

Environmental Biotechnology Network ECR Conference 2024

Wednesday, 24 July 2024 - Friday, 26 July 2024
Newcastle Helix Centre - The Frederick Douglass Centre, G.06 - The Florence Kirky Lecture Theatre and Atrium

WEDNESDAY 24 July 2024

14:00	16:30	Site Visit to BEWise - optional (timings TBC)
17:00	18:00	ARRIVAL/REGISTRATION
18:00	19:00	<p>Opening plenary session Professor Victor de Lorenzo, Head of Systems Biology Program, Centro Nacional de Biotecnología, CSIC</p> <p><i>Professor de Lorenzo's current research focus involves deep engineering of soil bacteria both as cell factories for industrial biotransformations and as agents for environmental bioremediation and valorisation of toxic waste. Other areas of research include environmental microbiology, metabolic engineering, Pseudomonas putida biology and biotechnology, gene expression regulation, synthetic (micro)biology, and global warming.</i></p>
19:00	22:00	<p>Evening Drinks and Buffet (Newcastle Helix Centre) <i>Informal networking</i></p>

THURSDAY 25 July 2024

09:00	09:30	ARRIVAL REFRESHMENTS			
09:30	09:40	Welcome: "I am an Environmental Biotechnologist..."			
09:40	09:50	Move as necessary to parallel session.			
PARALLEL SESSION A (G.56)			PARALLEL SESSION B (G.06)		
<p>SESSION 1A: 09:50 - 11:00 Resource recovery from waste Chair: Miss Maira Anam, University of Nottingham</p>			<p>SESSION 1B: 09:50 - 11:00 Dealing with AMR Chair: Dr Becky Greaves, Biogen</p>		
09:50	10:05	<p>1 Dr Szabolcs Pap, Environmental Research Institute, UHI <i>Phosphorus recovery from wastewater with sewage sludge biochar: Performance at pilot-scale and biochar quality</i></p>	09:50	10:05	<p>1 Ms Yiting Wang, Cranfield University <i>A strategy for detecting, mitigating and controlling antibiotic resistance in the environment</i></p>
10:05	10:20	<p>2 Dr Youzhou Tang, University of Leeds <i>Spatially analysis identifies the potential for biochar production in Great Britain</i></p>	10:05	10:20	<p>2 Dr Carmen Falagan, University of Portsmouth <i>Acidic extreme environments and their potential in biotechnology</i></p>
10:20	10:35	<p>3 Mr Benjamin Armijo, University of Edinburgh <i>One-pot biosynthesis of acetone from waste poly(hydroxybutyrate)</i></p>	10:20	10:35	<p>3 Miss Charlotte Head, University of York <i>Exploring effectivity of the minimum air-drying process of wastewater treatment biosolids: an antimicrobial resistance perspective</i></p>
10:35	10:50	<p>4 Abbas, Loughborough University <i>Converting carbon dioxide into commodity chemicals using an electroactive microbial community developed from wastewater treatment</i></p>	10:35	10:50	<p>4 Dr Kelly Jobling, Newcastle University <i>Demonstrating integrated wastewater AMR surveillance for city-scale health protection</i></p>
10:50	11:00	General questions and discussion	10:50	11:00	General questions and discussion
11:00	11:30	REFRESHMENT BREAK			

THURSDAY 25 July 2024

PARALLEL SESSION A (G.56)				PARALLEL SESSION B (G.06)			
SESSION 2A: 11:30 - 12:45		Enzymes, catalysts and metabolism Chair: Miss Maira Anam, University of Nottingham		SESSION 2B: 11:30 - 12:45		Bioreactors and process configurations Chair: Dr Becky Greaves, Biogen	
11:30	11:45	1	Miss Prabodhi Preethika Dehiwalage Dona, Newcastle University <i>Advancing polymer biodegradation frameworks and methods: insights from Pullulan enzymatic degradation study</i>	11:30	11:45	1	Mr Muhammad Zalkifal, University of Southampton <i>Bioproducing succinic acid from hydrolysate of biomass waste in a biofilm reactor</i>
11:45	12:00	2	Miss Peirou Li, University of Exeter <i>Mn oxide formation by the cyanobacterium Synechococcus leopoliensis</i>	11:45	12:00	2	Dr Rhys Jon Jones, University of South Wales <i>Extracting volatile fatty acids from blast furnace gas fermentation increases and stabilises acetic acid yield</i>
12:00	12:15	3	Miss Kathleen Dunbar, University of Surrey <i>Increased hydrogen production from genetically modified Escherichia coli and their use within biocoatings</i>	12:00	12:15	3	Mr Sergio Serrano Blanco, Newcastle University <i>3D printing and surface modelling for enhanced microalgal production and wastewater treatment</i>
12:15	12:30	4	Mr Abdulrahman Alogaidi, University of Nottingham <i>Biological production of molecular hydrogen facilitating a net zero carbon economy through novel FeFe hydrogenases</i>	12:15	12:30	4	Mr Arian Shabruhi Mishamandani, University of Huddersfield <i>Thermodynamic investigation and environmental analysis of integrated system of two anaerobic digestion systems with pyrolysis unit</i>
12:30	12:45	General questions and discussion		12:30	12:45	General questions and discussion	
12:45	14:15	LUNCH and POSTER SESSIONS - see schedule - starts 13:10					
SESSION 3A: 14:15 - 15:40		Innovative uses for microbes Chair: Dr Benaissa Dekhici, University of Surrey		SESSION 3B: 14:15 - 15:40		Natural systems and nature-based solutions Chair: Mrs Deborah Hall, Harper Adams University	
14:15	14:30	1	Mrs Miriam Watafua, Heriot-Watt University <i>Pre-inoculated wheat straw biochar with Acinetobacter baumannii for enhanced bioremediation of hydrocarbon-contaminated soil</i>	14:15	14:30	1	Dr Disni Gamaralalage, University of Nottingham <i>Optimising a biowaste to biochar scheme in the UK</i>
14:30	14:45	2	Dr Jamie Haystead, Northumbria University <i>Effect of (in)organic additives on microbially induced calcium carbonate precipitation</i>	14:30	14:45	2	Miss Chiara Sarti, Cranfield University <i>Engineered nature-based solutions for the removal of emerging micropollutants in wastewater treatment</i>
14:45	15:00	3	Ms Zinnia Mansoor, University of Wolverhampton <i>Towards green biotechnology: production of bacterial cellulose for agricultural applications from household and industrial waste</i>	14:45	15:00	3	Mr Ilgaz Cakin, University of the Highlands and Islands <i>A comparison between constructed wetland substrates: impacts on microbial community and wastewater treatment</i>
15:15	15:30	4	Ms Paula Nerlich, Newcastle University <i>Sensory textile-bacterial hybrids: textile-bacteria fusion to impart forest-associated scents</i>	15:15	15:30	4	Mr Chinedu Ekechukwu, University of the West of England <i>Investigating sediment accumulation as an indicator of water quality and availability degradation in nature-based systems</i>
15:30	15:40	General questions and discussion		15:30	15:40	General questions and discussion	
15:40	16:10	REFRESHMENT BREAK					

THURSDAY 25 July 2024

PARALLEL SESSION A (G.56)			PARALLEL SESSION B (G.06)		
SESSION 4A: 16:10 - 17:00 Dealing with nitrogen Chair: Dr Benaissa Dekhici, University of Surrey			SESSION 4B: 16:10 - 17:00 Environmental protection Chair: Mrs Deborah Hall, Harper Adams University		
16:10	16:25	1 Miss Zhufang Wang, University of Surrey <i>Deciphering enhanced anaerobic ammonium oxidation (anammox) by granular activated carbon for wastewater nitrogen removal</i>	16:10	16:25	1 Miss Radwa Ibrahim, University of Westminster <i>Enhanced Azo dye treatment in a sequential anaerobic-aerobic coupled system of a biophotovoltaic cell and aerobic bioreactor</i>
16:25	16:40	2 Dr Yixing Sui, University of Greenwich <i>Yes to organic nitrogen and no to organic carbon: Dunaliella, the picky microalga</i>	16:25	16:40	2 Mr Zachary Thompson, Newcastle University <i>Statistical patterns in methane emissions from a large wastewater treatment plant</i>
16:40	16:55	3 Mr Roman Bielski, Loughborough University <i>Digital twin modelling of an ANAMMOX reactor</i>	16:40	16:55	3 Mr Albert Woodward-Rowe, University of Surrey <i>Capsule formation mechanisms in interfacially-initiated macroporous hydrogels to tailor microstructures for encapsulation of living bacteria</i>
16:55	17:00	<i>General questions and discussion</i>	16:55	17:00	<i>General questions and discussion</i>
17:10	19:00	Free time before dinner			
19:00	22:00	EVENING DINNER at COPTHORNE HOTEL			

FRIDAY 26 July 2024

09:00	09:30	ARRIVAL REFRESHMENTS	
SESSION 5A: 09:30 - 10:45		Bioelectrochemical systems Chair: Dr Ali Nawaz, University of Huddersfield	
09:30	09:45	1	Miss Maira Anam, University of Nottingham <i>Evaluating the performance of inkjet-printed transparent anode in biological photovoltaic systems</i>
09:45	10:00	2	Miss Hannah Bird, Newcastle University <i>Understanding proliferation of bacteria across anodes in Microbial Fuel Cells (MFC)</i>
10:00	10:15	3	Dr Carlos Domingo-Felez, University of Glasgow <i>The link between microbiology and electric circuits in environmental bioreactions</i>
10:15	10:30	4	Mr Jack Reeder, Newcastle University <i>Selective attachment of electroactive bacteria in MFCs</i>
10:30	10:45	General questions and discussion	
SESSION 5B: 09:30 - 10:45		Systemic trade-offs Chair: Dr Szabolcs Pap, Environmental Research Institute, UHI	
09:30	09:45	1	Mr Amin Zarei, University of Surrey <i>Dynamic optimization of biogas production and CHP utilization in anaerobic digestion systems</i>
09:45	10:00	2	Dr Nicholas Davison, University of Reading <i>Economic and environmental trade-offs with using brewers' spent grains for anaerobic digestion versus cattle feed</i>
10:00	10:15	3	Mrs Deborah Hall, Harper Adams University <i>Valorisation of poultry litter – a socio-environmental cost-benefit comparison</i>
10:15	10:30	4	Dr Benaissa Dekhici, University of Surrey <i>AI-enhanced optimisation of anaerobic digestion for biogas production</i>
10:30	10:45	General questions and discussion	
10:45	12:00	REFRESHMENT BREAK and POSTER SESSIONS - see schedule	
12:00	12:15	Dr Anjali Jayakumar, Newcastle University (EBNet ECR Working Group lead) <i>Community water management in Bolivia with nature-based solutions using biochar and microalgae</i>	
12:15	13:45	CAREERS Dr Pavlina Theodosiou, Newcastle University <i>Using LinkedIn for professional development</i>	
13:45	14:45	LUNCH	
14:45	15:15	PRIZE GIVING Dr Francis Hassard, Cranfield University - Senior Lecturer in Public Health Microbiology at Cranfield Water Science Institute and Fellow of the Royal Society of Biology	
15:15	15:30	Close and collect posters	

POSTER SESSIONS

THURSDAY 25 July 2024		FRIDAY 26 July 2024	
POSTER SESSION A (Atrium)		POSTER SESSION B (Atrium)	
SESSION 13:10 - 14:15		SESSION 10:50 - 12:00	
Poster Session - 5 minute flash presentations held beside your poster - see lunchtime timeslots from 13.15-14.00		Poster Session - 5 minute flash presentations held beside your poster - see refreshment break timeslots from 10.50-11.45	
13:10	14:15	10:50	12:00
See schedule displayed at Registration Desk		See schedule displayed at Registration Desk	