

Shaleology Forum 2017 - List of Speakers



Alberto Striolo
University College London

Since 2013 Dr. Striolo is Professor of Molecular Thermodynamics within the Department of Chemical Engineering at University College London, London's global university. Prior to this position, Dr. Striolo was the Lloyd and Joyce Austin Presidential Associate Professor within the School of Chemical, Biological and Materials Engineering at the University of Oklahoma, US. During his career, Dr. Striolo has applied an arsenal of modelling and simulation techniques to characterise the structure of fluid at solid-liquid interfaces. He held visiting positions at Lawrence Berkeley National Laboratory, Berkeley, CA, and at Princeton University, NJ, to verify the theoretical predictions using experimental observables and to correlate the interfacial fluids structure to their transport. Striolo is interested in quantifying interfacial effects, especially those that can be related to practical applications such as water desalination, management of hydrates in flow assurance problems, separations, self- and directed assembly, and many others, including shale gas.



Adrian Jones
University College London

Adrian Jones is the Hayman Reader in Petrology at UCL, and holds an Associate Research post at the Natural History Museum London. Adrian has wide geological, fieldwork, and analytical geochemical expertise, especially on the behaviour of carbon-rich systems during melting and crystallization at high pressures and temperatures. He has supervised >25 PhD students of whom 5 currently hold academic tenured positions in leading UK institutions. He was a Founder of the Deep Carbon Observatory (DCO) supporting education and research of carbon through multidisciplinary science. His UCL lectures and DCO summer schools and workshops aim to inspire early career scientists to imagine new methods and technologies for measuring carbon in the natural environment including bio-rock interaction.



Kevin Taylor
University of Manchester

Prof Kevin Taylor is a professor in the University of Manchester and is currently Head of the School of Earth and Environmental Sciences. His research has applied standard petrographic and geochemical analysis (e.g. optical and electron microscopy, XRD, stable isotope analysis) and novel mineralogical analysis (e.g. CL, Raman, synchrotron X-ray analysis) to modern and ancient sediment and systems. He has been instrumental in integrating field- and basin-scale observations with pore-scale analysis, which has had significant implications for predicting shale and sandstone oil and gas reservoir properties. His recent and current research has been integrating multi-scale sedimentological and diagenetic analysis in major mudstone successions and shale-gas reservoirs (e.g. the Mancos Shale, Utah; the Marcellus, Woodford and Fayetteville Shales of eastern USA; Cretaceous calcareous shales of the Western Interior Seaway, Ordovician Shales in Canada). He is currently collaborating on research initiatives in shale-reservoir structure using high-resolution X-ray CT scanning and experimental mechanical analysis of shales, with links to petrophysical data. He has received funding from both the international oil and gas industry, and the UK research councils, has published >70 peer reviews papers and has supervised over 40 PhD students, and he is on the Editorial Board of the journal "Geology".



Yonghao Zhang
University of Strathclyde

Yonghao Zhang is Weir Professor of Thermodynamics and Fluid Mechanics and Director of James Weir Fluids Laboratory. His expertise is in the fluid dynamics of rarefied flows, which presents an important technological challenge, with long-term research and industrial implications. His group is among the first to develop lattice Boltzmann (LB) methods for simulating rarefied flows. In particular, they were the first to prove that high-order LB models can be reduced to the linearised BGK equation, giving confidence that LB models can be applied to highly rarefied gas dynamics. His group also developed a fast spectral method for solving the Boltzmann equation, considering different molecular potential models. His other research activities centre on complex flow physics, including multiphase flows, droplet technologies and granular flows.



Sudeshna Basugupta
University College London

Sudeshna is a geochemist, currently working on shale gas in the Department of Earth Science UCL, as the PI of an industry (Shell) sponsored project 'A new strategy for predicting free gas in shale gas using carbon, nitrogen and noble gases'. Sudeshna is trying to identify effective shales for natural gas exploitation. Further details of this project is available in https://www.ucl.ac.uk/earth-sciences/research/shale-gas-hub/shale_gas_geochemistry. In the past, during her Ph.D. and previous postdoctoral tenures, Sudeshna has successfully studied different types of terrestrial samples such as diamonds and oceanic sediments that are important natural resources. Apart from her research, Sudeshna is involved as a Teaching Fellow with the Chemical Engineering Department, UCL, delivering a Geology module to multi-disciplinary M.Sc. students.



Phil Meredith
University College London

Philip Meredith is Professor of Rock Physics at the Department of Earth Sciences, University College London. From 2010 to 2014, Prof Meredith was Head of Department of Earth Sciences at UCL. In 2003, he was elected International Fellow at the School of the Environment at Tohoku University, Japan. From 2007 to 2011 he was vice-president of EMRP Division of European Geosciences Union. Since 2013, Prof Meredith has been the visiting Professor at the University of Strasbourg in France. He is also the recipient of the EGU Louis Neel Medal 2016 for "fundamental contributions to rock physics and geo-mechanics and international research integration". Throughout his career, Prof Meredith has been PI or Co-I on 31 major research grants from external funding bodies. He has published more than 120 research papers in refereed journals, has been editor / co—Editor of 2 books, has 33 refereed chapters in books and 27 refereed papers in conference proceedings. Prof Meredith's research focus is on rock physics and geo-mechanics: rock fracture and deformation, brittle creep, time-dependent deformation processes, fluid flow and permeability, and micro-seismicity and acoustic emission.





Jill Cooper
Andarko Petroleum
Corporation, USA

Jill Cooper is a Corporate HSE Manager of Reporting & Advocacy for Anadarko Petroleum Corporation and works on global health, safety, and environmental matters for the company. She received her MBA in International Business at Thunderbird School of Global Management and continued on to receive her JD in Environmental Law at the University of Colorado Law School (1996). She has since then held several positions including the Senior Advisor to the Executive Director on environmental matters, Director of the Sustainability Division and Legal Administrator for the Air Pollution Control Division at the Colorado Department of Public Health & Environment. She also practiced environmental, natural resource and sustainability law as an Attorney with Faegre & Benson LLP. Ms. Cooper was the Group Lead in the divisional environmental program for Encana Oil & Gas Inc., which included air, water, waste, land, wildlife, and sustainability. She specializes in sustainability, environmental and regulatory legal, management as well as oil and natural gas. At Anadarko, she has co-chaired the internal Technical Water Committee and internal Seismicity Working Group. Her team is leading efforts to develop a water data system to better track water data and information. She is also currently the Chair of the Energy Water Initiative (EWI), which is comprised of 22 oil and natural gas companies working together on technical water issues around the life-cycle of water management.



Christopher I. McDermott
University of Edinburgh

Dr. habil. C.I. McDermott studied Geology (BSc., 1988) and Engineering Geology (MSc., 1989) at the University of Durham. He worked as a consultant in Geotechnics until 1994 whereupon he moved to Germany and continuing his education at the University of Tuebingen, completing a year long advanced studies course (academically between MSc and PhD, 1996) principally in hydrogeology. He then completed a PhD in Applied Geoscience in the field of flow and transport in fractured porous rock (1999) and was employed in research and teaching at the University of Tuebingen. He gained his habilitation (PD.) in 2006 in Applied Geoscience and Hydroinformatics. In August 2007 he moved to the University of Edinburgh to take up the position of senior lecturer in reactive transport. His main focus in research is the numerical and experimental investigation of coupled processes relevant to geoscientific applications. It is important to Dr McDermott that the areas he works in have a real relevance to actual geo-engineering problems. A significant part of his research time is spent in the further development of the object oriented code GeoSys/RockFlow for the simulation of coupled processes. This code is open source and available for research purposes.



Nils Backeberg
University College London

Nils is a field-structural-economic geologist, currently working at Roskill Information Services as a research analyst on rare earth element supply and demand forecasts. Originally starting at the University of Cape Town with an MSc in geochemistry. He completed his PhD at McGill University working on Archaean tectonics and gold. After moving to University College London to work on the permeability of shales in the Rock & Ice Physics Laboratory. As an exploration geologist Nils worked on rare earth element deposits, geothermal fields and gold deposits.



Don Westacott
Halliburton, USA

Don Westacott is the Chief Advisor, Global Unconventional Reservoirs for Halliburton. Don has pursued a lifelong interest in science and engineering beginning as a youth in western Canada. Don continued this interest and graduated from the University of Alberta receiving a Bachelor Science in Electrical Engineering. During the last 39 years he has worked in E & P industry in Canada, the United States, Europe, the Middle East and the Far East. Don's unconventional reservoir analysis work began in the early 1980's when he worked for Canadian Hunter Exploration. Don worked for the legendary oil and gas finder John Allen Masters and with his mentoring developed the fundamental skills of oil and gas exploration that he would apply through his continued career. Don developed reservoir characterization expertise while working for Apache Corporation, Carigali-Hess Malaysia, ResTech Houston and Newfield Exploration. His technical area of interest lead to publications of nuclear magnetic resonance applied to reservoir characterization. Don Westacott strongly considers training and technology transfer as an important part of his role within the E&P industry. Recently Don accepted a role as guest lecturer at the Colorado School of Mines providing instruction to a new generation of petroleum engineering students. Don was honored to be the Distinguish Speaker at the Harvard University Energy Panel Arab Conference.



Gary Edwards
UK Environment Agency

After gaining an engineering degree from the Camborne School of Mines, Gary went on to study Hydrogeology at Birmingham. His area of work focuses on the extractive industries and in particular metal mining and hydrocarbons, with particular interest in fluid transport and geomechanics. Gary joined the Environment Agency in 2003 and worked on implementing the European Mining Waste Directive. Since then he has contributed to the regulation of the oil and gas sector. Gary has just completed a two-month visit to Alberta, where he worked closely with the Alberta Energy Regulator and industry to gain a practical understanding of a full-scale shale gas industry.

