MaREI

SAC Committee

Member Bios (December 2019)

MaREI
Energy • Climate • Marine

Alistair G.L. Borthwick (SAC Chair, University of Edinburgh)

Alistair Borthwick has more than 40 years' experience in engineering science. He is a Professorial Fellow at The University of Edinburgh, an Emeritus Fellow of St Edmund Hall, Oxford, and Visiting Distinguished Professor at Shanghai Jiao Tong University. He is an adjunct professor at UCC. Alistair was previously a Professor of Engineering Science at the University of Oxford, where he worked for 21 years from 1990-2011. He was Head of Civil & Environmental Engineering at University College Cork from 2011-13, where he was the Founding Director of the SFI Centre for Marine and Renewable Energy Ireland. Alistair's research interests include environmental fluid mechanics, coastal and ocean engineering, and marine renewable energy. In 2016, Alistair was awarded the Dr honoris causa by Budapest University of Technology and Economics. In 2019, he was awarded the Gold Medal of the Institution of Civil Engineers for his lifetime contributions to Civil Engineering. He is a Fellow of the Royal Academy of Engineering, and a Fellow of the Royal Society of Edinburgh.

Dr. Andrea Copping (Pacific Northwest National Laboratory)

Andrea Copping is an oceanographer and senior research scientist for Pacific Northwest National Laboratory, one of the US Department of Energy's national laboratories, located in Seattle and Sequim, Washington State. Andrea focuses on environmental effects of offshore wind, wave, and tidal energy development, and the role that these effects play in technology development and project initiation across the nation. Using risk-based approaches, Dr. Copping leads a research team that integrates laboratory, field, and modeling measurements into a coherent body of evidence to support siting and permitting decisions. Andrea leads international projects that share information on environmental effects of wave and tidal (Annex IV) and wind energy (WREN) to benefit from progress made around the world. In addition, Dr. Copping has been examining trade-offs among different renewable energy sources, as they relate to one another in smaller "maritime markets", as alternatives to utility scale energy production. Key end users she works with include ocean observation, recharging underwater vehicles, and offshore aquaculture. Dr. Copping is a Distinguished Research Fellow in the University of Washington's School of Marine and Environmental Affairs, an associate editor of Coastal Management Journal, and serves on the editorial board of the International Marine Energy Journal.

Prof. Zoran Vukić (University of Zagreb)

Zoran Vukić was a Full Professor at the University of Zagreb Faculty of Electrical Engineering and Computing, Department of Control and Computer Engineering with more than 45 years of experience in education and research. He retired on October 1st, 2019. He established and was a Head of the Laboratory for Underwater Systems and Technologies (LABUST) http://labust.fer.hr/ (until May 29th 2019). He is Director of the NGO "Center for underwater systems and technologies" (CUST) http://www.cepost.hr/. He specialized at Royal Institute of Technology (KTH) in Stockholm, Sweden and at Vanderbilt University in Nashville, USA. He published four books, three book chapters and more than 200 papers (in journals and at conferences) as author or co-author. His research interest is in the application of control theory for marine vessels (surface and underwater), especially the area of cooperative navigation guidance and control, robust and adaptive control, nonlinear control, intelligent control, fault tolerant and reconfigurable control. He has led a number of research projects (national and international). He teached courses on Automatic control, Nonlinear control, Adaptive and Robust Control, Guidance and Control of Marine Vehicles. Recipient of the "J. J. Strossmayer" award by the Croatian Academy of science and art for the best book published in 2004, and also recipient of the IMarEST SMI Donald Maxwell Award prize for the best IMarEST journal paper in 2003. Recipient of the Golden plaque "Josip Lončar" in 2011 by the University of Zagreb, Faculty of electrical engineering and computing for his achievements in research and

education. He is a member of editorial boards of Croatian journal “Brodogradnja” (Shipbuilding) published by FAMENA, University of Zagreb, and “Underwater Technology” published by Society for Underwater Technology (SUT). He is a member of various professional societies such as: IEEE, IFAC TC on Marine Systems, Croatian Registry of Shipping, Mediterranean Control Association etc. Zoran Vukić is General chair of the field-training “Breaking the surface“ (http://bts.fer.hr).

Dr. Sonia Yeh (Chalmers University of Technology)

Dr. Sonia Yeh is Professor in Transport and Energy Systems in the Department of Space, Earth and Environment. Her expertise is in energy economics and energy system modeling, alternative transportation fuels, sustainability standards, technological change, and consumer behavior and urban mobility. Her role as Professor in Transport and Energy Systems is building ties with faculty, researchers and students whose research interests lie in the distinct disciplines of energy, system modeling, sustainability, and information and communication technology (ICT), and bring them together in an emerging space of system modeling for the sustainability of integrated mobility. Throughout her work, she has advised and worked broadly with U.S. state and international advisers, policymakers, a wide range of stakeholder groups and academic researchers in developing climate policies toward reducing the environmental impacts and GHG emissions from transport. She served as Fulbright Distinguished Chair Professor in Alternative Energy Technology in 2016-2017 and was awarded Håkan Frisinger Award by Volvo Research and Educational Foundations in 2019.

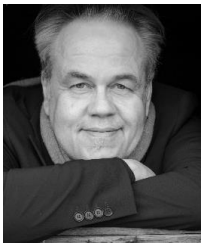
Prof. Felice Arena (Natural Ocean Engineering Laboratory)

Felice Arena is Full Professor of Ocean Engineering at the ‘Mediterranea’ University of Reggio Calabria, where he is Director of the Natural Ocean Engineering Laboratory NOEL (www.noel.unirc.it). Fields of interest of his research activity include: mechanics and statistics of ocean waves; offshore engineering; wave energy converters; wind energy offshore. He is author of more than 250 papers, published in international Journals, books and in Proceedings of National and International Conferences. In Scopus he has 174 publications, with 1335 citations and H-index 21 (orcid.org/0000-0002-0517-1859). He is Member of the Scientific Committee for the STRUCTURES. SAFETY AND RELIABILITY SYMPOSIUM at the OOAE Division” by ASME International, since 2005. He was Senior Member, in PIANC, of the Working Group “Renewable Energy for Maritime Ports” (159), between 2012 and 2019. He is: in the Editorial Board of “Probabilistic Engineering Mechanics”, by Elsevier; Associate Editor of “ASME Journal of Offshore Mechanics and Arctic Engineering”. He was Visiting Professor several times at Columbia University of New York (USA), Rice University (Houston, USA), Instituto Superior Tecnico (Lisbon, Portugal), Indian institute of Technology IIT Madras (Chennai, India).

He won the “OMAE 2011 SSR Best paper Award”, by ASME (USA), OOAE, for the paper “Space-Time Extremes in Sea Storms” written with F. Fedele and M.A. Tayfun. He was Editor of Special Issues: in “Probabilistic Engineering Mechanics” (Volume 34, pages 1-124, January 2014) on Stochastic Mechanics; in the Philosophical Transactions A of the Royal Society of London (February 2015 Volume: 373 Issue: 2035) on "New Perspectives in Offshore Wind Energy"; in “Probabilistic Engineering Mechanics” (Vol. 54, Pages 1-146, October 2018). He is reviewer of the most important international journals on ocean sciences, marine engineering and renewable energies. He has been scientific supervisor (principal investigator) of many Italian and international projects (for a whole amount of more than 20 million of euros, on offshore engineering and marine energy. In particular: he was scientific supervisor of project PLENOSE, supported by Marie Curie action FP7-PEOPLE-2013-IRSES (duration 2014-2018); he was scientific coordinator of the European Project REWEC 3 - 2013-IT-92050-S, supported by the EU's TEN-T Programme, on the wave energy exploitation in the Port of Civitavecchia; he has been leading the UNIRC unit in the Horizon 2020 project with acronym “The Blue Growth Farm”, supported within the call H2020-BG-2017-1 (activity: BG-04). Duration of the project:

2018-2021. For details see www.noel.unirc.it. He founded WAVENERGY.IT, a Spin Off of the Mediterranea University of Reggio Calabria (Italy), which is established for developing devices for wave energy exploitation (www.wavenergy.it).

Prof. Mats Eklund (Linköping University)



Mats Eklund is professor in environmental technology and management and scientific leader of Biogas Research Center at Linköping university, Sweden. He holds a PhD from the multidisciplinary research school of Water & Environmental Studies at Linköping University and is a professor at the technical faculty there since 2007. He is a research leader for the group "Industrial and Urban symbiosis" and founder of the transdisciplinary, triple-helix centre of excellence Biogas Research Center. He is also initiator/founder of the strategic collaboration between Tekniska Verken and Linköping university called Industrial Ecology research program which has been in operation for the last ten years. Other strategic collaboration partners include Stena Metall, E.ON and Lantmännen. He has supervised more than 50 Master theses, ten PhD-candidates to their degree and authored about fifty scientific papers on analysis, development and dissemination of sustainable solutions.

Other roles he has includes: Founder and board member of Cleantech Östergötland AB – a company that supports environmentally driven business development from 2008 to 2014, Board member of East Sweden strategic municipal research centre from 2009-14, Member of the board of the Econova, an innovative company in the recycling and garden sectors with a turnover of about 550 MSEK, since 2014, Member of the strategic board of Re:Source, a strategic innovation program about valorization and minimization of resources 2015-2019, Strategic advisor and evaluator of research projects for Familjen Kamprad foundation since 2015, Evaluator in Energimyndighetens biomass research program since 2016, Member of the scientific advisory board of the company Axolot, a high-tech company in water cleaning.

Dr. Charlie Wilson (Tyndall Centre for Climate Change Research)

Charlie Wilson is a researcher in the Tyndall Centre for Climate Change Research (UK) for which he co-leads the Accelerating Social Transitions research theme, and a Reader in Energy and Climate Change in the School of Environmental Sciences at the University of East Anglia (Norwich, UK). He is also a Visiting Research Scholar at the International Institute for Applied Systems Analysis (Vienna, Austria). Charlie's research lies at the intersection between innovation, behaviour and policy in the field of energy and climate change mitigation, working at both a systems level and a micro level.

Dr. Edel Sheridan (SINTEF)

Edel Sheridan (PhD) is a senior research scientist with over 15 years of experience in research of electrochemical systems with a particular focus on batteries including Li ion, Mg, Zinc-air and High temperature liquid metal batteries. She has worked on a host of industry and publicly funded projects with roles varying from laboratory researcher to manager. In recent years, she has focused on strategic business development and is heavily involved in several European initiatives, including the preparation of the SET Plan Implementation Plan for Action 7. Edel's employer SINTEF has very recently appointed her the role of Leader for Strategic Development – Batteries. Edel is a native English speaker, has good communication skills and enjoys working with diverse teams. She is motivated to see the establishment of a large-scale battery industry in Europe.