

Environmental Biotechnology Network ECR Conference 2022

Monday, 12 September 2022 - Wednesday, 14 September 2022

TUESDAY 13 September 2022 (RALEIGH ROOM 1)

08:30 AM	09:00 AM		ARRIVAL REFRESHMENTS (East Atrium)
09:00 AM	09:15 AM		Welcome: What is Environmental Biotechnology?
SESSION 1: 09:15 AM - 10:45 AM			How to create, count and consume plastics Chair: Dr Rachel Schwartz-Narbonne, Sheffield Hallam University (tbc)
09:15 AM	09:30 AM	1	Miss Vittoria Vecchiato, Westminster University <i>Enhanced production of polyhydroxyalkanoates (PHAs) by Pseudomonas species and their degradation behaviour in the marine environment.</i>
09:30 AM	09:45 AM	2	Miss Karthika Sangilidurai, Cranfield University <i>Microplastics in agriculture ecosystem: Sources and impact on soil biota</i>
09:45 AM	10:00 AM	3	Miss Bethan Brown, University of Nottingham <i>Investigating the effects of nanoplastics on cyanobacteria spp.</i>
10:00 AM	10:15 AM	4	Miss Fatima Ceballos Rodriguez-Conde, UCL <i>Construction of a plastic-degrading synthetic microbial community</i>
10:15 AM	10:30 AM	5	Dr. Alice Banks, Imperial College London <i>Environmentally isolated microbial chassis for the upcycling of polyethylene terephthalate (PET) to value-added products</i>
10:30 AM	10:45 AM		General Questions and Discussion
10:45 AM	11:00 AM		REFRESHMENT BREAK (East Atrium)
SESSION 2: 11:00 AM - 12:45 PM			The diverse engineering challenges of EB Chair: Dr George Hurst, Manchester Metropolitan University
11:00 AM	11:15 AM	1	Ms. Maira Anam, University of Nottingham <i>Advanced three-dimensional anode structure for improved biophotovoltaic system operation</i>
11:15 AM	11:30 AM	2	Miss Manpreet Bagga, Newcastle University <i>Self-healing concrete – the surprise in the wastewater</i>
11:30 AM	11:45 AM	3	Miss Emma Beirns, Imperial College London <i>Findings from metagenomic analysis of anaerobic fluidised-bed membrane bioreactors (AFMBRs)</i>
11:45 AM	12:00 PM	4	Ms. Simone Krings, University of Surrey <i>Encapsulating Viable Extremophile Cyanobacteria in Biocoatings for Carbon Fixation</i>
12:00 PM	12:15 PM	5	Miss Wenliang Li, Cranfield University <i>A paper-based device integrating RPA-CRISPR assay for detecting antimicrobial resistance genes in the environmental water</i>
12:15 PM	12:30 PM	6	Miss Zhongli Wang, University of Nottingham <i>In-situ selenium (Se) removal and recovery using zero-valent iron (ZVI) combined with magnetic separation</i>
12:30 PM	12:45 PM		General Questions and Discussion
12:45 PM	02:00 PM		LUNCH and POSTERS (East Atrium)

SESSION 3:**02:00 PM - 03:30 PM****Tackling waste streams and pollutants**

Chair: Dr Victoria Outram, Nottingham University

02:00 PM	02:15 PM	1	Mr. Nicholas Davison, University of Leeds <i>Potential greenhouse gas mitigation from hydrothermal carbonisation of food waste in India, Europe and China</i>
02:15 PM	02:30 PM	2	Mr. Henrique Dornelles, University of São Paulo & Imperial College London <i>Simultaneous shortening of ethoxy and alkyl chain in biodegradation of 4-tert-Nonylphenol n-Ethoxylated surfactant in anaerobic fluidified bed reactor</i>
02:30 PM	02:45 PM	3	Mr. Obaidullah Mohiuddin, Newcastle University <i>Potential of combining yeast and microalgae biocomposite for tertiary wastewater treatment</i>
02:45 PM	03:00 PM	4	Ms. Palak Saket, Indian Institute of Technology & University of Huddersfield <i>The core of earthen membrane-based constructed wetland-microbial fuel cell for dye degradation and power production</i>
03:00 PM	03:15 PM	5	Mrs. Ipek Tezyapar Kara, Cranfield University <i>Bioleaching of basic oxygen furnace sludge and dust: process optimisation using Taguchi orthogonal array design</i>
03:15 PM	03:30 PM		General Questions and Discussion
03:30 PM	03:45 PM		REFRESHMENT BREAK (East Atrium)

SESSION 4:**03:45 PM - 05:15 PM****The Applications of Bio- and Hydro-chars**

Chair: Miss Maira Anam, Nottingham University

03:45 PM	04:00 PM	1	Mr. Emmanuel Atai, Cranfield University <i>Bioengineering remediation of former industrial sites contaminated with chemical mixture s</i>
04:00 PM	04:15 PM	2	Ms. Okelani Aworabhi, Cranfield University <i>Using sustainable soil amendments for accelerated bioremediation of 4-6 ring PAHs in hydrocarbon contaminated wetlands</i>
04:15 PM	04:30 PM	3	Dr. Anjali Jayakumar, University of Edinburgh <i>Nature-based solution for water treatment using biologically enhanced biochar</i>
04:30 PM	04:45 PM	4	Dr. George Hurst, MMU <i>The application of hydrochar by-product from acid catalysis as an anaerobic digestion supplement</i>
04:45 PM	05:15 PM		General Questions and Close

07:00 PM 11:00 PM

Evening Dinner (Spokes Restaurant, Jubilee Conf. Centre)

WEDNESDAY 14 September 2022

08:30 AM	09:00 AM		ARRIVAL REFRESHMENTS (East Atrium)
09:00 AM	09:15 AM		Welcome back. Dr Rachel Schwartz-Narbonne, Sheffield Hallam University, a member of our ECR Scientific Committee, will open the day with a talk on " <i>The coat hanger: A co-designed student-led citizen science model for effective environmental research</i> "
SESSION 5: 09:15 AM - 10:45 AM			Products, by-products and VFAs Chair: Dr Sanjay Nagarajan, University of Bath
09:15 AM	09:30 AM	1	Mr. Isah Sani Saidu, University of Leeds <i>Optimisation of BMP yields using different ISR and inoculum source from invasive aquatic macrophytes</i>
09:30 AM	09:45 AM	2	Dr. Rhys Jon Jones, University of South Wales <i>Recovery and concentration of volatile fatty acids from grass using a novel combination of technologies</i>
09:45 AM	10:00 AM	3	Mr. Jack Morton, University of Southampton <i>Quantifying interactions between pH, VFA rejection, and initial feed concentrations for resource</i>
10:00 AM	10:15 AM	4	Miss Tararag Pincam, University of Southampton <i>Simultaneous phosphorus release and volatile fatty acids production from sewage sludge</i>
10:15 AM	10:30 AM	5	Dr. Yumechris Amekan, University of York <i>BONCAT-ABCS: A technique to identify metabolically active microbial populations in anaerobic</i>
10:30 AM	10:45 AM	6	Ms. Esther Agyabeng Fofie, Lancaster University <i>Effects of different anaerobic digestate on the growth of micro-tom tomato cultivar</i>
10:45 AM	11:15 AM		REFRESHMENT BREAK (East Atrium)
SESSION 6: 11:15 AM - 12:30 PM			O₂, CO₂ and H₂ - microbes and gases Chair: Dr Natalia Jawiarczyk, Cranfield University
11:15 AM	11:30 AM	1	Dr. Helen Theaker, Alps Ecoscience <i>Dark fermentation of OFMSW to produce hydrogen</i>
11:30 AM	11:45 AM	2	Dr. Maria Ramos Suarez and Mr. Arnaud Aimale-Troy, University of South Wales <i>OxyHyWater – Utilisation of electrolytic oxygen for wastewater aerobic treatment</i>
11:45 AM	12:00 PM	3	Mr. Michael Ho, Imperial College London <i>Energetics modelling of micro-aerated anaerobic digestion</i>
12:00 PM	12:15 PM	4	Dr. Abdel Zaky, University of Edinburgh <i>Recent advances in seaweed biorefineries and assessment of their potential for carbon capture and storage</i>
12:15 PM	12:30 PM		General Questions and Discussion
12:30 PM	01:30 PM		LUNCH and POSTERS (East Atrium)
01:30 PM	02:00 PM		PRIZE GIVING - Dr Tony Gutierrez, Heriot-Watt University (EBNet) (East Atrium)
SESSION 7: 02:00 PM - 04:30 PM			Core Research Project Management Skills workshop Led by: Caroline Broad, Broad Associates Limited
02:00 PM	04:30 PM	(Pre-registered attendees only)	An exploration of the practicalities of implementing project management in a research context. Explore how to apply best practice project management theory, from project initiation to project close. Discuss the challenges of consistently applying that theory for effective research project management.
04:30 PM	04:45 PM		CLOSE