

The University of Glasgow, in conjunction with Scottish Development International, aims to bring together academic experts and industry leaders in Singapore to share their know-how, challenges and technological innovations in water management, looking towards future-ready, sustainable water solutions.

Through invited talks, presentations and panel discussions this symposium provides an excellent platform to find out about the challenges and opportunities for the water sector, development and applications of cutting-edge water technologies at the University, and understanding of water in the natural and built environment. This symposium will also give insight into how University of Glasgow expertise and Scottish industry can support water sustainability projects to tackle current and future water scarcity.

Keynotes will be delivered by leaders in the field from Singapore and Scotland, with technical presentations delivered by experts from the University of Glasgow and key representatives from the industry. The expert panel includes representatives from Singapore and Scottish water companies, SDI and the University of Glasgow.

SUSTAINABILITY
FUTURE WATER
SOLUTIONS

20.07.2017

- Where **Innovation,**
Technology and
Policy meet

VENUE: PUB WaterHub, 80 Toh Guan Road East, 608575

TIME: 0900 to 1700 (Registration from 0830)

PROGRAM

- 0830 Registration
- 0900 Welcome (Prof. Trevor Hoey, University of Glasgow and Mr Neil McInnes, Scottish Development International)
- 0915 Business of Water - Challenges and Opportunities for Singapore and Scotland (Professor Asit Biswas, Lee Kuan Yew School of Public Policy)
- 1000 Scottish Water Journey - taking intellectual into Scottish Water International (Mr Geoff Aitkenhead, Scottish Water International)
- 1045 Overview of University of Glasgow's expertise in water (Professor Trevor Hoey, University of Glasgow)
- 1200 Expert Panel Discussion—Technology, Policy and Future Solutions
- 1230 Lunch
- 1330 Can decentralisation deliver more sustainable water solutions? (Professor William Sloan, University of Glasgow)
- 1415 Technical Talk: Osmotic membrane bioreactor for environmentally sustainable wastewater treatment and biofuel production (Dr Xue Jin, University of Glasgow)
- 1445 Technical Talk: Computational Fluid Dynamics (CFD) as a Design Tool in Water Management (Dr. Imran Ibrahim, University of Glasgow Singapore)
- 1515 Industry Talk: Data management in Wastewater treatment (Mr Richard Brice, Mott McDonald)
- 1600 Industry Talk
- 1700 Networking Refreshment

SPEAKER PROFILES

Professor Asit Biswas PhD

Distinguished Professor at Lee Kuan Yew School of Public Policy, Singapore

Asit Biswas is one of the world's leading authorities on water and environment. He is Co-founder of the Third World Centre for Water Management, Mexico, and is currently Distinguished Professor at Lee Kuan Yew School of Public Policy, Singapore. He was member of the World Commission on Water, and a founder of International Water Resources Association and World Water Council. He has been senior advisor to 19 governments and six Heads of United Nations Agencies; Past President of International Water Resources Association; advisor to CEOs of major MNCs on strategic issues. Among his numerous awards are Stockholm Water Prize, considered to be the Nobel Prize in water area, and five honorary doctorates from major universities. Reuters selected him as top 10 water trailblazers of the world. In 2015 he was named world's second most influential water industry leader. He is author of 83 books and over 650 scientific and technical papers. His work has been translated into 37 languages.



Professor Trevor Hoey PhD

Dean, University of Glasgow Singapore

Trevor is Professor of Numerical Geoscience at the University of Glasgow, and Dean University of Glasgow Singapore. His research focuses on river hydraulics and sediment transport, mostly using numerical simulation. Recent work has addressed sediment transfer in bedrock rivers, with applications ranging from geological timescales to the ecological consequences of impoundments. His numerical models have been used to evaluate the impact of climate change on large rivers, and have demonstrated links between small-scale processes and medium- to long-term river behavior. Trevor has applied theoretical approaches to various topics, and has recently published on hillslope stability, topographic response to earthquakes and CO2 efflux from rivers. He has worked on projects in Asia and is currently researching Philippines river stability.



Mr Geoff Aitkenhead, BSc, CEng, FICE, MCIWEM, MIoW Chairman, Scottish Water International

Scottish Water International (SWI) is a wholly owned subsidiary of Scottish Water (SW), the publically owned water services utility serving the whole of Scotland. From 2002 – 2006, Geoff was Executive Director, Group Board, SW. A £1.1 billion turnover water and wastewater utility company wholly owned by the Scottish Government. The was accountable for asset management planning, capital investment delivery and all scientific services. Responsible for 1,034 staff, annual operating budget of £48 million and capital investment budget of £500 million per year. In 2002-2006 Geoff was involved in all aspects of a major corporate merger and led a transformation programme in the Asset Management directorate that delivered a 40% reduction in operating costs whilst improving levels of service. Manpower under his direct control was reduced from c4,000 to c2,500 through a wide range of rationalization, organizational change and working practice improvements. Geoff was accountable for the planning and delivery of three regulated investment programmes that in aggregate comprised over 15,000 projects and cost circa £8 billion.



Mr Neil McInnes BA (Hons)

Head of Southeast Asia and Australasia at Scottish Development International

Neil is Head of Southeast Asia and Australasia at Scottish Development International (SDI). Previously, Neil was the Head of Communications at Scottish Enterprise and SDI. His team is focused on helping to raise awareness amongst Scottish companies about the opportunities in South East Asia and Australasia and developing a strong network of industry contacts to strengthen trade links across the region. Neil has worked in economic development for the past 9 years working on various projects to promote Scotland's capabilities in the food and drink, life sciences, energy and financial services sectors in Scotland, London, Turkey, Japan and China.



SPEAKER PROFILES

Professor William Sloan PhD., PGCE, MSc, BSc
Professor and Head of Division of Infrastructure and Environment, University of Glasgow

Bill is Professor and Head of Division of Infrastructure and Environment at the University of Glasgow. He is also an EPSRC Advanced Research Fellow. His research interests are in mathematical modelling of both biological and physical environmental systems. Recently his research has concentrated on modelling the ecology of engineered and natural microbial communities. In particular, on interpreting the output from new molecular methods for characterising microbial communities in situ to estimate biodiversity and describe community assembly. His theoretical research has found wide practical application in wastewater treatment, microbial fuel cells and biofilm modelling. In addition, Bill maintains an interest in hydrological modelling and water resources and has published on a wide variety of topics from macroscale hydrological modelling, through radionuclide transport in groundwater to modelling the evolution of snow cover in the Austrian Alps and water quality in the Himalayas.



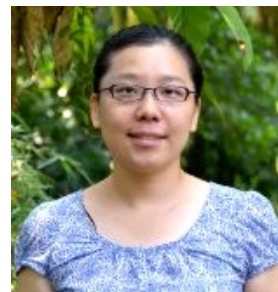
Mr Richard Brice, BTech
Water Leader (South East Asia) Global Wastewater Treatment Practice Leader. Mott McDonald

Richard is the S.E.A. water leader in global wastewater treatment at Mott McDonald. He has over 18 years of experience working in Singapore, New Zealand, Australia, United Kingdom, Fiji, Pakistan, Vietnam, the Middle East, Bangladesh and Indonesia. He specialises in the design, operation and optimisation of all biological processes for wastewater treatment, advisory work on water supply and review or desalination and recycled water systems, as well as, project management, and consultation management as part of the planning and licensing process on various wastewater treatment and reuse projects. Richard is experienced in wastewater characterisation process design and simulation modelling, including BioWin, for various process arrangements including biological nutrient removal plants. Utilisation of BIM and data management systems for asset design and management including evaluation of carbon inputs. He has interest in development projects, particularly given experience in anaerobic digestion projects in Pakistan and Indonesia.



Dr Xue Jin BS, PhD
Honorary Lecturer in Water Engineering, University of Glasgow

Xue is a Lecturer in Water Engineering at the University of Glasgow. She is an expert in membrane characterization and processes, water reclamation and desalination, membrane fouling mitigation, emerging contaminants removal, and environmental nanotechnology. Her research group at Glasgow explores the union of nanomaterials and membrane technologies for water purification, renewable energy, and environmental protection. For many years, her research has focused on ways to improve performance, reduce cost, and mitigate environmental impacts associated with membrane-based desalination and advanced water treatment processes.



Dr Imran Ibrahim BEng, MEng, PhD
Assistant Professor, University of Glasgow Singapore

Imran is an Assistant Professor in the Aeronautical Engineering division at the University of Glasgow, Singapore. He is an expert in Computational Fluid Dynamics (CFD) and has more than 10 years of experience in modelling aerodynamics flow control (active and passive), urban airflow and multiphase flow analysis. His main research interest encompasses multiple facades in engineering, spanning from the modelling of urban airflow in built environments to sump, sewage and coastal modelling. He has developed a keen interest in aerodynamics and flow control analysis and utilizes open source CFD software to



WATER @ GLASGOW

Climate change, dwindling carbon based energy sources and population growth are all conspiring to make water one of the most 'at risk' natural resources and yet it is vital to all life on Earth. The University of Glasgow has staff working across Science, Engineering, Social Science, Medicine and the Arts to ensure that it is a centre of excellence in water research and teaching. They aim to deliver new water technologies, new understanding of water in the natural and built environment, innovation in the governance of water and better public health in Scotland and in the most vulnerable regions of the Globe.

Our research themes focus on three key areas:

Technology

We aim to bring the most up-to-date science to bear on the the development of novel sustainable water and environmental technologies. Engineers, biologists, chemists, physicists and social scientists from across the university are collaborating on delivering solutions to the Global Grand Challenge of sustainable clean water for all.

Environment

We undertake research to better understand the sensitivity and resilience of our aquatic environment to environmental stressors such as climate change, water regulation and pollution. We develop models to describe these processes with the aim of alleviating adverse consequences for humankind and other living organisms.

Governance and Economics

We draw together a multi-disciplinary group of researchers from across the College of Social Science including experts from the Adam Smith Business School. While having established expertise in water research in Scottish and UK settings, we are developing an international profile in our agenda and locations for research, especially in the areas of law, financial modelling and development studies.


INTERESTED TO WORK WITH US?

For more information, please contact: **Deepika Sood** (Deepika.sood@glasgow.ac.uk)



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