



**Miðvikudaginn 7. júní** verður á vegum jarðtæknifélags Íslands (JTFÍ) og umhverfis- og byggingarverkfræðideildar Háskóla Íslands haldnir tveir fyrirlestrar vegna komu tveggja gesta til landsins frá Queen's University í Kingston í Ontario fylki í Kanada. Báðir fyrirlesarar eru í fremstu röð á sínum sérsviðum.

**Staður: Háskóli Íslands, VR-II, Hjarðarhagi 2-6, stofa 152, jarðhæð.**

Dagskrá:

14:00 Gestir boðnir velkomnir. Sigurður Erlingsson, prófessor HÍ.

14:10 Dr. Kerry Rowe, prófessor. Geosynthetic liners and their use in cold climates

14:50 Dr. Ian Moore, prófessor. Pipeline Response to Imposed Ground Motion

Í lok fundar verður boðið upp á léttar kaffiveitingar.

*Útdrættir úr fyrirlestrunum fylgja hér:*

### **Geosynthetic liners and their use in cold climates'**

**Dr. R. Kerry Rowe**

Professor and Canada Research Chair in Geotechnical and Geoenvironmental Engineering  
Queen's University at Kingston, ON, Canada

#### **ABSTRACT:**

Geosynthetic liners are commonly used to protect the environment from the migration or escape of contaminants. Remote locations in cold climates offer a number of particular challenges including managing/cleaning up problems from past human activity that are impacting the environment, containment of hydrocarbon spills, and remediation of hydrocarbon contaminated soil so it can be reused in situations where there is little natural soil. Added to this are the challenges of working in a remote environment with a narrow construction window, difficult logistics, and conditions not normally considered suitable for the use of geosynthetic liners. This talk discusses how lessons learnt from modern research have greatly influenced their use in three projects – two in the Canadian Arctic and one situation related to Australia's Antarctic (Casey) station as well as the possible remediation of the abandoned Wilkes station in Antarctica.

### **Pipeline Response to Imposed Ground Motion**

**Dr. Ian Moore**

Professor and Canada Research Chair in Infrastructure Engineering  
GeoEngineering Centre at Queen's – RMC, Kingston, Ontario, Canada

#### **ABSTRACT:**

Circumstances can arise where pipelines are subjected to differential ground movements, and successful pipeline performance is contingent on understanding and accounting for the resulting pipe-soil interaction. This presentation presents the results of experimental and computational studies examining the details of pipeline responses when subjected to normal ground faults. Centrifuge studies are used to investigate the impact of the flexibility of pressure pipelines on behaviour, as well as the performance of conventional 'beam on elastic spring' buried pipeline models. Prototype scale experiments using a new test box are then discussed, for both continuous PVC and jointed clay sewer pipes.



*Stutt yfirlit yfir einstaklinganna (CV):*

**Ian D. Moore, PhD, PEng, FCAE, FEIC**

Professor and Canada Research Chair in Infrastructure Engineering  
Department of Civil Engineering, Queen's University  
&  
Executive Director, GeoEngineering Centre at Queen's – RMC  
Kingston Ontario K7L 3N6

**Biographical Notes**

Trained in Australia, Dr Moore has been Canada Research Chair in Infrastructure Engineering at Queen's University since 2001. An expert on soil-structure interaction, buried pipes, and geotechnical engineering, his more than 200 publications examine conventional and trenchless construction of buried water, sewer, and energy pipelines, contributing to North American and other codes of practice. Projects for industry include work as Editor of the 4<sup>th</sup> Edition of the Canadian Foundation Engineering Manual, research clarifying the strength of new, deteriorated and repaired pipes, contributions to behaviour of pipe pipes pulled into place using slip lining, pipe bursting and horizontal directional drilling, and studies of onshore and offshore oil and gas pipelines. Other activities include work as founding Executive Director of the GeoEngineering Centre at Queen's-RMC, as Editor of the Canadian Geotechnical Journal since 2007, membership on editorial boards for journals focused on pipelines, underground infrastructure, and Geomechanics, as well as involvement with code, professional and scholarly committees in Canada and the US. Honours, include the Killam Research Fellowship, the Stirling Medal from the Engineering Institute of Canada, election as Fellow of the Canadian Academy of Engineering, and best paper and other awards from Canadian, US, North American and international societies.

**Dr. R. Kerry Rowe - P.Eng., FRS, NAE, FREng, FRSC, FEIC**

Professor and Canada Research Chair in Geotechnical and Geoenvironmental Engineering  
Queen's University at Kingston, ON, Canada

Author of over 350 refereed journal papers, 3 books, 15 book chapters, and more than 330 full conference papers, he has extensive research and consulting experience in geosynthetics, waste management and geoenvironmental engineering including the design and/or peer review of hydrogeology and/or design for more than 60 landfills in Canada, US and other countries. He was the key advisor developing technical aspects of regulations in many parts of the world. His long list of projects includes remediation of PCB contaminated soil in the Canadian Arctic; the remediation of hydrocarbon contaminated soil in the Arctic and Antarctic; and liners for mining applications. He has been recognized by numerous awards including the *Giroud Lecture* (2002), *Rankine Lecture* (2005), *Casagrande Lecture* (2011), and the *ASCE Karl Terzaghi Lecture* (2017). The *International Society for Soil Mechanics and Geotechnical Engineering* has created the *ISSMGE R. Kerry Rowe Lecture*. He has been elected a Fellow of the world's oldest and most prestigious scientific society, the *Royal Society* (of London, UK) as well as being elected a foreign Member of the *U.S. National Academy of Engineering*, Fellow *UK Royal Academy of Engineering* and both the *Royal Society of Canada* and the *Canadian Academy of Engineering* as well as Professional Societies in Australia, Canada, and USA. He is a past president of the *International Geosynthetics Society*, the *Canadian Geotechnical Society* and the *Engineering Institute of Canada*.