

Innovation: Powering Future Industries

7:00am – 8:45am, Wednesday 23 August 2023

Speakers' Hall, Queensland Parliament House, Corner of George and Alice Streets, Brisbane

Researcher and Panellist biographies

Dr Ruby Michael – Lecturer in Ecological Engineering and founder of Green Infrastructure Research Labs (GIRLS), School of Engineering and Built Environment, Griffith University

Dr Ruby Michael is an ecological engineer specialising in living green infrastructure and landfill phytocapping. Dr Michael is the founding director of Griffith University's award-winning Green Infrastructure Research Labs (GIRLS) within the Cities Research Institute. Green Infrastructure Research Labs is an interdisciplinary team united by a vision to reinstate soil and plant ecosystems back into our cities and rural communities for the benefit of the climate, biodiversity, and people's lives. Working at the intersection between engineering, ecology and design, Dr Michael and her team design and build full-scale pilots in partnership with industry to meet engineering performance objectives and demonstrate ways to incorporate living infrastructure solutions.



Associate Professor Joshua Watts – Director for the National Battery Testing Centre – Energy Storage Research Group, School of Chemistry and Physics, Faculty of Science, QUT

Associate Professor Joshua Watts is the Director of the National Battery Testing Centre and associated projects, and has a PhD in energy and process engineering specialising in nano-materials synthesis, optimisation and characterisation. He has more than 14 years of research and development experience in industry and academia, primarily focused in the fields of battery energy storage and renewable energy generation. Joshua has managed multiple battery energy storage related projects commercially and at QUT, and has expertise in battery control systems design as well as materials development, characterisation, and electrochemical testing. Joshua has authored several peer reviewed publications in the fields of materials synthesis and advanced characterisation.



Associate Professor Esteban Marcellin – Principal Research Fellow, Australian Institute for Bioengineering and Nanotechnology (AIBN), The University of Queensland

Associate Professor Esteban Marcellin is an expert in systems and synthetic biology. His work centres on enhancing biological systems for producing fuels, chemicals, foods, and biopharmaceuticals. He uses biological systems coupled with mathematical modelling to understand cellular behaviour to find gene targets for engineering. His innovative approaches include the use of gas fermentation to convert greenhouse gases into valuable fuels and chemicals, contributing to sustainability in Australia. Collaborating with industry leaders, Marcellin's research aims to enhance the yields and broaden the scope of the advanced biomanufacturing sector to produce sustainable fuels.



Mr Chris Baker – Founder, Director and CTO, Sunshine Hydro

Chris is a civil and software engineer with a recent focus on electro-mobility and renewable energy integration. Past experience includes infrastructure projects such as construction planning of coal loader offshore works, detailed design of highway grade separated interchanges, design and systems analysis for highway design software used in 42 countries and design and construction of municipal facilities.



Professor Peter Talbot – Executive Director, Feline Pty Ltd

Peter is an experienced materials scientist who has developed a range of innovative technologies from a combination of technical, academic and commercial arenas. He is internationally regarded as a materials science expert and leader in the fields of lithium-ion batteries, nano-materials manufacture and high temperature superconductors. He holds numerous patents in the fields of solid-state chemistry, automated chemical manufacture and nanomaterials.



Peter is a founder and Executive Director of Feline Pty Ltd., a lithium-ion cell and battery manufacturing company based in Queensland. He held the position of Professor at QUT and remains an Adjunct Professorial Fellow. He was an AQ Founders Fellow and Program Manager for the Future Battery CRC. Other roles included Director and Project Manager of the National Battery Testing Centre at QUT in collaboration with the FBI CRC. Peter was also a Chief Investigator of the Australian Research Councils Training Centre for Future Energy Storage Technologies and a Chief investigator for the Australian Renewable Energy Agency research and development program for Cost Effective Renewable. During his QUT tenure, as Chief Investigator for the AutoCRC project to produce lithium-ion battery materials for the Malaysian Automotive Institute, he established QUT's Advanced Battery Facility (ABF), located at QUT's Pilot Plant, Banyo. The ABF was the first lithium-ion battery fabrication facility in Australia.

Mr David Johnston – General Manager, Jet Zero Australia

David is the General Manager of Jet Zero Australia. He brings 25 years of operational and strategic accountabilities with Shell for downstream oil and gas businesses at national, regional and global levels. David has an extensive background in refining, supply chain operations and downstream strategic projects. David has over 10 years experience consulting in oil & gas operations and to businesses grappling with the challenges in technical development and commercialization of innovative energy technologies. Most recently, David was a senior consultant to the Fuel Services Branch of the Australian Department of Defence. David has a Bachelor of Chemical Engineering (Honours) from Curtin University, was a Chemeca Medal recipient and is a Chartered Engineer from the Institution of Chemical Engineers.

