners associated with the UK Research and Innovation (UKRI) CDT in Al, Machine Learning and Advanced Computing (AIMLAC) and the Science and Technology Facilities Council (STFC) CDT in Data-Intensive Science

**Read more** 

#### **RESEARCH**



## Science outreach promotes positive change

An <u>analysis</u> carried out by Swansea University <u>Science for School Scheme</u> (S4) has found that it is having a positive impact on young people from poorer areas by improving their career aspirations, and opinions on studying science at university.

S4 is a widening access STEM outreach programme led by <u>Professor Mary Gagen</u>, Geography and <u>Dr Will Bryan</u>, Physics. Established in 2012, S4 delivers



# Research on saltmarshes contributes to major national study

Research led by <u>Dr John Griffin</u> (Biosciences) and <u>Professor Harshinie Karunarathna</u> (Civil Engineering) together with Dr Tom Fairchild and Dr William Bennett in the NERC funded <u>CoastWEB</u> project has formed the basis of a major national study carried out by the <u>Office of National Statistics</u> (ONS) on 'Saltmarsh flood mitigation in England and Wales, Natural capital: 2022'. In this study, ONS estimates the impacts of saltmarshes have on reducing flood risk in coastal

research-led science, technology, engineering and maths (STEM) based activities, including hands-on workshops, summer schools and science showcases, as well as online education to young people in South Wales in areas experiencing poverty and disadvantage.

areas in England and Wales using the methodology and data developed in CoastWEB

**Read more** 

#### **RESEARCH EVENTS**

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

**Faculty upcoming events** 

#### **RESEARCH BLOG**

Read more research stories!

**Research Blog** 

#### **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 (aswansea.ac.uk)). Deadline for submissions: 15th of each month.

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