

MREDS WORKPACKAGES: COMPLETE LISTING OF INVESTIGATOR CVs

Professor Nigel Barttrop was appointed Chair and Head of Department of Naval Architecture and Ocean Engineering at the University of Glasgow in 1995 following many years with W. S. Atkins. In 2001 he oversaw the merger between Glasgow and Strathclyde Universities' Naval Architecture Departments. He is actively involved in numerous research projects in the fields of hydrodynamics, statistics and wave impact forces; offshore renewable energy: device behaviour accessibility and maintainability; jack-up stability; calculation methods for stress intensity factors and fatigue lives of ship details; effects of corrosion and fatigue on reliability of ageing structures.

Dr Melissa Bowen has a PhD in physical oceanography from the Massachusetts Institute of Technology and Woods Hole Oceanographic Institution on the physics of estuaries and the response of the salt balance to variations in environmental conditions. More recently her research has focussed on the climate variability of the South Pacific subtropical gyre and western boundary currents. She has been an expert reviewer for the recent IPCC report and served on the Royal Society of New Zealand Climate Committee.

Colin Bullen has over 15 year's of research and consultancy experience. His early work at ICIT focused on risk, safety, and environmental engineering; particularly within the context of offshore oil and gas infrastructure. Marine operations and the deployment of scientific instrumentation is a particular area of expertise. Recently collaborations have involved the design and implementation of moorings experiments to assess the impact of marine growth induced drag on renewable marine energy devices as part of the Supergen Marine programme.

Dr Jim Chalmers has a background in agricultural research and practice. He joined Orkney College, UHI Millennium Institute in 1999 to lead the development in collaboration with ICIT of an undergraduate programme in sustainable development and environmental management. He delivers courses in renewable energy, waste minimisation, biotechnology and sustainable development to UHI programmes and his area of responsibility at the College includes Agronomy and Archaeology/Geophysics. He is a member of the OREF Board.

Professor Patrick Corbett is Head of the Institute of Petroleum Engineering. He has a PhD in Petroleum Engineering and a DSc "Petroleum Geoengineering". From 1978, Patrick worked for 11 years in industry in various positions in international exploration and development geoscience for Unocal in the UK, Netherlands and Indonesia. Since then he has followed an active research career investigating many aspects of permeability, anisotropy modelling, well test interpretation, dynamic upscaling, and genetic petrophysics. He was SPE EUROPEC convenor for a Special Session of "Petroleum plus Renewables" at the EAGE/SPE Forum in Vienna in 2006.

Dr Gareth Davies is the current Chair of the Orkney Renewable Energy Forum (OREF). He has a PhD in marine biology, and has worked as an environmental consultant for most of his career. His work in the North of Scotland on renewable energy resources is well known and forms part of the 350 projects covering a wide range of environmental and operational energy studies he has completed.

Professor Climis Davos' theoretical, methodological, teaching and research interests focus on the evaluation of environmental policy impacts with direct stakeholder participation. An integral part of these interests is the game theoretic analysis of conflicts and compensation strategies for achieving sustainable stakeholder co-operation and environmental justice. Recent field applications, working with ICIT, include cases of coastal management in Europe and South America.

Dr Olivier Dubrule of Total E&P Aberdeen has agreed to act as the industrial liaison for workpackage 2. He is Manager of the Geoscience Research Centre in Aberdeen and former president of EAGE (European Association of Geoscientists and Engineers).

Dr John Fletcher is a specialist in electrical power generation, conversion, control and utilisation. He is a senior lecturer in the Institute of Energy and the Environment at the University of Strathclyde and is a member of the Power Electronics, Drives and Energy Conversion research group. His research interests include renewable generation, HVDC transmission, electrical grid interfacing and control and holds patents in the areas of novel electrical machines and power electronic converters.

Dr Stuart Gibb is Director of the Environmental Research Institute at North Highland College, UHI Millennium Institute. His research has been in the fields of marine bio-geochemistry, including biogenic gases, air-sea exchange processes and atmospheric chemistry, phytoplankton dynamics and climatic and environmental change.

Dr Rob Harris was a Lecturer in the School of Life Sciences at Heriot-Watt and has recently relocated to the University's Orkney campus, joining the ICIT / IPE research and teaching group. His main research interests lie in the fields of hydrodynamics, oceanography and more recently marine renewable energy systems, he has over 29 years experience in hydrodynamic model testing, and in offshore / marine structures.

Professor Paul Jowitt is Professor of Civil Engineering Systems and Executive Director of the Scottish Institute of Sustainable Technology at Heriot Watt University. He is currently a Board Member of Scottish Water, a Member of the EPSRC Peer Review College, a Fellow of the Royal Society of Edinburgh and a Vice President of the Institution of Civil Engineers. His major research interests concern the issues of sustainable development, risk, and the development of systems-level solutions within civil and marine engineering, the built environment and environmental management.

Dr Sandy Kerr teaches on a number of energy related MSc courses and supervises doctoral students. His research interests include the sustainable management of coastal and island resources particularly renewable energy, fisheries, and conservation. Recent research articles have appeared in journals such as *Ocean and Coastal Management*, and *Fisheries Research and Town Planning Review*.

George Mermiris is a Research Fellow in the department of Naval Architecture and Marine Engineering (Universities of Glasgow and Strathclyde) with primary interest in risk-based design and risk modelling. He has participated in a number of research and commercial projects and he has authored and co-authored 5 journal and conference papers.

Professor Frank Rennie is Head of Research at Lews Castle College, UHI Millenium Institute. His main research interest is the relationships between the natural environment and community development. Recent work has focussed on the use of new technologies to promote rural development; involving collaborations with partners in Europe, Amazonia, New Zealand, Bhutan and Nepal. Professor Rennie has published widely, including more than 20 books, and is a regular speaker at international conferences.

Professor Jonathan Side is Director of ICIT and Professor of Sustainable Development at Heriot-Watt University. He holds an honorary professorship at the University of Edinburgh, and is a fellow of the RICS. He is a long-term champion of marine renewables in Scotland, and has served several terms as Chair of OREF. He has been involved in numerous marine science research programmes, and has project managed several of these, including 3 EU framework research projects.

Dr Hance Smith is a specialist in marine geography at the School of Earth, Ocean and Planetary Sciences, University of Cardiff. His work includes applications in marine resource management, sea use management, and the development of maritime communities. Current projects include coastal research for policy integration (COREPOINT) funded by INTERREG IIIB N W Europe; and science and policy integration for coastal system assessment (SPICOSA) funded by EU Framework 6 Programme.

Dr Karl Stephen is a physicist and has been carrying out research and consultancy for the oil and gas industry at the Institute of Petroleum Engineering since 1996. He has worked on several projects, which have focussed on improving the modelling and prediction of hydrocarbon recovery from reservoirs. Karl is applying these interests to modelling tidal behaviour on the north coast of Scotland to ensure that energy converters can be appropriately located and operated.

Professor Bahman Tohidi. After graduation (BSc in Chemical Engineering from Abadan Institute of Technology), he joined the National Iranian Oil Company (NIOC) in 1984 where he worked as production engineer as well as university lecturer for seven years. Bahman Tohidi joined Heriot-Watt University in 1991 with his doctoral work on the phase behaviour of water-hydrocarbon systems and gas hydrates. His research interests include gas hydrates, flow assurance, alternative energy and energy conversion, phase behaviour, and reducing the emission of greenhouse gases.

The Rt Hon Professor Jim Wallace is an honorary professor at Heriot-Watt University, with a close association with the work of ICIT on the University's Orkney Campus. Since retiring from the Scottish Parliament in May 2007, Jim has been actively involved in raising the profile of the Scottish Renewables sector and in championing the opportunities for marine renewables research and development in the North of Scotland. He will chair meetings of the MREDS Steering Group.

Professor David Whitmarsh teaches within the Department of Economics, and supervises doctoral students attached to the CEMARE research group in the University of Portsmouth. With over 30 years specialist in the economics of the marine environment, David has collaborated on projects with various international agencies, notably the European Commission, the OECD, and the UN Food and Agriculture Organisation.

Dr Peter Woodward is a Reader in Geotechnical Engineering at Heriot-Watt University. He has developed and patented new techniques in foundation engineering and has published widely in the international literature on the behaviour and modelling of foundations under static, cyclic and dynamic loading. He has researched and supervised numerous research projects, including on the behaviour of offshore foundations.

Dr David Woolfe is a marine physicist with interests in climate, marine and atmospheric processes. Following a PhD in Physical Oceanography, he spent 17 years at University of Southampton / National Oceanography Centre Southampton before joining the Environmental Research Institute in 2006. Most of his published research concerns waves, including the associated air-sea exchange of material, remote sensing, climatology and coastal impacts. Recently he has led research at ERI on offshore resources including offshore winds, waves and tidal currents.