

Australia-Japan Clean Energy and Emerging Research Leaders Exchange Program Forum

21–22 November 2024

Speakers and Early Research Leader Exchange Program Mentors



PRESENTED BY



Australian Academy of
Technological Sciences
& Engineering



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Professor Ken Baldwin



Professor Baldwin is the inaugural Director of the ANU Energy Change Institute (now the ANU Institute for Climate, Energy and Disaster Solutions) and founding

Director of the ANU Grand Challenge: Zero-Carbon Energy for the Asia-Pacific. His focus is to drive the energy transition, particularly for Australia's future export industries based on renewable energy.

Glen Currie



Dr Currie is responsible for managing and expanding the impacts of the energy system program, focusing on delivering system scale change to support the Australian energy

transition. His research and teaching experience range from energy consumer and demand side research, solar PV business, pumped hydro, hydrogen, distribution, transmission, climate change and system engineering. A Fellow of Engineers Australia and the Australian Institute of Energy, Glen brings over 20 years of experience in strategic planning, complex problem solving and leading the transformation of companies, including CSIRO Energy. At Caterpillar, Glen was a Senior Consultant in the service department technology program for dealers in 44 countries around Europe, Asia and Australia. He has also run his own business developing large-scale solar.

Peter Derbyshire



Peter Derbyshire is the Director, Policy and International Affairs at the Australian Academy of Technological Sciences and Engineering (ATSE). Here he works with ATSE's

900+ expert Fellows to provide evidence-based advice to decision makers in Australia and abroad. This includes advice on Artificial Intelligence, STEM skills, and renewable energy transitions. Prior to this, Peter worked at Science & Technology Australia where he connected scientists and technologists to members of government through programs like STEM Ambassadors and Science meets Parliament. Though his passion is science policy, Peter was originally a zoologist with a focus on reptile cardiac nerve function and comparative morphology.

Dr Takaya Fujisaki



Dr Fujisaki is Assistant Professor, Faculty of Materials and Energy at Shimane University. Previously he was an Academic Researcher at the Institute of

Multidisciplinary Research for Advanced Materials at Tohoku University, and at the International Institute for Carbon-Neutral Energy Research, at Kyushu University.

Professor Tao Gu

ERLEP mentor



Professor Gu from Macquarie University is an international renowned expert in the fields of the Internet of Things, mobile computing, ubiquitous computing, edge and embedded AI. He is an IEEE Fellow, AAIA Fellow and ACM Distinguished Member. He is also recognised as Stanford's World Top 2% scientists in networking and telecommunications. He has been devoted to discovering ways of connecting and sensing the physical world and embedding AI to facilitate the development of new computing systems and applications.

Dr Yuko Harayama

Keynote speaker



Dr Harayama is the former Executive Member of the Council for Science and Technology Policy, Cabinet Office of Japan and the former Deputy Director General of the Directorate

for Science, Technology and Innovation, OECD. She is a Legion D'Honneur recipient (Chevalier) and was awarded an honorary doctorate from the University of Neuchatel. Previously, she was a Professor in the Department of Management Science and Technology at the Graduate School of Engineering of Tohoku University. She holds a PhD in education sciences and a PhD in economics from the University of Geneva.

Waseqa Hasan



Waseqa Hasan is a Senior Sustainability Consultant. Her background includes dual bachelor's degrees in Business and Electrical Engineering, plus an ongoing MBA. Waseqa is

also a Green Star Accredited Professional and is adding WELS and NABERS accreditations. She has led impactful carbon initiatives for a Sydney council and integrated sustainability principles into design and construction at a top-tier consultancy in Melbourne.

Dr Kazuhide Ito



Dr Ito is Professor and Dean of the Faculty of Engineering Sciences at Kyushu University. Dr Ito's current research topics include in-silico human modeling, indoor

environment, computational fluid dynamics, public health, energy-efficient and sustainable building design and analysis. He has published over 400 journal and conference papers. Dr Ito has received several awards from the Japanese government, Architectural Institute of Japan and Society of Heating, Air-conditioning and Sanitary Engineers of Japan.

Distinguished Professor Baohua Jia



Professor Jia's research focuses on fundamental light and nanomaterial interaction. Her work on laser manipulation of two-dimensional materials has led to the design and

fabrication of functional nanostructures and nanomaterials for effective harnessing and storage of clean energy from sunlight, purifying water and air for clean environment; imaging and spectroscopy and nanofabrication using ultrafast laser towards fast-speed all-optical communications and intelligent manufacturing.

Dr Jehan Kanga



Dr Kanga is a multi-award winning scientist, Founder and CEO of Rux Energy, an advanced materials startup delivering breakthrough efficiency gains for dispatchable

hydrogen storage, enabling step change efficiencies for heavy mobility, maritime, rail, road, energy distribution networks, and heavy industry. They are leading several global collaborative heavy transport and maritime decarbonisation projects, interfacing with nearly a dozen Universities and public research institutions across Australia, UK and Singapore. Previously, Jehan was an emerging clean tech leader at KPMG Australia, completed a PhD in Chemistry at the University of Sydney, and was listed as 40 Under 40 Most Influential Asian Australians in 2019 by Asialink, and was awarded India Australia Business Council Young Professional of the Year 2021.

David Kilham



David Kilham is International Affairs Manager at the Australian Academy of Technological Sciences and Engineering. He has worked at the interface of policy and

science with the Department of Foreign Affairs and Trade, the former Department of Environment and Heritage and the Australian Antarctic Division. David has extensive experience in foreign and trade policy and international engagement, including as Australia's Deputy Ambassador to Greece, Romania and Bulgaria at the Australian Embassy in Athens and as First Secretary to the Australian Permanent Mission to the World Trade Organisation in Geneva.

Professor Sandra Kentish



Professor Kentish is a distinguished and highly cited research leader undertaking needs-driven strategic research which has resulted in novel patented membrane

technologies that assist Australian companies to improve their operational efficiency and reduce their environmental impact. Her teams have developed new membranes for water treatment and desalination, the recovery of protein from dairy waste, the capture of carbon dioxide from gas streams and the selection of sperm for artificial human reproduction. Professor Kentish is also a gifted teacher and an accomplished university leader.

Professor Douglas MacFarlane

Keynote speaker and ERLEP mentor



Professor MacFarlane is a world leader in the discovery and technology of new organic materials that are of use in a range of advanced applications including ammonia

production, refrigeration technologies, batteries, capacitors, lubricants, and drug delivery and that are now in production commercially by suppliers worldwide. He has collaboratively developed breakthrough technologies based on these materials including high stability electrolytes for green ammonia production and improved safety in lithium batteries, as well as high efficiency thermal energy and cooling technology.

Professor Nasir Mahmood

ERLEP mentor



Professor Mahmood is an Associate Professor and Vice-Chancellor Senior Research Fellowship recipient at RMIT University. His research involves the development

of advanced materials for a sustainable society. He is a highly cited researcher and among the Best Materials Scientists and Chemists by Research.com. He has an excellent track record in publishing high-quality publications >185 with citations >16,300 and an H-index of 63 and holds 10 patents/applications and author of 10 books/book chapters. He has been awarded several prestigious awards including the Beijing Science and Technology Award 2018, RMIT Vice-Chancellor Postdoctoral Fellowship, RMIT Vice-Chancellor Senior Research Fellowship and 2023 GAMECHANGER Australian by Advance Australia and Finalist for Global Talent Award.

Professor Jonathan Manton



Professor Manton holds a Distinguished Chair at the University of Melbourne with the title Future Generation Professor. He has a Bachelor of Science (mathematics) and

Bachelor of Engineering (electrical) from the University of Melbourne, Australia. In 2005 he became a full Professor in the Research School of Information Sciences and Engineering (RSISE) at the Australian National University. He has served as an Associate Editor for IEEE Transactions on Signal Processing and Lead Guest Editor for IEEE Transactions on Selected Topics in Signal Processing. He is currently on the IEEE Machine Learning for Signal Processing Technical Committee, and is the Signal Processing Chair of the IEEE Victorian Chapter. Awards include a prestigious Queen Elizabeth II Fellowship and a Future Summit Australian Leadership Award.

Haruki Motegi



Haruki Motegi is Chief Researcher in the Computational & Mathematical Engineering Department, Corporate R&D Division of IHI Corporation. He is engaged

in research and development of simulation and optimisation technologies, with a focus on transport phenomena with chemical reactions. Formerly he was with Mizuho Research & Technologies Ltd where he was engaged in development of simulation technologies for chemical and electrochemical devices. He contributed to the creation of roadmaps for hydrogen and fuel cells by Japanese national institutes.

Professor Toshiro Ohashi



Professor Ohashi has been Full Professor of Faculty of Engineering since 2009 and Director of Europe Office in Helsinki from 2021 to 2023 at Hokkaido University, Japan. His

research interests involve cell/tissue biomechanics, mechanical characterisation of soft tissues in health and disease and bio-MEMS towards high throughput single cell analysis. His editorial appointments include emeritus Editor-in-Chief of Journal of Biorheology, Associate Editor of Journal of Biomechanical Science and Engineering, Editorial Board Member of Mechanobiology in Medicine. He has been President of the Japan Society of Biorheology since 2023.

Professor Yasushi Sekine

Keynote speaker



Professor Sekine is the Director of the Research Innovation Center and Professor, Faculty of Advanced Science and Engineering, at Waseda University. He is a Fellow of

Royal Society of Chemistry (FRSC). He has received the 2020 Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology, Prizes for Science and Technology (Japan).



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Dr John Söderbaum



Dr Söderbaum FTSE has worked on energy policy and programs for over 40 years, including for the Australian and UK governments and the International Energy

Agency. Since 1998 he has worked as a consultant in the private sector and is currently the Director for Science and Technology for a national consulting firm, ACIL Allen. He does work for private firms, governments and research organisations. Many of his projects sit at the intersection of research, commercialisation and public policy. He has a strong interest in topics such as: the impact and value of research; new and emerging technologies; and policy and program evaluation.

Professor Paul Wood



Professor Wood led R&D teams from CSIRO, CSL and Pfizer (now Zoetis) and was Deputy-Director of the Vaccine Technology CRC. He brought several innovations to market,

receiving recognition for inventing a new diagnostic test for Tuberculosis, including the CSIRO Medal, the Clunies Ross award and the Order of Australia. Paul was Chair of GALVmed and on the Board of Dairy Australia. He is on the Board of Australian Academy of Technological, Science and Engineering and an Adjunct Professor at Monash University. In 2019, he received the International Distinguished Veterinary Immunologist Award and in 2022 the Eureka Prize for Outstanding Mentor of Young Researchers.

Dr Emi Yuda



Dr Yuda is a professor specialising in bio-signal processing and biological big data analytics. Her research covers diverse physiological fields, including the detection

of sleep apnea and the development of methods to identify motion from bio-acceleration. She also focuses on innovations in autonomic function assessment and pulse rate variability analysis, and promotes interdisciplinary research that integrates engineering, medicine, and information science.

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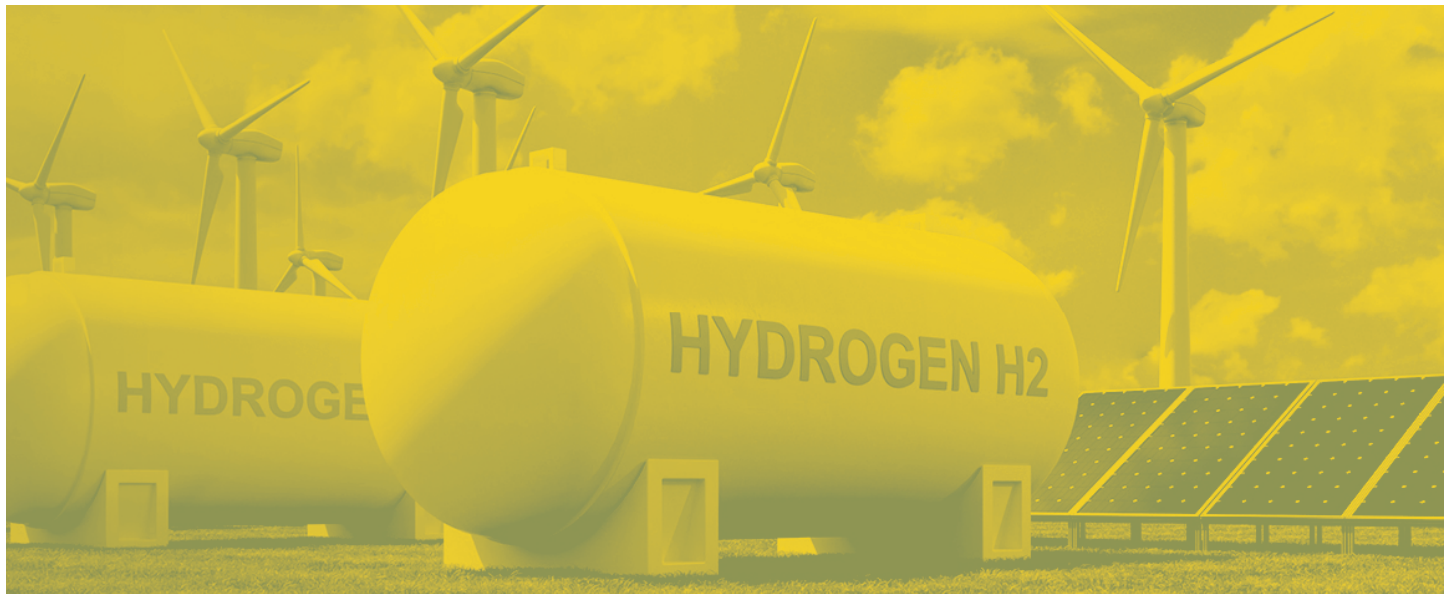
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