







Hydrogen Winter School 8-12 January 2024 - Speaker profiles

<p>Dr Kathryn North</p> 	<p>Kathryn is the Associate Pro Vice-Chancellor for Climate Change and Net Zero at Loughborough University and is also the Director of the Centre for Postdoctoral Development in Infrastructure Cities and Energy (C-DICE). She is skills lead for the HyDEX project and Head of Skills for the Energy Research Accelerator (ERA). Kathryn's interests lie in developing researchers at all career stages, and latterly in supporting the developing of high-level skills that we will need for achieving a decarbonised future, through C-DICE, ERA and HyDEX. Having supported researchers at Loughborough University since 2007, Kathryn has experience in creating innovative approaches to researcher development through the Doctoral College, leading the Research Leaders programme, and establishing the Institute of the Advanced Studies. Kathryn is currently leading Loughborough's strategy around hydrogen research and innovation.</p>
<p>Dr Elizabeth Ashton</p> 	<p>Dr Ashton is a skilled chemist, and has expertise in materials characterisation, green growth economics, and electrochemistry. After completing her materials chemistry Ph.D in 2021, she has continued hydrogen energy research as a postdoctoral research associate. She was part of the team, alongside Prof. Wijayantha, that delivered the Ten Point Green Growth plan for the Midlands Engine. In 2023 she joined the research group of Prof. Strickland investigating battery electrolyzers for green hydrogen production.</p>
<p>Dr Sharon George</p> 	<p>Dr Sharon George is a senior lecturer and Course Director for the MSc in Environmental Sustainability & Green Technology, and a researcher in Keele's Institute for Sustainable Futures. She holds a PhD in chemistry and is a specialist in sustainable development, technology development and deployment. Current research includes Technology feasibility studies, LCBEP – EU funded project implementing low carbon technologies into local UK businesses and SEND (£15M) the largest single, integrated electricity, gas and heat smart energy network demonstrator in Europe. She has worked extensively on technology development with academia and businesses including the lead PI role on Innovate UK projects on barriers to EV technology, Inductive Charging for Electric Vehicles and solar cooling. She is the principal investigator for the HyDEX project, which is supporting and fostering the creation of a new hydrogen industrial economy in the Midlands.</p>

<p>Professor Upul KG Wijayantha</p> 	<p>Professor Wijayantha has considerable expertise in low-carbon H2 technologies, electrochemical energy storage, energy materials and the circular chemical economy, having led industrial development of green H2 production in the UK which then expanded to the US. He currently serves on two technical task groups of the International Energy Agency, and is part of the team behind HyDEX, a project aiming to accelerate innovation in H2 by supporting SMEs to develop the technologies and skills needed.</p>
<p>Dr Abdelrahman Hegab</p> 	<p>Dr Hegab is a senior research fellow within the Faculty of Engineering at the university of Nottingham. His current research focus is internal combustion engines, fuels and powertrain research. Areas of expertise include novel combustion modes (e.g. HCCI & LTC), advanced combustion systems and valvetrain, jet ignition engines, thermal management, low carbon technologies, alternative fuels, fuel injection systems, heat recovery and exhaust emissions control. Dr Hegab is also interested in vehicle design, alternative propulsion systems, turbo-compounding, electrification and hybridization.</p>
<p>Professor Robert Steinberger-Wilckens</p> 	<p>Robert is Professor for Fuel Cell and Hydrogen research in Chemical Engineering. He is director of the research Fuel Cell and Hydrogen group and the Centre for Doctoral Training Fuel Cells and their Fuels, which is run by the universities of Birmingham, Nottingham, and Loughborough, Imperial College, and University College of London.</p> <p>He works and has worked in many areas across the fields of renewable energies, energy efficiency, fuel cells, hydrogen production and distribution, as well as electric vehicles.</p> <p>Currently, his main areas of interest include Solid Oxide Fuel Cells, high temperature electrolysis (SOE) and reversible fuel cells (SOC) with methane synthesis, intermediate temperature polymer fuel cells, and market introduction of fuel cells and fuel cell vehicles.</p>
<p>Dr Yousif Al-Sagheer</p> 	<p>Yousif is a research fellow in the Birmingham Centre for Fuel Cell and Hydrogen Research, based in the School of Chemical Engineering at the University of Birmingham. His main research interest is the integration and control of fuel cell systems. He received his PhD on balancing renewable energy fluctuation using hydrogen fuel cell and water electrolyser. He studied hardware induced events in such systems to improve the balance reliability under prediction uncertainty of power generation and demand, and to provide recommendations for the operational and design requirements. He has experience on developing model predictive controllers based on the feedback theory.</p>

<p>Dr Shangfeng Du</p> 	<p>Shangfeng Du is an Associate Professor leading research activities in low temperature fuel cells and electrolyzers in the School of Chemical Engineering at the University of Birmingham. He graduated from Tsinghua University in Materials Science and Engineering and obtained his PhD in Chemical Engineering from Chinese Academy of Sciences. After working as a research associate at Max Planck Institute for Metals Research, Germany, he joined the University of Birmingham as a Marie Curie Research Fellow. His current research interests lie in electrochemical engineering research for energy application, with focuses on the development and evaluation of electrodes, composite membranes, single cells and short stacks, as well as their application and degradation research.</p>
<p>Dr Artur J Majewski</p> 	<p>Dr Majewski is an associate professor in hydrogen and hydrogen-based energy technology within the school of Chemical Engineering at the University of Birmingham. His current research includes hydrogen (production, distribution, storage, etc.) biofuels, renewable synthetic fuels, solid oxide cells, catalysis, hydrocarbons reforming fuels for SOFC. He is currently working on the Ammogen project, which involves commissioning the world's largest and most efficient ammonia-to-hydrogen conversion unit. He is also a project manager on the GreenFlexJet project, which is constructing a pre-commercial demonstration plant to produce advanced aviation biofuel (jet fuel) from waste vegetable oil and organic solid waste biomass.</p>
<p>Dr Miloud Ouadi</p> 	<p>Dr Miloud Ouadi is a pioneer and international expert on biomass thermal conversion processes to produce drop in biofuels. He is the Principal Investigator of several award-winning international EU projects such as To-Syn-Fuel and Green Flexjet. He is also one of the key inventors of the pioneering Thermo-Catalytic Reforming technology which has developed the first biorefinery demonstration plant for Europe converting sewage sludge into green diesel, hydrogen, biochar, petrol, and aviation fuel. He currently leads on biomass and bioenergy pyrolysis research at UOB.</p>