

**WE ARE STEM**  
THE COLLEGE OF SCIENCE,  
ENGINEERING & FOOD SCIENCE



College of  
**Science,  
Engineering  
& Food Science**



# UCC STEM Awards **2023**



**16 MAY 2023**

Devere Hall, Áras na Mac Léinn,  
University College Cork



## DEAR STUDENTS, (COLLEAGUES AND GUESTS),

I am delighted to welcome you here to Devere Hall, University College Cork for the annual UCC STEM Awards hosted by the College of Science, Engineering and Food Science, UCC.

The Awards are the highlight of our events calendar at the College of Science, Engineering and Food Science (SEFS). This evening, we acknowledge the achievement of 51 students and staff through the presentation of these prestigious prizes awarded by the College of SEFS, the university, and the generosity of our supporters.



The students celebrated here this evening are an exemplar for the study of STEM (Science, Technology, Engineering, and Mathematics). Through their impressive commitment to academic excellence and personal development, they are an inspiration to their peers and to the wider university, and we are extremely proud of their achievements.

We also recognise the achievements of our outstanding staff whose leadership and support are essential to the success of the College, and whose work extends into the wider community. The exceptional contribution of these staff enhances the learning and teaching experience of our students, enabling them to reach their full potential.

The Awards also showcase our commitment to advancing research excellence through the Publication of the Year Award. This prize acknowledges the best peer-reviewed academic papers produced by research students from across the College of SEFS.

I would like to congratulate our inspirational awardees on their impressive achievements. It is an honour to gather here together to celebrate this very special occasion.

I hope you have a most enjoyable and memorable evening.

## PROFESSOR SARAH ULLOTY,

**HEAD, COLLEGE OF SCIENCE, ENGINEERING AND FOOD SCIENCE**

## About the UCC STEM Awards

Each year, the College of Science, Engineering and Food Science (SEFS) recognises and celebrates the successes and achievements of students and staff members during the previous academic year. These include high-profile award recipients nominated for recognition by their unit, college-level award winners, and student-nominated outstanding staff members. Students from within the college who have received university-awarded prizes may also be recognised.



## Quercus Scholars - College of Science, Engineering and Food Science

Scholarships of up to €500 are awarded based on the results of each of the end-of-year university exams in first, second and third year, in programmes offered by the College of Science, Food Science and Engineering.

### CONGRATULATIONS TO THE WINNERS BELOW:

David Gerard Brett	BSc (Computer Science)
Tommaso Batori	BE (Engineering)
Barry James O'Donovan	BSc (Physics and Astrophysics)
Iris Kelvin Carvalho	BSc (Biological and Chemical Sciences)
James Hennessy	BSc (Chemical Sciences)
Sara Goldschmidt	BSc (Biological, Earth and Env Sciences)
Thomas Patrick Connolly	BSc (Mathematical Sc) - Single Honours
Konrad Dagiell	BSc (Computer Science) - Single Honours
Sean Aodh O'Donoghue	BSc (Phys and Math Sci) - Joint Honours
Niamh Saoirse Mulcahy	BSc (Biological Sciences)
Hannah Sheedy	BSc (Nutritional Sciences)
Grace Lynch	BSc (BEES) Applied Plant Biology
James Ronan O'Sullivan	BSc (Phys and Math Sci) - Joint Honours
Thomas Peter Beese	BE (Energy Engineering)
Leah Twomey	BE (Electrical and Electronic Engineering)
Colm Patrick Breslin	BSc (BEES) - Ecology and Env Biology
Fionn Stephen Twomey	BSc (Chem. of Pharm. Cpds.)
Isobel Wheeler	BSc (Biomedical Sciences) Joint UCC/MTU

(ONTD. →)

## Quercus Scholars - College of Science, Engineering and Food Science (Contd.)

Lauren Kate O'Sullivan Griffin	BSc (Nutritional Sciences)
Rory Thomas Fox	BSc (Physics) - Single Honours
Cillian Timothy Murphy	BSc (Physics) - Single Honours



## Quercus University Scholar 2022

This award is made to students who have demonstrated exceptional academic achievement. The winners of this award benefit from a wide range of academic, financial, personal, and other supports.

Congratulations to Ciara Josephine Millerick, our 2022 Quercus University Scholar.

Ciara Millerick is a fourth year Chemistry student and is this year's Quercus University Scholar for the College of SEFS, awarded for academic excellence in her third-year examinations. She was awarded the Pfizer Silver Medal for outstanding academic achievement in 2019. She enrolled in UCC as a Biological and Chemical Science student in 2019 where she was awarded the Eli Lilly Chemistry Prize for her academic achievement in Chemistry. She went on to specialise in the Chemistry degree stream, undertaking the PepsiCo Mentorship in collaboration with UCC in her second year. She undertook an internship in Pfizer Pharmaceuticals API Plant in Ringaskiddy in 2022. She was recently awarded the Oxford University Chemistry Prize and the inaugural Thermo Fisher Organic Chemistry Prize. She has a keen interest in organic, pharmaceutical and environmental chemistry and strives to build a career in these fields.



**CIARA JOSEPHINE MILLERICK**

**BSc CHEMISTRY**



## Peel Memorial Prize 2022

This award is made to students who have taken their primary degrees with first-class honours in the minimum time and who, in the opinion of the UCC Scholarships Committee, have played a distinguished part in the public life of the university. The prizes take the form of books or instruments.

Congratulations to Temitope Akinlade, who is this year's prize winner.

Temitope Akinlade obtained a First Class Honours in BSc Biotechnology from UCC in 2022. Presently, Temitope is employed as a Microbiology Technician at Boston Scientific.

Outside of her work with the EDI Unit on the UCC Sanctuary scholarships, Temitope also dedicates her time as a volunteer at the Cork Migrant Centre to provide equal and comprehensive advice on academic and career paths to refugees and young migrants, while offering support to bridge any gaps they may encounter. It is important to her that these individuals receive the guidance and resources needed to thrive.



### TEMITOPE AKINLADE

**BSc BIOTECHNOLOGY**



## The Dr Catherine Keogh Memorial Grant 2023

Dr Catherine Keogh (née Slattery) graduated from UCC with a BSc Chemistry of Pharmaceutical Compounds in 2008 and PhD in synthetic organic chemistry under the supervision of Professor Anita R. Maguire in 2012. This led to fundamental discoveries which have been published in leading journals in the field and continue to underpin current research in the team in UCC today. Thanks to the generous sponsorship of MSD, Ballydine, where Catherine was employed, an annual scholarship has been established in her honour. This prize will be awarded to a final year student on the BSc Chemistry of Pharmaceutical Compounds programme who has demonstrated personal and academic growth over the course of the programme.

Congratulations to Emily Goff, this year's Prize Winner.

Emily is from county Waterford and she grew up with a love for science, verging predominantly towards chemistry whilst in secondary school. Emily's time in UCC began in 2019 and she soon became heavily involved in student life, participating as the Social Media Officer for the UCC Science Society and the Public Relations Officer for UCC Athletics Club. Emily is an avid long distance runner and she has competed for UCC in many races over the last four years. Emily was lucky to experience her industry placement in MSD Ballydine. Both industry placement and her final year research project confirmed her passion for research and working in the lab.

**EMILY GOFF**

**BSc CHEMISTRY OF PHARMACEUTICAL COMPOUNDS**



## Thermo Fisher Scientific Prize in Organic Chemistry 2023

The prize is open to all students who have completed their third year in Chemistry and will be awarded annually to the student who has passed with the highest combined mark in the Organic Chemistry modules.

Congratulations to Ciara Josephine Millerick, this year's prize winner.

**CIARA JOSEPHINE MILLERICK**

**BSc CHEMISTRY**



## Student-Nominated Staff Awards

The Annual Student Nominated Staff and Demonstrator Teaching Awards across SEFS Programmes were selected for the 2022 calendar year. Students across the College were invited to nominate Academic staff, Professional staff and Student Demonstrators that they deemed worthy of the award.

CONGRATULATIONS TO THE WINNERS BELOW:

### STUDENT-NOMINATED STAFF AWARD 2022 (ACADEMIC)

Dr Orla Ni Dhubhghaill - Winner	School of Chemistry
Dr Ed Jarvis - Runner Up	School of Biological, Earth and Environmental Sciences



### STUDENT-NOMINATED STAFF AWARD 2022 (PROFESSIONAL SERVICES)

Michelle O'Leary - Winner	School of Microbiology
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### STUDENT-NOMINATED STAFF AWARD 2022 (LABORATORY)

Jennifer Duane - Winner	School of Biochemistry
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### STUDENT-NOMINATED STAFF AWARD WINNER 2022 (POSTGRADUATE DEMONSTRATOR)

David Fox - Winner	School of Maths
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## SEFS Excellence in Education and Public Engagement Award 2023

The College of Science, Engineering and Food Science have a long and proud tradition of engaging with the public, especially in recent years through Education and Public Engagement (EPE) activities. Many staff, of all categories, and researchers and PhD students have displayed great creativity and dedication in this area, and this award strives to highlight the importance of EPE efforts by the SEFS community.

Dr Anca Mustata - Winner	School of Mathematical Sciences
Dr Davide Tiana - Winner	School of Chemistry
Dr Eoin Lettice - Winner	School of Biological, Earth and Environmental Sciences
Dr Aoife Ryan and Team - Commended	School of Food and Nutritional Sciences
Sarah Kate Sweeney - Commended	School of Physics



## SEFS Staff Citizenship of the Year Award 2023

The College of Science, Engineering and Food Science is pleased to announce the introduction of a new College award that celebrates good citizenship and recognises all our staff, who lead by example. This award will acknowledge the members of staff who go above and beyond to provide outstanding and ongoing excellence in services to staff, students and/or others.

Professor Cormac Sreenan - Winner	School of Computer Science and Information Technology
Olive Cosgrave - Winner	School of Biochemistry and Cell Biology
Dr Paul Bolger - Winner	Environmental Research Institute (ERI)
Ralph O'Flaherty - Winner	School of Engineering



## Postgraduate Research Publication of the Year

The College of SEFS Postgraduate Research Publication of the Year Prize is awarded to the best peer-reviewed academic papers submitted by a registered PhD or MSc (research) student in a department/school or a research institute affiliated with the College of SEFS. Each department/school affiliated with the College of SEFS conducted an internal competition and selected the best peer-reviewed academic paper within the discipline, which was then put forward for the College of SEFS Postgraduate Research Publication of the Year Prize.

### CONGRATULATIONS TO THE WINNERS BELOW:

Jamie Darby	School of Biological, Earth and Environmental Sciences	Darby, J., Clairbaux, M., Bennison, A., Quinn, J.L., Jessopp M.J. 'Underwater visibility constrains the foraging behaviour of a diving pelagic seabird', <i>Proc. R. Soc. B</i> 289
Alla Fedorova	School of Biochemistry and Cell Biology	Fedorova, A.D., Kiniry, S.J., Andreev, D.E. et al. 'Thousands of human non-AUG extended proteoforms lack evidence of evolutionary selection among mammals', <i>Nat Commun</i> 13(7910).
Archishman Bose	School of Engineering and Architecture	Bose, A., O'Shea, R., Lin, R., Long, A., Rajandran, K., Wall, D., De, S., Murphy, J.D. 'The marginal abatement cost of co-producing biomethane, food and biofertiliser in a circular economy system', <i>Renewable and Sustainable Energy Reviews, Elsevier</i> , 169.
Clodagh Carr	School of Microbiology	Carr, CM., Rodrigues de Oliveira, B.F., Jackson, S.A., Laport, M.S., Clarke, D.J., Dobson, A.D.W. 'Identification of BgP, a Cutinase-Like Polyesterase From a Deep-Sea Sponge-Derived Actinobacterium', <i>Frontiers in Microbiology</i> 13.
Ibithaj Albalawi	School of Chemistry	Albalawi, I., Hogan, A., Alatawi, H., Alsefri, S. and Moore, E. 'A novel comparative study for simultaneous determination of Cd (II) and Pb (II) based on ruthenium complex-nanoparticles-nafion modified screen-printed gold electrode', <i>Sensors and Actuators B: Chemical</i> , 380.
Zohaib Ijaz	CSIT	Ijaz, Z., Noor-A-Rahim, M., Pesch, D. 'Leader-follower-based self-triggered consensus control of industrial induction motor drives', <i>IEEE Systems Journal</i> , 16, (4).

Chris Whitty	School of Physics	Whitty, C., Kiely, A., Ruschhaupt, A. 'Improved anharmonic trap expansion through enhanced shortcuts to adiabaticity', <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 55(10).
Zhaoyan Xiu	School of Maths	Xiu Z., Muzi M., Huang J., Wolsztynski E. 'Patient-Adaptive Population-Based Modeling of Arterial Input Functions', <i>IEEE Trans Med Imaging</i> , 42(1).
Theresa Boeck	School of Food and Nutritional Sciences	Boeck, T., Ispiryan, L., Hoehnel, A., Sahin, A.W., Coffey, A., Zanini, E. and Arendt, E.K. 'Lentil-based yogurt alternatives fermented with multifunctional strains of lactic acid bacteria - technofunctional, microbiological and sensory characteristics', <i>Foods</i> , 10(1692).
Richard Murray	Tyndall National Institute	Murray, R., O'Neill, O., Vaughan, E., Iacopino, D., Blake, A., Lyons, C., O'Connell, D., O'Brien, J., & Quinn, A. J. 'Direct-write formation of integrated bottom contacts to laser-induced graphene-like carbon', <i>Nanotechnology</i> , 33(40).



## SEFS Graduate of the Year Award 2022

This prize is open to competition only amongst the students who achieved the highest marks in each of our degree programmes. In addition to their academic career, the awards committee looks carefully at the part played by the student in UCC life. This year we have two joint winners, Cian McDonnell and Ciara O'Keeffe.

### CONGRATULATIONS TO THE WINNERS BELOW:

#### CIARA O'KEEFFE - JOINT-WINNER

Ciara O'Keeffe is a graduate of BSc Mathematical Sciences Joint Honours with Physics. Ciara took a special interest in Applied Mathematics and Quantum Physics, undertaking a final year project which combined both areas. Her project investigated the interactions between light and matter in quantum dot systems and used computer simulations to visualise the results. Outside of her academic studies, Ciara was a member of EPONA, a subdivision of the UCC Physics and Astronomy Society, which focuses on improving and expanding EDI in physics. As part of this, she was involved in the first outreach programme to promote physics in secondary schools, particularly focusing on gender imbalance. She spent much of her time involved in outreach and sharing her knowledge with others. Ciara is currently working as a Network Engineer in Apple.



#### CIARA O'KEEFFE

#### BSc MATHEMATICAL SCIENCES - JOINT HONOURS



**CIAN McDONNELL - JOINT-WINNER**

Cian McDonnell graduated from UCC in 2022, with a BSc in Physics and Mathematical Sciences. At the beginning of his degree, he was awarded the Naughton Scholarship, given to 36 STEM students in Ireland each year, to fund his studies. During his time in UCC, Cian took an active role in UCC's Physics Society, first as the Academic Officer and then as the Rocketry and Astronomy Officer. In these roles he organised academic conferences, as well as stargazing trips to West Cork and Kerry, and model rocket launches. He also received a Quercus College Scholarship for his academic results during each year of his studies. In his final two years, Cian wrote the monthly horoscope column for UCC's Motley magazine. For this he was nominated for Best Colour Writer (best comedy piece) at the Irish Student Media Awards, in 2021 and 2022. He is currently studying for an MSc in Astronautics and Space Engineering at Cranfield University in Cranfield, United Kingdom. His thesis is titled: Autonomous Planetary Exploration - Understanding Planetary Terrains and Rover Motion by Interaction.

**CIAN McDONNELL****BSc PHYSICS AND MATHEMATICAL SCIENCES - JOINT HONOURS**



CONGRATULATIONS

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