

Early Career Researcher Conference

Engineering Biology for Environmental Solutions

16 - 17 September 2026 | Southampton, UK

Conference Programme

Venue

[National Oceanography Centre](#)

European Way, Southampton, SO14 3ZH

The venue is within the Port of Southampton (with entry via Dock Gate 4), Port Security require all visitors have a valid form of photographic ID (Driving License /Passport).

Please ensure you have this information accessible when entering Dock Gate 4:

Reason for visiting NOC: Conference

Dates: 16 - 17 September

Host: NOC Events

Location: NOC

Day 1 | Wednesday 16 September 2026

9:00 - 10:00	Welcome and Registration
Opening Session	
10:00	Opening Remarks Professor Frederic Coulon Director, Environmental Biotechnology Innovation Centre (EBIC)
10:20	Keynote Francesca Dawson-Pell Senior Policy Advisor Department for Business, Innovation, Science & Trade (UK Gov).
11:00 -11:25	Tea/Coffee break/Poster session
Session 1 – Environmental Bioremediation & Water Treatment	
11:25	Mahsa Baniasadi – Cranfield University Integrated Biological, Physical, and Chemical Approaches for Betaine Extraction from Salt-Stressed Algal Biomass
11:45	Heni Wang – Cranfield University Rapid and low-cost PFOA detection in drinking water by coupling engineered aptamers with DNA amplification
12:05	Evieva F. Ogbara – Liverpool John Moores University Re-evaluating Biochar-Based Remediation: Disentangling Sorption and Biodegradation Controls on PAH Attenuation in Soil Systems
12:25	Yasmin Meeda – Cranfield University Engineering biology for metaldehyde biodegradation in drinking water using <i>Acinetobacter sp.</i>

12:45	Q&A/ Session Wrap-up
12:50 - 13:50	Lunch break
Session 2 – Synthetic Biology & Engineering Biology Platforms	
13:50	Amanda Hopes – University of East Anglia Generating mutant strains for EBIC: Progress on development of a standardised cloning and transformation system to generate markerless mutants for a broad range of species and applications
14:10	Daniel Evans - UK National Measurement Laboratory at LGC Digital PCR methods to support tracking of engineered organisms in environments
14:30	Joshua Loh – Newcastle University BaNeX-guided identification and validation of neutral genomic integration sites for stable engineering biology applications
14:50	Prabhakar L. Srivastava – Bangor University Neutral Site-Driven Genome Engineering of <i>Alcanivorax borkumensis</i> to Expand Substrate Scope for Enhanced Bioremediation
15:10	Q&A/ Session Wrap-up
Flash Talks	
15:15	James Bowbrick Smith – University of Surrey Biorecovery of Gold Nanoparticles from Industrial Waste: Life Cycle and Techno-Economic Assessment of Scale-Up Pathways

15:20	Josephine Giard – Heriot-Watt University Adaption to climate change in the rhizosphere across the millennia
15:25	Monika Steinke – University of Essex In search of novel marine oil-degrading bacteria
15:30	Natalio Krasnogor – Newcastle University Informatics infrastructure in support of barcoding
15:35	Oxford Nanopore
15:40	GENEWIZ
Tea/Coffee break/Poster session (15:45 – 16:00)	
16:00 - 17:00	Panel Discussion Biocontainment Techniques and the Safe Use of Engineering Biology for Environmental Applications
Networking /Poster session (17:00)	
Dinner (19:00 - onwards)	

Day 2 | Thursday 17 September 2026

Day 2 - Welcome and opening	
09:00	Keynote James Allen - Co-Founder & CSO twig Why are there still so few commercialised Engineering Biology products?
Session 3 – Biofilms, Microbial Communities & Environmental Systems	
9:40	Maria Magliulo – Natural History Museum From Attachment to Adaptation: Exploring Biofilm Formation of <i>Acidithiobacillus ferrooxidans</i> on Pyrite
10:00	James Croxford – University of Glasgow Dynamics of SynBio and SynComs in environmental biofilms
10:20	Zachary Thompson – Newcastle University Spatio-temporal analysis of activated sludge emissions
10:40	Lyuboslava Harkova – University of Southampton Engineering biofilms for improved bioremediation
11:00	Q&A / Session Wrap-up
Flash Talks	
11:05	Hannah Adams – University of Essex Polycyclic aromatic hydrocarbon degradation pathways in <i>Cycloclasticus Sp.</i> TK8
11:10	Yasir Akbar – Newcastle University BaNeX: Bacterial Neutral sites prediction using multi-Omics: A Comprehensive Computational Framework for Predicting Neutral Integration Sites in Bacterial Genomes

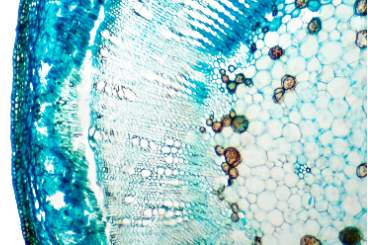
11:15	Giuliano Sting Pechar – University of York Engineering plant-mediated nickel solubilisation in the rhizosphere
11:20	Zahra Khomarbaghi – Durham University Intracellular Metal Buffering as a Design Principle for Engineering Robust Microbial Cell Factories
11:25	Muhammad Ejaz – Qatar University Metagenomic and Biotechnological Characterization of Spore-Forming Bacteria from Arid Soils of Qatar
11:30	Carla Spatola Rossi – Cranfield University Origami paper microfluidic device for the detection of viable bacteria in water
Tea/Coffee break/Poster session 11:35 – 11:50	
Session 4 – Metals, Mining & Resource Recovery Biotechnology	
11:50	Alex Marks – University of York Engineering Temperate Biomass Hyperaccumulators: Understanding the Biological Mechanisms of Nickel Tolerance and Accumulation
12:10	Anjali Vijay Prajapati – Swaminarayan University, Gujarat Fungal-based biosorption: An eco-friendly strategy for heavy metal removal from contaminated water
12:30	Elizabeth A. Watton – The University of Manchester Understanding metal homeostasis in the metal-reducing bacterium <i>Shewanella oneidensis</i> towards enhanced metal biorecovery
12:50	Q&A / Session Wrap-up

Lunch break (13:00-14:00)	
Session 5 – Sustainable Biotechnology & Environmental Adaptation	
14:00	Joseph Pennycook – University of Bristol Evaluation of a photosynthetic chassis organism in response to long-term ecological challenges
14:20	Maira Anam – Newcastle University Impact of fluid flow on microbial community development in pilot-scale MEC
14:40	Nick Dawson – Cranfield University Microbial Interactions in Vermifilter Sanitation
15:00	Magdalena A Howe – University of Southampton Mining For Novel Plastic Degrading Enzymes in the Human Gut Microbiome
15:20	Q&A / Session Wrap-up
Tea/Coffee break (15:25 – 15:40)	
15:40- 15:50	Awards for best presentation
15:50 -16:00	Closing Remarks Prof. Frederic Coulon, EBIC Director
16:00	Conference close – thank you all for joining us!

Poster Presentations

ID	Name	Poster Title
#1	James Bowbrick Smith University of Surrey	Biorecovery of Gold Nanoparticles from Industrial Waste: Life Cycle and Techno-Economic Assessment of Scale-Up Pathways
#2	Josephine Giard Heriot-Watt University	Adaption to climate change in the rhizosphere across the millennia
#3	Tatiana Spatola Rossi Heriot-Watt University	Recombinant expression of rhamnolipid synthesis genes in <i>Pseudomonas putida</i> for biosurfactant production
#4	Yasir Akbar Newcastle University	BaNeX: Bacterial Neutral sites prediction using multi-Omics: A Comprehensive Computational Framework for Predicting Neutral Integration Sites in Bacterial Genomes
#5	Hannah Adams University of Essex	Polycyclic aromatic hydrocarbon degradation pathways in <i>Cycloclasticus Sp.</i> TK8
#6	Juwon Samuel Afolayan Nottingham Trent University	Engineered Mycelial Scaffolds with Tuneable Ultraviolet Protection, Wettability, Thermal Stability, and Spatial Mechanics
#7	Yexin Feng University of Southampton	Chemical-free production and in-situ product recovery (ISPR) of value-added chemicals from mixed culture anaerobic fermentation of organic waste streams
#8	Yu Wang Cranfield University	Understanding the CO ₂ impacts on mycelium: implications for circular bio-based materials
#9	Giuliano Sting Pechar University of York	Engineering plant-mediated nickel solubilisation in the rhizosphere
#10	Somaya Ahmed University of Southampton	Optimization of the Biotreatment of GTL Process Water Using <i>Pseudomonas aeruginosa</i> Immobilized in PVA Hydrogel
#11	Zahra Khomarbaghi Durham University	Intracellular Metal Buffering as a Design Principle for Engineering Robust Microbial Cell Factories

#12	Merin Thyagu Pereira University of Westminster	Engineering <i>Geobacillus</i> for High-Temperature Plastic (PET) Degradation via Fusion of PETase and MHETase Enzymes
#13	Harry Maguire University of East Anglia	Development of transformation systems for engineering a range of diverse environmental bacteria
#14	Haydon Ross University of Nottingham	Enzymatic Degradation of Polyethylene
#15	Mohammed Rehmanji University of Oxford	High-throughput phenotyping to engineer carbonate biominerals using <i>Sporosarcina pasteurii</i> system
#16	Monika Steinke University of Essex	In search of novel marine oil-degrading bacteria
#17	Muhammad Ejaz Qatar University	Metagenomic and Biotechnological Characterization of Spore-Forming Bacteria from Arid Soils of Qatar
#18	Katharine Davis University of York	Assessing ability of plants and microbes to establish vegetative cover and remove rare earth elements from African mine tailings and soils
#19	Rebecca Morton Heriot-Watt University	Bioinoculation of Plants using Plant-Growth Promoting Bacteria to Alleviate the Impact of Drought Stress.
#20	Carla Spatola Rossi Cranfield University	Origami paper microfluidic device for the detection of viable bacteria in water
#21	Hamid Rehman Yildiz Technical University	From Black Mass to Battery-Grade Metals: A Bioleaching Approach for Spent Lithium-Ion Battery Recycling



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