Speakers

Reef-UKC Symposium
SEEP Conference 2025

30th July 2025,
Brunel University, London

REEF-UKC

Steve Molloy, Daikin UK

With more than 25 years' experience in the HVAC industry, Steve has built a wealth of knowledge through working closely with the whole supply chain of the built environment. As Daikin UK's Sustainability and Commercial Solutions Manager, Steve has a passion for assisting with the design and delivery of HVAC solutions with the emphasis on delivering reduction in whole life carbon.

Dr Muhammad Wakil Shahzad, Northumbria University

Dr. Shahzad is working as an Assistant Professor in the Mechanical and Construction Engineering Department at Northumbria University (NU), Newcastle Upon Tyne, United Kingdom. He holds a Ph.D. in Mechanical Engineering from the National University of Singapore (2014) and a BSc from the University of Engineering and Technology Lahore Pakistan (2007). He is a Chartered Engineer from Engineering Council UK and a Fellow of AdvanceHE UK.

Dr. Shahzad led the renewable energy and water generation research lab and education at Northumbria University. He conducts multidisciplinary research on the water-energy-environment nexus and trains the next generations of scientists capable of developing innovative solutions for sustainable water and cooling production, renewable energy harvesting, and smart grid integration and control strategy for process optimization.

Prof Neil J Hewitt, Ulster University

Prof. Neil Hewitt is recognised as an expert in heat pump technology, particularly in their development and application within energy storage and demand-side management. Throughout his career, Professor Hewitt has initiated and contributed to numerous significant research projects funded by European and UK Research Councils, collaborating with both academic and public/private sectors. He has authored over 100 publications and is a sought-after speaker at national and international conferences.

In addition to his research and speaking engagements, Professor Hewitt serves on several editorial boards and is the Editor-in-Chief of the International Journal of Ambient Energy. He also represents the UK at the International Institute of Refrigeration's Commission B2 on Refrigerating Machinery, further solidifying his role as a leading figure in the field.

Tonia Clark – Birmingham City Council

Tonia is Finance and Bids Officer in the Net Zero Team at Birmingham City Council. She is a Chartered Management Accountant who has worked predominately in the voluntary and public sectors in Finance Manager roles.

Tonia has worked on successful multi-million pound tenders for service delivery and has written successful grant applications for over £26 million. She has also managed finance, IT, estate and human resources teams. She is a Carbon Literacy trainer and enjoys public speaking and is passionate about the environment. She doesn't own a car and cycles around Birmingham.

Mr Dave Pearson, Star Refrigeration

Dave is group Sustainable Development Director for Star Refrigeration Ltd. He is a visiting professor at Royal Academy of Engineering, Edinburgh Napier University. Dave is also a Director of Star Renewable Energy.

Prof Gioia Falcone, University of Glasgow

Gioia Falcone holds the Rankine Chair in Energy Engineering at the University of Glasgow, where she is Director of the Glasgow Centre for Sustainable Energy, Associate Director of the Centre for Sustainable Solutions and Head of the Energy and Sustainability Research Group. Until June 2018, she was Professor and Head of the Geo-Energy Engineering Centre at Cranfield University. Between 2011 and early 2016, she held the Endowed Chair and Professorship in Geothermal Energy Systems at Clausthal University of Technology, Germany, where she was also the Director of the now Institute of Subsurface Energy Systems. Gioia was formerly an Assistant and then Associate Professor at Texas A&M University, Chevron Corporation Faculty Fellow and faculty member of the Ocean Drilling and Sustainable Earth Science partnership. Prior to joining academia, she worked with Eni-Agip, Enterprise Oil UK, Shell E&P UK and Total E&P UK.

Dr Binjian Nie, University of Oxford

Dr. Binjian Nie is a Senior Research Fellow at the University of Oxford, where he leads the Energy Storage and Energy Carriers group.

Dr. Nie obtained his PhD in Chemical Engineering in 2019, building on a BSc and MEng in Chemical Engineering and three years of experience in Chemical Process Engineering. Prior to joining Oxford in 2022, he held research fellowships at the Energy Research Accelerator (ERA), including a role as a T-ERA Senior Research Fellow.

Zafer URE, PCM Products Ltd

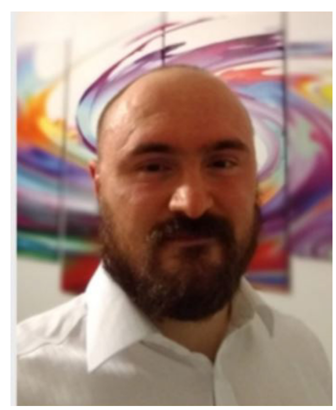
Mr. Ure started his career in 1981 as a mechanical engineer and since than served in number companies like Karbogaz (Turkey), J&E Hall (UK) in the refrigeration field and worked as Building Services Consultant for a number of UK based consultancy firms as well as marketing in York International as a Sales Manager. Mr. Ure used to be the Chairman of CIBSE Thermal Storage Group in the UK.
Mr. Ure is the founder and Managing Director of PCM Products Ltd. specialised in PCM based Thermal Energy Storage products and associated low energy cooling / heating technologies.
He takes a special interest in the promotion of alternative energy efficient and environmentally friendly technologies and overall load shifting / site demand management practices for practical HVAC & Refrigeration applications.

Yusuf Bilesanmi, Eja-Ice Limited

Experienced Innovative Product & Business Developer with over a decade of driving sustainable business growth across consumer electronics (Panasonic), energy markets (Mitsubishi Corporation), investment advisory (Flux Limited), cold chain infrastructure (Eja-Ice), sustainability advisory for companies and Respiratory care solutions (Shifa Tech). Exceptional understanding of sector value chains, business operations and analytics tools for effective analysis of data.

Yusuf's products and innovative business solutions have been recognised by the Royal Academy of Engineering's Africa Prize where he won "One to Watch Award" , the Leicestershire Innovation Awards and the World Economic Forum's UpLink Blue Ocean Innovator Awards etc. Yusuf develops, implements, and leads new business & project initiatives to advance investments in clean energy. Led teams, managed workforce training and skills development of team members. Responsibilities include; financial management, resource management, customer interaction, technical support and project execution with technicians.

Dr Steven Metcalf, University of Warwick



Dr. Steven Metcalf is an Associate Professor at the University of Warwick, specializing in sustainable thermal energy technologies. He completed his MEng and PhD in Mechanical Engineering at Warwick, where he has since contributed to numerous EPSRC, EU, BEIS, and industry-funded projects. Dr. Metcalf's primary research focuses on developing gas-fired heat pumps, aimed at reducing domestic gas consumption by 30-40% as a near-term solution for lowering carbon emissions.

He also represents Warwick in the International Energy Agency (IEA) Annexes on thermally driven heat pumps and serves in the European Heat Pump Association. Additionally, he teaches and leads the module ES3B5: Engines and Heat Pumps.

Dr Adam Yussef Sulaiman, Queen's University Belfast

Dr Sulaiman is a Teaching Fellow in Mechanical and Aerospace Engineering at Queen's University Belfast. His research centres on decarbonising industrial heating and cooling by advancing efficient vapour-compression technologies, natural refrigerants and other low GWP fluids, and by confirming their climate value through rigorous whole-life assessments. A frequent contributor and reviewer for leading energy journals, he also collaborates with the REEF UKC network to reshape process-heat practice. At the SEEP Conference he will present "Electrifying Industrial Heating and Cooling: A Key Step toward Deep Decarbonisation," offering a concise survey of emerging technologies, future trends, ultra-low and ultra-high temperature systems, and the main hurdles that must be cleared for widespread adoption

Syed Atif Iqrar, Aston University

Syed Atif Iqrar is a mechanical engineer with a strong focus on thermo-fluid applications and advanced numerical modelling. He is currently a Research Associate at Aston University in the Department of Mechanical, Biomedical, and Design Engineering, where he leads the design and optimisation of low-cost phase-change-material (PCM) cold-chain systems to support small-scale fisheries in East Africa. His work integrates 3D CAD (SolidWorks) with CFD and FEA simulations to enhance insulation strategies, PCM performance, and thermal efficiency.

Prior to his role at Aston, Syed gained international research experience at KAIST (South Korea) and NUST (Pakistan), where he contributed to peer-reviewed studies in heat transfer, PCM-based thermal management, and acoustofluidic systems. He holds an MSc in Mechanical Engineering and brings a multidisciplinary approach to solving real-world thermal design challenges, making his work highly relevant to sustainable cold storage and the transportation of perishable goods.

Sadri Shadabi, Aston University

Sadri Shadabi is a third-year PhD researcher in the Department of Engineering and Physical Sciences at Aston University's Energy and Bioproducts Research Institute (EBRI) and a young researcher with FOLIAGE—the European Network for FOstering Large-scale Implementation of Energy Geostructures. Her work explores the optimisation and design of energy piles, an innovative shallow-geothermal technology for net-zero buildings, using advanced numerical modelling and Multiphysics simulations to assess their capacity to meet heating and cooling demands. Through his role in FOLIAGE, she contributes to international collaborations that advance the widespread adoption of energy geostructures, supporting the development of efficient, low-carbon building systems aligned with future environmental and energy goals."

Sina Fadaie, Aston University

Dr Sina Fadaie is a Postdoctoral Research Associate at Aston University, where he completed a PhD in Civil Engineering, specialising in Geotechnical Engineering. His award-winning research focused on fibre optic sensing systems for monitoring geo-structures, integrating experiments, modelling, and 3D printing. Sina began his research career in Iran, earning national recognition for his MSc thesis. His work spans smart infrastructure, sustainable construction, and energy geo-structures. He is a Fellow of the Higher Education Academy and a finalist in STEM for BRITAIN and the British Renewable Energy Awards.

Armin Esmaeilzadeh, Aston University

Armin is in the final year of his PhD in Mechanical Engineering at the University of Guilan, Iran, specialising in magnetic refrigeration for cryogenic and deep cooling applications. Currently, He holds a Visiting Research position at Aston University. His academic background includes a BSc in Fluid Mechanics and an MSc in Heat and Mass Transfer Enhancement using passive methods.

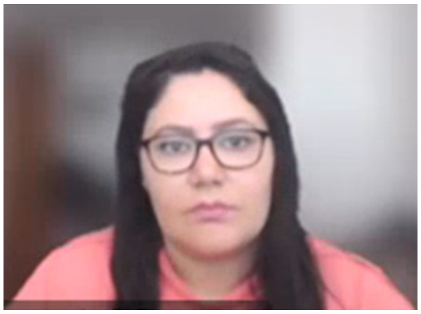
Gayatri Sundar Rajan, University of Oxford

Gayatri Sundar Rajan is an Engineering Science DPhil student at the University of Oxford researching at the water-energy-X nexus. Her current research focuses on developing synergistic sorption desalination and cooling process for sustainable development applications (such as clean water and food cold storage cogeneration). More broadly, she seeks to utilize computational and experimental methods to tackle current and future opportunities to improve human quality of life. Prior to joining the University of Oxford, Gayatri completed her B.S. in Mechanical Engineering at Boston University. During her degree, she built and tested a desiccant-based water harvesting device for her senior design project, conducted research in heating electrification through Boston University's Campus Climate Lab, and interned at Commonwealth Fusion systems as an R&D Mechatronics Intern. Building on a range of research and industrial internships in the energy and water landscape, Gayatri aims to bring an interdisciplinary perspective to future research projects

Isa Kolo, University of Glasgow

Isa is a researcher specialising in geo-energy, with experience in heat transfer, materials and structures, and fracture mechanics. His work spans repurposing oil and gas wells, carbon capture and storage, nuclear waste disposal, and geothermal energy, including open- and closed-loop systems for energy storage and extraction. Currently, his research focuses on net-zero technologies, particularly heating and cooling decarbonisation, hybrid geothermal systems, and underground thermal energy storage.

Fatemeh Ardakani, University of Birmingham



Fatemeh is a Senior Geotechnical Engineer, PhD Candidate and Research Assistant at the University of Birmingham. With over six years of international experience, she has delivered geotechnical design and ground investigation strategies for major infrastructure projects across the UK and the MENA region. Her work spans high-speed rail, tunnelling, and advanced foundation systems, with a strong emphasis on digitalisation and automation in ground engineering.
Fatemeh's research focuses on the application of AL and digital twin technologies to enhance the thermal performance and resilience of energy geostructures. She is currently investigating renewable and sustainable solutions for ground energy systems under the National Buried Infrastructure Facility (NBIF) Scholarship.

Dr Mark Cassidy, University of Edinburgh

Mark is an interdisciplinary researcher focussed on socio-technical relationships around energy, society, and technological change. Originally from a materials processing background Mark has 25 years research and development experience on energy materials. During this time, he worked across a range of industrial and academic environments. In 2017 Mark took a decision to move beyond the technical and widen his engagement with broader issues around energy transitions gaining an MSc in Energy Society and Sustainability and a second PhD in the History of Technology. As a result, Mark's research has shifted towards social sciences and environmental humanities, aiming to better engage with the social and contextual relations which are deeply rooted within practices, perceptions and engagement around energy policy and technological transitions.

Dr Ehsan Baniasadi, Aston University

Dr. Ehsan Baniasadi is a Senior Research Fellow at Aston University, focusing on sustainable energy systems. He holds a PhD from Ontario Tech University in Canada, where he was pivotal in the design and development of a pioneering pre-commercial pilot plant for hydrogen production using water and solar energy. This significant project was supported by the Natural Sciences and Engineering Research Council of Canada and Phoenix Canada Oil Company Limited.

Throughout his academic career, Dr. Baniasadi has charted a path through the evolving landscape of renewable energy technologies. Beginning with his doctoral research, which laid the groundwork for the development of innovative hydrogen production technologies, he has continually expanded the boundaries of what's possible in the realm of sustainable energy.