

## Report on The EBN Net Early Career Researcher Conference – 30 Aug-1 Sep 2023, Heriot Watt University, Edinburgh -Sent to The Douglas Bomford Trust

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I am a member of The Environmental Biotechnology Network (EBNet), one of six Phase II Networks in Industrial Biotechnology and Bioenergy funded in part by the Biotechnology and Biological Sciences Research Council (BBSRC) and in part by the Engineering and Physical Sciences Research Council (EPSRC).

It is an academic and industrial community dedicated to developing microbial systems for environmental protection, bioremediation, and resource recovery. For the last five years, the network has organized the Early Career Researcher Conference (ECR), and I have had the privilege and honour of attending four of the previous years, as well as this year's.

This is the 5th EBN Net ECR conference (<https://ebnet.ac.uk/ebnet-ecr23/>), which was held at Heriot Watt University in Edinburgh from August 30 to September 1, 2023. The theme of the conference is "I am an Environmental Biotechnologist because..."



It was a three day conference consisting of:

- **WEDNESDAY 30th August:** Arrival – informal drinks reception (pm)
- **THURSDAY 31st August:** Presentation & poster sessions – plus evening dinner (all day)
- **FRIDAY 1st September:** Presentation & poster sessions (all day)

The plenary speaker at the conference was Professor Mike Manefield from the University of New South Wales, Australia. Throughout the event, Professor Manefield was approachable, friendly, and readily engaged in informal conversations with attendees.

His presentation revolved around the theme of "Choose your own adventure with transferable academic skills." Additionally, the conference featured other distinguished invited speakers who emphasized career development. Notable among them were Dr. Ian Fotheringham, the CEO of Ingenza, and Dr. Angela Sherry, an Assistant Professor specializing in Microbial Environments.



This year's conference featured a top invited foreign speaker and included a drinks reception, dinner, accommodation/travel, and two full days of exciting presentations from ECRs around the country working on the latest hot subjects. It provided an excellent opportunity to contextualize my study, meet new people, and improve my communication skills.

### **Day one.**

My journey to the conference at Heriot Watt University was shared with fellow Cranfield University colleagues, as we all boarded the same flight from Luton Airport to Edinburgh. Upon arrival, we swiftly completed our registrations and joined the opening plenary session, which featured Professor Mike Manfield as the speaker. His presentation, titled "Choose your own adventure with transferable academic skills," left a lasting impact on me. Professor Manfield's success story, encompassing achievements in research, teaching, and industry, served as a powerful illustration of the rewards of stepping out of one's comfort zone and pursuing areas of interest despite initial apprehension. His inspiring narrative demonstrated that bravery in exploring new frontiers can yield tangible results, a message that resonated with all of us.

Following the enlightening plenary session, we enjoyed an evening of Drinks and Buffet, providing an informal yet enriching networking opportunity. Amidst a gathering of both familiar Early Career Researchers (ECRs) and new acquaintances, I had the pleasure of connecting with Dr. Sabolc, a researcher hailing from the Environmental Research Institute, UHI. Our conversation revolved around the fascinating subject of biochar, particularly its production from sewage sludge. Engaging with Dr. Sabolc proved highly informative, and I gained valuable insights that have since influenced the direction of my research career, setting the stage for exciting future endeavours.

### **Day Two**

The second day of the conference commenced with a series of presentations centred on the critical topics of environmental protection and bioremediation. Following a refreshing break, the audience had the privilege of listening to invited speakers who shared their insights on "Careers in Environmental Biotechnology." This session proved to be another invaluable

learning experience, offering a glimpse into the exciting prospects that lie ahead in a research career. It also delved into the crucial aspects of managing expectations and navigating the often intricate path of academia and industry. The harmonious blend of academic research and industrial perspectives provided a wealth of encouragement and newfound confidence, especially for someone like me who had recently completed a PhD. It was enlightening to discover how one can seamlessly integrate into both domains.

The session concluded with a general open discussion, encompassing a wide range of topics. Participants engaged in constructive dialogues about building resilience, effectively managing conflicts, coping with stress, setting and pursuing career goals, and maximising networking opportunities. These discussions served as a forum for shared wisdom and collective growth, enriching our understanding of the multifaceted aspects of a successful career in environmental biotechnology.

### **Lunch and poster session.**

The poster session followed an interactive approach where individuals were stationed by their respective posters, ready to engage with anyone interested in their research. This format provided me with the opportunity to present my poster to a diverse audience, which included notable figures like Prof Tony, one of the conference conveners. My poster discussion spanned a wide range of areas, touching on the broader applications of my work, such as its relevance in wastewater management, soil fertilisation, the standardisation of methods, pesticide applications, and its implications for addressing climate change.

Furthermore, our conversation delved into the possibility of securing research grants to further expand my work, with a promising offer of assistance from Dr. Sabolc, an esteemed researcher from the Environmental Research Institute. Additionally, there was talk of potential research collaboration with Dr. Anjali from Newcastle University, highlighting the collaborative spirit and knowledge-sharing ethos that characterised the conference.



### **Session 3**

These comprised a variety of presentations on the topic of Monitoring Microbial Systems. It featured five speakers who discussed low-cost paper-based biosensor development, microbial performance monitoring in wastewater treatment, air microbiome diversity, Lipidomic characterisation, and marine plastisphere.

### **Session 4**

Following a short break for refreshments, another round of presentations and questions & answers was held. This time, the talks focused on sustainable processes, such as regulating nitrous oxide emissions, bioelectrochemical carbon dioxide conversion, biomethane from anaerobic sludge, and humanising science to solve climate change.



### Evening Dinner

I thoroughly enjoyed this experience, which allowed me to savour a variety of foods, wines, and desserts. It was a well-thought-out arrangement designed to facilitate networking opportunities. The seating arrangement was random, creating an informal and welcoming atmosphere that encouraged discussions on a wide range of topics, including research, hobbies, interests, travel experiences, culinary preferences, and even personal stories about family.

This relaxed and enjoyable evening served as a perfect way to unwind after a hectic day of conference activities. I relished every moment of interaction and found myself connecting with five individuals at my table. I am eagerly looking forward to the potential for collaborations and the exchange of ideas that may arise from these newfound connections in the future.

### Day 3

There were two presentation sessions for the last and final day of the conference. One with 6 presentations around the subject of engineering microbial systems. I would say, personally, this is my best session. I enjoy all the presentations and as I predicted, the overall best presentation of the entire conference was won by a person in this group. It was won by Sergio Serrano Blanco from Newcastle University; he presented on *T. obliquus* growth and productivity in heterotrophic conditions.

The second session had 5 presentations in resource recovery from waste.

### Lunch and poster

This time around the poster session was very brief because of time.

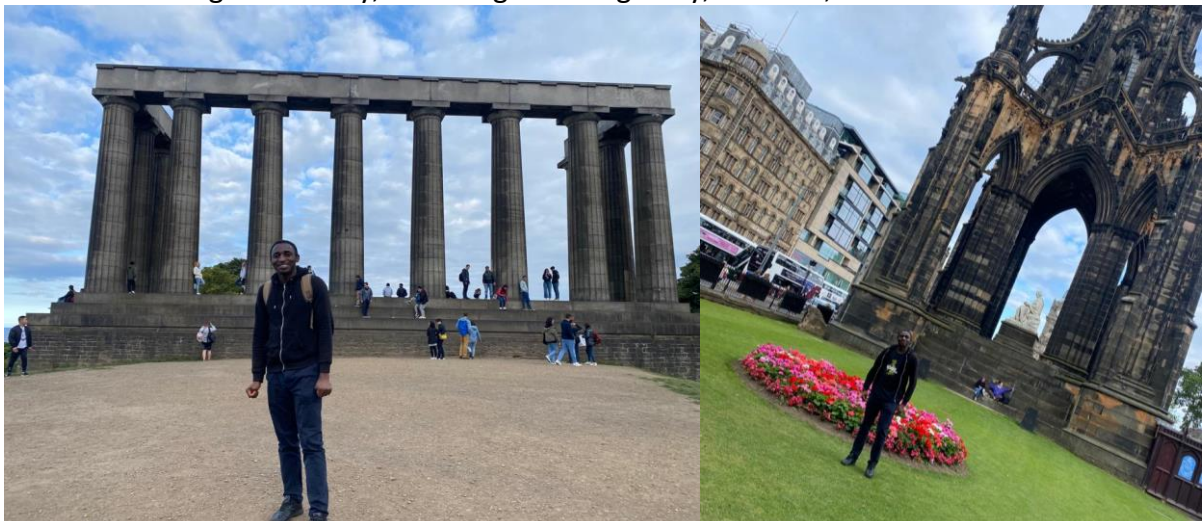
### Prize giving

There were prizes including 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> best poster. Best presentation in each session and an overall best presentation. I did not win a prize this time around.

### Closing and collection of posters

### Touring Edinburgh

Edinburgh is a very lovely city steeped in history. Most of our sightseeing was concentrated around Edinburgh Waverley, including the art gallery, the hills, and numerous monuments.



## Connection/Network achievement

It was truly an honour to meet Professor **Michael Manefield** of University of South Wales, Australia; Dr **Ian Fotheringham** CEO Ingenza, and Dr **Angela Sherry**. I reconnected with my examiner, Associate Professor **Tony Gutierrez**.

I had the opportunity to engage with a fantastic group of individuals, including, **Anjali Jayakumar**, **Sabolc Pap**, **Himani Taneja**, **Maggie White**, **Rita-Noelle Moussa**, **Georgia Waldram**, **Manisha Kumari**, **Ayo Ogundero**, Abbas Ahsan Islam, **Maira Anam**, Doborah Hall, and **Sergio Serrano Blanco** (who won the best presentation).



I also had the pleasure of catching up with my colleagues from **Cranfield University**, including **Nnenna Estar Chukwuekezie**, **Ayisha Affo Souleymane**, **Carla Spatola Rossi**, and our good friend, **Miriam Watafua** of **Heriot-Watt University**. I am looking forward to the potential for meaningful professional collaborations in the future.

## Acknowledgement

- My profound gratitude to my co-authors, particularly my supervisors, Dr Mark Pawlett and Prof Frederic Coulon, for their assistance during my PhD and, in particular, in this paper, which an extract poster was presented at this conference.
- I would like to offer my heartfelt appreciation to EBN Net UK for continually providing us with a wonderful platform for our professional development. The entire event was free, including registration, materials, eating, lodging, and a travel bursary.
- I would like to extend my sincere gratitude to The Douglas Bomford Trust for their generous support. Initially, they provided me with a grant intended for my participation in the Aqua Con Soil conference in Prague, Czech Republic. However, due to unforeseen visa complications that prevented my travel to Prague, they kindly allowed me to repurpose part of the grant to cover my expenses for attending the conference in Edinburgh. Their trust and support have been invaluable in making my participation possible. As a token of appreciation, I have prominently displayed their logo on my poster, ensuring it accompanies any pictures or exhibitions related to the conference.
- Finally, I shall be eternally grateful to The Petroleum Development Trust Fund (PTDF), Nigeria, for funding my PhD at Cranfield University UK.