Supergen ORE Hub 2024 Annual Assembly:
Accelerating Offshore Renewable Energy (ORE) to 2040 and beyond

Speaker biographies

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Welcome to the University of Plymouth (09:00 – 09:10)

Professor Kevin Jones
University of Plymouth - Deputy Vice-Chancellor Research and Innovation

Professor Kevin Jones is currently Professor of Computing Science and the Deputy Vice-Chancellor Research and Innovation at the University of Plymouth. As DVC R&I, Kevin provides institution-wide strategic leadership, driving and supporting research excellence, innovation and impact whilst promoting interdisciplinary research, as well as driving and overseeing business ventures and collaboration, and international research partnerships. Preceding his move to the Office of the Vice-Chancellor, Kevin was the Executive Dean of the Faculty of Science and Engineering at the University of Plymouth, responsible for the Schools of Engineering, Computing & Mathematics, Biological & Marine Sciences and Geography, Earth & Environmental Sciences. Prior to joining Plymouth, he was Head of Computer Science at City University London. Previously, he had spent a number of years in the Silicon Valley in CA, holding executive, managerial, technical and research positions, in both successful start-up companies and major corporations. His research and teaching interests cover the Trustworthiness of Complex Systems, including Cyber Security, with a focus on the Maritime domain, and he is the founder member of the Maritime Cyber Threats Research Group. Kevin is a Fellow of the IMarEST, IET and the BCS, a Senior Member of the IEEE and the ACM, and a Liveryman of the WCIT.

Keynote session (09:10 – 09:35)

Andrew Garrard CBE FREng
University of Bristol - Royal Academy of Engineering, Visiting Professor in Renewable Energy

In 1984, Andrew co-founded Garrad Hassan (GH) in Bristol. It grew to become the world's largest renewable energy consultancy, employing 1,000 people in 29 countries. He became President of GL Garrad Hassan after Germanischer Lloyd (GL) and Garrad Hassan merged in 2009. He ran the new company until 2012, when he became Chairman. After the merger of DNV and GL in 2013, Andrew became a member of the DNV GL Energy Supervisory Board. Andrew has been professionally involved in wind, wave and tidal energy for over four decades. He built his first wind turbine in 1971. From 2013 to 2014 he was President of the European Wind Energy Association (EWEA) and he is a past-Chairman of the British Wind Energy Association. He chaired Bristol's year as European Green Capital in 2015. In 2006, he became the first British recipient of EWEA's Poul la Cour prize, and in 2015, he became the only non-Greek recipient of the Hellenic Wind Energy Association's Aeolus prize. Under his leadership, GH twice won the Queen's Award for International Enterprise. He is an Honorary Fellow of New College, Oxford.

Amanda Solloway MP
Parliamentary Under Secretary of State (Minister for Affordability and Skills) and Junior Lord of the Treasury (Government Whip)

Amanda Solloway was appointed Government Whip (Lord Commissioner of HM Treasury) on 20 September 2022. She was appointed Parliamentary Under Secretary of State (Minister for Energy Consumers and Affordability) at the Department for Energy Security and Net Zero on 7 February 2023.

She was previously Parliamentary Under Secretary of State at the Home Office, and a Parliamentary Under Secretary of State (Minister for Equalities) at the Foreign, Commonwealth and Development Office between 8 July 2022 and 20 September 2022.

She was previously Parliamentary Under Secretary of State at the Department for Business, Energy and Industrial Strategy between 14 February 2020 and 8 July 2022.

Welcome to the Supergen ORE Hub and the Annual Assembly (09:35 – 09:40)

Professor Deborah Greaves OBE
University of Plymouth - Professor of Ocean Engineering, University of Plymouth and Director of the Supergen ORE Hub

Deborah Greaves is Head of the School of Engineering, Computing and Mathematics, Professor of Ocean Engineering and Director of the COAST Laboratory at the University of Plymouth with previous appointments at Oxford, UCL and the University of Bath.

Her research interests include marine and offshore renewable energy, and physical and numerical modeling of wave-structure interaction. She has led many national and international research projects concerning offshore renewable energy (ORE) in collaboration with industrial and academic partners and in 2017 was appointed by EPSRC as the new ORE Supergen Leader, directing the UK research programme in ORE. She recently published with Wiley an edited book on Wave and Tidal Energy (2018) and in the Queen's Birthday Honours List, 2018, she was awarded an OBE for services to Marine Renewable Energy, Equalities, and Higher Education.

Panel session 1: Accelerating to 2040: Policy, Planning and Consenting (09:40 – 10:40)

Professor David White (Chair)
University of Southampton - Co-Director of the Supergen ORE Hub

Professor David White, at the University of Southampton, has held academic positions at the Universities of Cambridge and Western Australia and works primarily in offshore energy.

His work has attracted >£25M of funding, split between industry and competitive grants, leading to 8 best paper awards. The work has changed engineering practice for offshore infrastructure and mooring systems, with impact on industry design codes (API/ISO) and recommended practices (DNV), including recognition through 9 industry awards. His prior leadership roles include Founding Director of the Australian Research Council Hub for Offshore Floating Facilities as well as UWA's Shell Chair of Offshore Engineering. He is a Fellow of the Royal Academy of Engineering.

Tim Pick MBE
Chair, Offshore Wind Growth Partnership / former UK Offshore Wind Champion

In May 2023 Tim completed an assignment as the UK's first Offshore Wind Champion with the publication of his report (https://www.gov.uk/government/publications/accelerating-deployment-of-offshore-wind-farms-uk-offshore-wind-champion-recommendations) containing detailed recommendations for Government, Industry and other stakeholders. He remains an advocate for positive change in the sector, and is Chair of the UK's Offshore Wind Growth Partnership (Offshore Wind Growth Partnership (owgp.org.uk)). Tim was awarded an MBE in the 2024 King's New Year Honours for services to offshore wind energy.

Tim is a seasoned energy projects lawyer with more than 25 years experience of advising on the development and financing of some of the largest and most complex projects in the UK, Eastern Mediterranean, Middle East, East Africa and beyond, including in the oil and gas, LNG, pipeline, refining, power, water and wastewater industries.

Tim also acts as an Angel investor with interests in Energy Transition, Healthcare, E-commerce, Tech and Social Mobility.

Tim previously spent 10 years living and working in Abu Dhabi.

William Apps
The Crown Estate - Offshore Wind Strategy Director, Marine

Will is responsible for the offshore wind strategy of The Crown Estate, the business that is responsible for the seabed rights of England, Wales & Northern Ireland, alongside supporting nature and the rich biodiversity of our seas and helping to rejuvenate local economies and communities.

With 20 years experience in the sector, Will has directly contributed to the strategic evolution of the UK market, working alongside governments, stakeholders and the industry. Will oversees The Crown Estate's enabling and derisking activities focussed on securing the sustainable and coordinated growth of the pipeline and the industry. Will is a Chartered Civil Engineer, and previously a student at Plymouth University.

Professor Henry Jeffrey
University of Edinburgh - Co-Director of the Supergen ORE Hub

Henry Jeffrey at the University of Edinburgh is a specialist in marine energy roadmaps, action plans and strategies.

He is responsible for dissemination and within the current UK Marine programme. He holds the position of "strategy and internationalisation officer" for "Wave Energy Scotland" and chairs the European Energy Research Alliance (EERA) as well as the IEA OES group for Ocean programme. He is the only academic member of the ETI and Renewable UK Marine Strategy Groups. His international collaboration includes Canada, the US, Chile, and Mexico. He is lead of several European marine energy projects including DTOcean.

David Carlin
Department for Environment, Food and Rural Affairs (Defra) - Senior Leader in Marine Science

As the UK Department for Environment, Food and Rural Affairs (Defra) Lead Marine and Fisheries Scientist, David leads a team of multidisciplinary scientists and social researchers overseeing the interface of science into policy and the ongoing evaluation of policy outcomes. He is responsible for leading Defra's investment into marine and fisheries science outcome and building relationships across the marine science community. With over 25 years in the marine science sector in the UK, David brings a range of experiences from bench scientist to head of delegation roles in international fora and leadership roles from a range of science programmes directly linked to developing and evaluating government policy. He is a Fellow of both the Royal Geographical Society and Institute of Marine Engineering, Science and Technology.

Research session 1: Core research updates from the Supergen ORE Hub (11:00 – 11:30)

Professor Philipp Thies (Chair)
University of Exeter - Co-Director of the Supergen ORE Hub

Prof Philipp Thies is an Associate Professor Renewable Energy at the University of Exeter with research interests in offshore reliability engineering including component reliability testing, field load evaluation for ORE and statistical reliability methods.

He is Principal Investigator for the Innovate UK project for "Dynamic Load Reduction and Station Keeping Mooring System for Floating Offshore Wind" and has led a Newton Fund UK-China project on novel mooring systems. He acts as Co-Investigator for a GCRF UK-China project, an Innovate UK project and UKCMER. He is responsible for mooring risk assessment in the EU H2020 OPERA project, test activities in the EU H2020 Marinet2 programme and contributes to the IDCORE doctoral programme.

Dr Hannah Mullings
University of Manchester - Research Fellow

Dr Mullings graduated with a First Class MEng degree in Mechanical Engineering in 2015. Following this she went on to begin a PhD in Mechanical Engineering investigating the loads on a tidal stream turbine due to different unsteady operating conditions. In 2021, Dr Mullings was awarded a fellowship of the Higher Education Academy as well as a Chartered Engineer through the Institution of Mechanical Engineers. For the last four years, Dr Mullings has been supported as a Postdoctoral Research Associate and subsequently as a Research Fellow at the University of Manchester, continuing research into offshore renewable energy.

Dr Hugo Putuhena
University of Southampton - Postdoctoral Research Fellow in Offshore Renewable Energy

I am an early career researcher with a background in marine geoscience and geospatial analysis, currently working as a postdoctoral fellow in offshore renewable energy in the Department of Civil, Maritime, and Environmental Engineering at University of Southampton.

I have an interest in doing research using GIS to capture the intersections of multi-disciplinary aspects of the ocean, perform ocean characterisation, and communicate geospatial data insights. I concern on how to balance clean energy ambitions with sustainable supply chains and minimum risk to the environment as well as human cultures and activities.

Being involved in the multidisciplinary research project, I enjoy collaborative effort with various groups from academia, industry, and government bodies. I have an enthusiasm for delivering insights of complex issues in the ocean to wider audiences and how through those could catalyse further research, robust policies, or engineering solutions.

Dr Xiaosheng (Shaun) Chen
University of Oxford - Research Associate

Dr Xiaosheng Chen is currently a research associate in the Wind and Tidal Energy research group at University of Oxford as a CFD specialist. He graduated from the University of Science and Technology of China with BEng in Thermal Energy and Power Engineering in July 2012. He was then awarded an

MSc degree with distinction in Advanced Mechanical Engineering in Oct 2013 by University of Sussex. Later, he obtained a PhD degree in aeronautical engineering in 2018 from the National Centre for Combustion and Aerothermal Technology (former Rolls-Royce University Technology Centre) based at Loughborough University.

Following the graduation, he started a secondment job in the Combustion Aerothermal Methods Team of Rolls-Royce plc., helping them to design the next generation lean-burn jet engine combustor. In July 2019, he joined the University of Oxford as a research assistant, working with Prof. Richard Willden and Dr. Christopher Vogel in wind and tidal energy.

Kris Grattan
University of Edinburgh - Research Associate in Offshore Renewables

I am a research associate with a primary focus on offshore renewable energy currently working for the Policy and Innovation Group at the University of Edinburgh.

I hold an MSc with Distinction in the topic of Energy, Society and Sustainability from the University of Edinburgh and an undergraduate BSc in Physics from Heriot Watt University.

I am highly motivated to enact positive, proactive change in response to the threat of global climate change. I believe that the analytical and problem solving skill-set I have gained from my degrees, combines well with my increased understanding of the socio-technical challenges facing the drive for a more sustainable world in the 21st century. It is my eventual career aspiration to work with an organisation who are focused on delivering high-level policy solutions that will make a tangible outcome in response to the ongoing, and worsening, climate crisis.

Arriana Zampollo
University of Aberdeen - Research Assistant

Arianna Zampollo is a Research Assistant in the School of Biological Science at the University of Aberdeen. Arianna specialises in modelling hydrodynamic and primary production changes within Offshore Renewable Energy deployments in the North Sea. Her main focus is understanding temporal and spatial changes of primary production in different hydrodynamic regimes where several arrays of offshore wind turbines will be deployed. Before starting her PhD at the University of Aberdeen, Arianna had a BS in Natural Sciences and an MS in Environmental and Land Management at Università degli Studi di Torino in Italy, and she contributed to investigating the spatial distribution of bottlenose dolphins and loggerhead turtles in the northeastern Mediterranean Sea.

Flexible Funding Award Research Showcase (11:30 – 12:30)

Professor Xiaowei Zhao (Chair)
University of Warwick - Co-Director of the Supergen ORE Hub

Professor Xiaowei Zhao obtained his PhD in Control Theory from Imperial College London in 2010 and then worked as a postdoctoral researcher in the Control Engineering Group of the University of Oxford until 2013. After that he joined the University of Warwick where he was awarded a chair in 2018. At Warwick he has established the Intelligent Control & Smart Energy (ICSE) research group which currently includes around 20 PhD students and postdoctoral researchers. His main research areas are control theory and machine learning with applications to the offshore renewable energy systems and their grid integration, local smart energy systems, and autonomous systems. He currently has six main research projects (four from EPSRC and two from H2020) in these areas with a total project values of £20 million.

Callum Rothon
University of Hull - PhD student with the Aura CDT

I'm a second year PhD student with the Aura CDT based at the University of Hull. My research focuses on using Machine Learning to detect, diagnose, and predict damage on wind turbines from drone-gathered images. I've previously worked with Toshiba, building a dialogue-based system for training a defect detection tool for the wind industry.

Dr Marcin Kapitaniak
University of Aberdeen - Lecturer in Mechanical Engineering

Marcin is a Lecturer in Mechanical Engineering at the University of Aberdeen, working at the National Decommissioning Centre (NDC) with 12 years academic research experience in applied engineering, particularly in nonlinear dynamics, mechanical design and marine modelling. He is currently the Academic Lead for the NDC's state-of-the-art Marine Simulator developed by Offshore Simulation Centre (OSC). He has been Principal Investigator and Co-Investigator of numerous applied research projects within Offshore Wind and Energy industry in collaboration with companies like Aubin Group, T-Omega Wind, Dublin Offshore, Blackfish Engineering, Oasis Marine, Welltec, Rotojar, READ Cased Hole. Marcin has led 7 research projects on ORE technologies, including a project on variable buoyancy anchors for floating wind applications funded by the Supergen ORE Hub. Marcin has also established in 2022 a research partnership between NDC, ORE Catapult and School of Engineering that led to a joint funding of 3 PhD projects focussed on floating wind.

Professor Ali Mehmanparast
University of Strathclyde - Professor of Structural Integrity

Ali Mehmanparast is a Professor of Structural Integrity at the University of Strathclyde. He is a member of the management committee for the Strathclyde-Oxford-Edinburgh Centre for Doctoral Training in Wind and Marine Energy Systems and Structures (WAMSS CDT: 2019-2027) and was previously the Manager of the Cranfield-Oxford-Strathclyde Centre for Doctoral Training in Renewable Energy Marine Structures (REMS CDT: 2014-2022)

Prof. Mehmanparast received his MEng degree in 2008 and PhD degree in 2012, both from the Mechanical Engineering Department at Imperial College London. He also holds an MBA degree from Cranfield University. Prior to joining the University of Strathclyde in 2022, he worked at Imperial College London and Cranfield University as a Research Associate, Lecturer, Senior Lecturer and

Reader between 2012 and 2021. He is a Chartered Engineer of IMechE, Chartered Manager and Fellow of CMI, and Fellow of the Higher Education Academy. He is on Editorial Board of 6 international journals of "Applied Ocean Research" (Elsevier), "Engineering Failure Analysis" (Elsevier), "Forces in Mechanics" (Elsevier), "Materials at High Temperatures" (Taylor & Francis), "Journal of Multiscale Modelling" (World Scientific) and "Wind" (MDPI). He has published over 120 peer-reviewed journal articles, conference papers and book chapters in the field of engineering structural integrity, and has organised and chaired technical sessions at international conferences.

Dr Ajit Pillai
University of Exeter - Senior Lecturer in Autonomous Systems and Robotics

Ajit's research is focused on the development and deployment of optimization algorithms to aid in the design of offshore renewable energy devices and arrays.

From 2021 he is a Royal Academy of Engineering Research Fellow developing new techniques to integrate numerical physics-based models with targeted, dynamic measurement campaigns using autonomous vessels to reduce offshore uncertainty and develop a new framework for spatial data.

Prior to joining the University of Exeter, Ajit obtained an EngD in offshore renewable energy through the Industrial Doctoral Centre for Offshore Renewable Energy (IDCORE); a partnership between the Universities of Edinburgh, Exeter, and Strathclyde with the Scottish Association for Marine Science, HR-Wallingford, the ETI, and the EPSRC. His EngD research, completed in partnership with EDF Energy R&D UK Centre, led to the development of a methodology and tool for the optimization of offshore wind farm layouts considering the sites and constraints relevant for future gigawatt scale wind farms in European waters.

Ajit also holds an MSc in Sustainable Energy Systems from The University of Edinburgh and a BSc in Mechanical Engineering from Columbia University.

Dr Brian Seller
University of Edinburgh - Chancellor's Fellow

Dr Brian Sellar is a Chancellor's Fellow (Lecturer) in ORE appointed in 2019. He currently oversees advanced in-situ measurement and wave-current modelling campaigns as Co-Investigator and work-package (WP) lead on the EC RealTide project (2018-2021, €5m). He leads a team of 3 PDRAs and PhD students from 4 ORE-related CDTs including IDCORE. During the ReDAPT tidal project (ETI, £12.8m 2010-2015) as a post-doctoral research associate (PDRA) (latterly promoted to a Project Management role) he delivered an open globally unique met-ocean database featuring wave-currents-turbulence data from UK waters. Exploited nationally and internationally by numerical and physical modellers and device designers the dataset is being transferred in upgraded form to the RealTide Tidal Database in Q3 2021. Sellar leads as PI for UoE the EC Resourcecode (2018-2021 €2m) project developing large-scale WEC resource models and end-user tools. His applied research (interfacing measurements, machines and models) provides a system-wide perspective. Sellar will lead on ORE Hub Engagement, have an advisory role on all WPs and lead the overall project.

Panel session 2: Accelerating to 2040: Transforming Practice (13:30 – 14:30)

Professor Beth Scott (Chair)
University of Aberdeen - Co-Director of the Supergen ORE Hub

Professor Beth Scott is a Professor in Marine Ecology. She conducts multi-disciplinary research using her expertise in marine ecology, oceanography and fisheries sciences.

Her research identifies general rules in bio-physical oceanographic processes that lead to the creation of hotspots of biodiversity and predator-prey activity. Specifically, her research group defines biological and physical variables that provide the limited, patchy locations and conditions where energy is transferred across trophic levels in marine food webs. Her research team using approaches ranging from the collection and use of fine scale (second by second) information throughout the water column as well as the analysis of large scale (100s or km) long term data sets on spatial and population dynamics. Both scales of information are also used within simulation modeling methods which are agent based. Recently her research portfolio has been focused on the understanding of the effects of marine renewable energy systems on multi-trophic interactions and the methods for co-developing a Marine Spatial Planning (MSP) decision-support system with a range of stakeholders (industry, government, NGOs, etc.) to better incorporate ecosystem service knowledge and values into effective policies.

Professor Hongda Shi
Ocean University of China – Professor

Shi Hongda, is a Professor in Ocean University of China (OUC), the Director of Shandong Provincial Key Laboratory on Ocean Engineering (KLOE), the director of the R&D Testing Platform for Marine Energy at Laoshan Laboratory, and the managing director of the China Renewable Energy Society.

Devoting himself to the fundamental research and original development of marine renewable energy, Shi Hongda has achieved numerous groundbreaking results in basic theory, key technology, and engineering demonstration. He introduced three different forms of wave energy utilization and successfully developed the first 300 kW marine energy integrated power supply demonstration system in China. He proposed the multi-buoy wave energy device, and an innovative wind-wave hybrid system. Serving as the only representatives from China in the field of marine energy, he participated the Fourth China-UK Energy Dialogue and signed a memorandum of cooperation. Moreover, he established the first master's and doctoral program in China for the utilization of marine renewable energy technology.

Professor Brian Polagye
University of Washington - Professor of Mechanical Engineering

Brian Polagye is a Professor of Mechanical Engineering at the University of Washington. His research group focuses on marine renewable energy generation from currents and waves, with an emphasis on laboratory-scale experimental hydrodynamics and control, as well as field studies to understand environmental effects at larger scales. He is currently leading an interdisciplinary team supported by ARPA-E to demonstrate the economic benefit of confined arrays of cross-flow turbines through a control co-design methodology that leverages expertise in turbine hydrodynamics, powertrain design, structural simulation, and techno-economic modeling. Brian is the former Director of the Pacific Marine Energy Center, a partnership between UW, Oregon State University, and University of Alaska Fairbanks. He is currently an affiliate investigator with the Applied Physics Laboratory at UW,

dual-appointed as a mechanical engineer with Pacific Northwest National Laboratory, and serves on the Washington Coastal Marine Advisory Council.

Dr Okechukwu Okorie
University of Exeter - Senior Lecturer in Sustainable Manufacturing

Dr Okechukwu Okorie is a Senior Lecturer in Sustainable Manufacturing at the University of Exeter. He is also a Royal Academy of Engineering Research Fellow (awarded 2023) pioneering the development of the multi-sector, evidence-based modelling toolkit to enable the adoption of circular economy principles in manufacturing with the aim of meeting the UK's Net-Zero target. Oke's research area includes digital manufacturing and remanufacturing, industry 4.0 adoption, circular economy and business models, life cycle assessment, carbon accounting, simulation modelling of manufacturing systems.

A trained mechanical engineer and an early career researcher with a PhD in Sustainable Manufacturing Systems (Cranfield University), he is a mixed-method researcher and has published in Q1 journals such as, Computers in Industry, Business Strategy and Environment, Resources, Conservation and Recycling and Journal of Cleaner Production. He has over 25 peer-reviewed publications, 800+ citations with a h-index of 14. He is a STEM Ambassador, holds as AFHEA qualification and is a UK Chartered Engineer with the Institute of Mechanical Engineers (IMechE) and has recently been appointed to the EPSRC Manufacturing and the Circular Economy Early Career Forum (2024). He holds affiliation with the Centre for Simulation, Analytics and Modelling and the Exeter Centre for Circular Economy, University of Exeter, amongst others.

Professor Campbell Booth
University of Strathclyde - Professor and Vice Dean – Research

I have been a member of the Strathclyde community since I began studying as an undergraduate student in the department of Electronic and Electrical Engineering in 1987. I completed my PhD, then occupied a number of research posts before becoming a lecturer in 2007, and I am now a Professor and am presently serving as Vice Dean - Research, in the Faculty of Engineering, having previously held the position of Head of the EEE Department from 2017-2021. My research is aligned with my belief that the future for energy networks in the UK and internationally will present numerous technical challenges. There remains political and technical uncertainty surrounding the future energy mix, with nuclear, renewables, clean coal and carbon capture, gas (including gas sourced from the "fracking" process), all potentially having a role in supplying future energy needs. Research into large- and small-scale storage continues, and the omnipresent "smart grid" continues to attract attention and investment. Regardless of the future situation, it is clear that it will be markedly different from the present day, and the dynamic behaviour of the power system, and consequently its control and protection, will require significant investigation to ensure that future systems are fit for purpose and continue to provide secure, reliable and quality power for consumers. My activities focus on the protection and control of present and future power systems incorporating high penetrations of distributed renewable energy sources, storage, power converters and DC links. I ensure that my work leads to tangible outputs wherever possible: many of my projects involve prototyping, real time simulation and laboratory demonstration, which is increasingly including activities at the Power Networks Demonstration Centre (PNDC). My recent publications have addressed: demonstration and quantification of protection issues for power systems incorporating distributed generation; strategies for operation, control and protection of multi-terminal HVDC systems; the design and applicability of superconducting fault current limiters; the design and applicability of distributed optical sensing for power system control and protection; and adaptive

protection and communications technologies for the enhanced protection and monitoring of future systems.

Peter Giddings
National Composites Centre - Chief Engineer – Energy

I set strategy and provide technical leadership for the Energy business unit, with particular focus on industrialising offshore wind, hydrogen distribution technology and developing a circular economy for composite materials.

I have built a profile within the UK wind industry as a technical leader with clear focus on building commercially viable businesses based on innovative technologies. I have helped author the UKs Industrial Growth Plan for offshore wind and am Chief Engineer for Wind at the High Value Manufacturing Catapult.

I'm an engaging presenter and speaker and have chaired panel discussions and multi-day wind conferences to bring out important messages and shape the narratives in our industry. I help ensure great ideas make it to market by actively translating between academic and industrial innovators, sitting on steering boards for national academic networks and regional investment funds.

Research session 2: Core research updates from the Supergen ORE Hub (14:30 – 15:00)

Professor Tim Stallard (Chair)
University of Manchester Co-Director of the Supergen ORE Hub

Professor Tim Stallard is a Reader at the University of Manchester in offshore renewable energy with a particular focus on unsteady loading of systems within arrays (e.g. tidal stream systems, wave devices and wind turbines) and with interests in the assessment of economic viability.

Tim has been Principal or Co-Investigator on several major marine energy projects with net value of >£3M, including EU FP7 Equimar, the ETI PerAWaT, UK-China EPSRC-NEWTON ALLT-Tidal, ETI ReDAPT and the EPSRC Challenge project X-MED. His research also addresses floating body hydrodynamics with interests in wave energy arrays through EU FP7 WECWakes and wave device innovations EPSRC STEP-WEC.

Dr Abel Arredondo-Galeana
University of Strathclyde - Research Associate

Abel works as a Research Associate in the Department of Naval Architecture, Ocean & Marine Engineering (NAOME) at the University of Strathclyde. He currently works in the development of marine renewables and floating technology, through the EPSRC funded programmes SuperGEN ORE Hub and Ocean REFuel. Prior to joining these programmes, Abel worked on LiftWEC, a Horizon 2020 program to develop a lift-based wave energy converter.

Abel previously worked as a Research Associate at the University of Edinburgh, where he also did his PhD. There, he specialised in fluid mechanics and novel tidal turbine technology.

Abel has vast experience in experimental flume and tank testing, flow diagnostics and vortical flows. His latest achievements include an Early Career Research grant from the Supergen ORE Hub programme, and co-author of the best paper award in the latest EWTEC conference.

Rui Li
University of Warwick - Ph.D. candidate

My research interests lie in trans-disciplinary applications of deep learning, especially for remote sensing, computer vision and offshore renewable energy. I have authored more than 20 articles in reputable journals such as ISPRS Journal of Photogrammetry and Remote Sensing, IEEE Transactions on Geoscience and Remote Sensing, Pattern Recognition, Applied Energy, Energy Conversion and Management and Energy, which have been cited 1700+ times by the Google Scholar with the h-index of 16. Eight of my papers have been selected as the ESI Highly Cited Paper (Top 1%) and two as the ESI Hot Paper (Top 0.1%). I was one of the recipients of the U.V. Helava Award Best Paper 2022 from the International Society for Photogrammetry and Remote Sensing. Besides, I have contributed my expertise as a reviewer over 80 times for about 20 journals, including ISPRSP&RS, APEN, and IEEE {TMI, TNNLS, TGRS and TCSVT}.

Dr Ed Mackay
University of Exeter - Research Fellow

Dr Ed Mackay is a Research Felow at the University of Exeter. His research focuses on the design and modelling of offshore renewable energy structures and resources, including statistical modelling of extreme environmental conditions and extreme structural responses. He is an expert in

hydrodynamics, met ocean assessment, numerical modelling, physical testing, data analysis and statistics. He has a track record of developing new methodologies for modelling offshore environments and advancing industry knowledge. He is currently involved in the EPSRC Supergen ORE Impact Hub to deliver representative cable properties that can support the future design of floating wind energy.

Dr Kaushal Bhavsar
University of Hull - Postdoctoral Researcher in Offshore Renewable Energy

Dr Kaushal Bhavsar is Postdoctoral Researcher in Offshore Renewable Energy.

He obtained his PhD in Engineering from The Robert Gordon University in 2016 and MSc in Nanotechnology and Nanoelectronic Devices from the University of Surrey in 2011. He has a BEng degree in Electronics and Communication from the Hemchandracharya North Gujarat University in India. Before starting his career in academia, he worked in the consumer electronics industry for about 5 years.

His research involved the development of fibre optic sensors, surface plasmon resonance sensors, and synthesis of metal/metal oxide nanomaterials for application in environmental sensing and monitoring, medical technology and offshore renewable energy systems.

Currently, his work is mainly focused on the development of fibre optic sensing systems for offshore renewable energy structures.

Dr Scott Brown
University of Plymouth - Supergen ORE Hub Research Fellow

Scott is a postdoctoral research fellow in the Coastal Engineering Research Group within the School of Engineering, Computing and Mathematics at the University of Plymouth, whose primary research interests include survivability of floating offshore renewable energy; computational fluid dynamics and physical modelling of two-phase free surface flows; wave-structure interaction; and turbulence generation. Scott is currently working on the Supergen ORE Hub project, investigating the use of design waves as a potential option for streamlining the ultimate load calculations within the design process for floating ORE.

Panel session 3: Accelerating to 2040: Supply Chain and People (15:30 – 16:30)

Professor James Gilbert (Chair)
University of Hull - Co-Director of the Supergen ORE Hub

Professor James Gilbert has extensive research experience in sensing, modelling and control systems research and in the development of innovative manufacturing processes. He is the Research, Development and Innovation lead for Aura, a collaboration between Siemens Gamesa Renewable Energy, Ørsted, University of Sheffield, Durham University and the Offshore Renewable Energy Catapult. He is Hull PI on the £7.6M EPSRC Prosperity Partnership 'A New Partnership in Offshore Wind'. He leads industry interaction for the EPSRC/NERC funded CDT in Offshore Wind and the Environment and is UoH lead for the Operations and Maintenance Centre of Excellence, a £2M collaboration between UoH and the Offshore Renewable Energy Catapult.

Roger Townsend
Innovate UK - Innovation Lead – Energy

Roger Townsend has considerable experience and a great passion for developing and commercialising innovative technology solutions and business models. Initially working in the Electronics sector, Roger has spent the last 24 years focused-on Energy and CleanTech. He has developed and managed U.K. and international teams and projects, driving revenue growth and investor value in both early-stage companies and large corporates.

Roger has been with Innovate UK for 5 years. He collaborates with companies, government, and academia to find and drive science and technology innovations which will grow the UK economy – delivering productivity, new jobs, and exports.

Roger's particular focus is on identifying innovation gaps within the renewable energy sector and delivering business-led R&D competitions. The aim is to reduce the costs and risks of deploying low carbon energy solutions and accelerate the transition to Net Zero.

Roger is a graduate Mechanical & Production Engineer from Nottingham Trent University.

Jane Cooper
Renewable UK - Director of Offshore Wind

Jane is the Director of Offshore Wind for RenewableUK. She was previously the Head of Stakeholder Relations & Regulatory Affairs for Ørsted, Head of Economic Regulation for Orange UK and worked as an aerothermal engineer at Rolls Royce Industrial and Marine Gas Turbines in Coventry. She is a Chartered Mechanical Engineer.

Dr Emma Edwards
University of Oxford - Career Development Fellow at St Peter's College

Emma completed her BSc in mathematics at the University of North Carolina at Chapel Hill in 2012. She then worked as a research assistant for a year at the University of Edinburgh's Institute for Energy Systems, where she was introduced to wave energy. Emma completed her PhD at MIT in 2020, and her thesis, supervised by Professor Dick Yue, was titled 'Optimization of the geometry of axisymmetric point absorber wave energy converters.' She then held a part-time postdoctoral position at MIT with Professor Yue for a year. She then completed a postdoctoral research fellowship from 2021-2023 at the University of Plymouth, working with Professor Deborah Greaves and Dr

Martyn Hann, expanding her expertise to Floating Offshore Wind Turbines (FOWTs) and physical modelling at one of the global hubs for offshore renewable energy research. From 2018-2022, in addition to her PhD and postdoctoral research, Emma competed as professional cyclist. In October 2023 she started as a Career Development Fellow in Engineering at St Peter's College, University of Oxford.

Amy Spalding
Engineering and Physical Sciences Research Council (EPSRC) - Offshore Renewable Energy Portfolio Manager

Amy works for UK Research and Innovation as a Portfolio Manager for Offshore Renewable Energy at the Engineering and Physical Sciences Research Council.

Dr Mark McBride-Wright CEng MIChemE
Equal Engineers - Founder & Managing Director

Mark is a chartered chemical engineer specialising in health and safety with experience in oil and gas, government services and defense. He holds a PhD and Masters in Chemical Engineering from Imperial College London. He is a recognised leader in diversity and inclusion in the engineering and construction industry. He is chair and co-founder of InterEngineering, an organisation which connects, informs and empowers LGBT+ engineers and supporters. Under Mark's leadership, the organisation has become the leading organisation addressing LGBT+ inclusion in the engineering and construction sector engaging prominent engineering institutes and employers, with a membership of over 500 engineers. Mark authored a report for the UK Government on tackling homophobic, biphobic and transphobic bullying in engineering and is working with the UK Government on implementation of the recommended measures. Mark is a Chartered Engineer with the Institution of Chemical Engineers (IChemE) and is a founding member of the IChemE Diversity and Inclusion Working Group. Mark has direct experience working in oil and gas, government services and defence. As a health and safety specialist, he is passionate about helping businesses overcoming challenges and barriers to create a positive health and safety culture. There are many parallels embedding an inclusive corporate culture and the intersection between health & safety and diversity & inclusion is a critical aspect to get right to unlocking positive results in both people and performance. Mark has spoken at numerous events including the launch of Rolls-Royce LGBT Network PRISM alongside world-renowned gay rights campaigner Peter Tatchell, London Business School's 2015 and 2016 EUROut conference for LGBT MBA students, and the UCL Institute for Engineering Education conference on inclusion in engineering.