



香港城市大學  
City University of Hong Kong  
三十周年紀念 30th Anniversary

## City University Distinguished Lecture Series

Speaker

**Dr Thomas E. Mason**

*Director of Oak Ridge National Laboratory  
U.S. Department of Energy*



# Science Technology for the Energy Challenge

on

Monday, 15 September 2014 at 4:30 pm

at

Connie Fan Multi-media Conference Room

4/F Cheng Yick-chi Building

City University of Hong Kong

Tat Chee Avenue, Kowloon

### Abstract

If we are going to successfully tackle the energy challenge — broadly defined as providing enough energy to support higher standards of living for a growing fraction of the world's increasing population, without creating intractable conflict over resources or causing irreparable harm to our environment — then substantial advances in the state of the art in energy generation, distribution, and end use are required.

To a large extent, the issues surrounding energy, environment, prosperity, and security are being addressed in international conversations about how to achieve a sustainable future. In particular, as the risks associated with global climate change become clear, the need for urgent action to build resilience to its most damaging impacts is clear. It is less clear, however, whether there is an understanding that making full use of today's best energy technologies, while highly desirable, is not by itself sufficient to overcome this challenge.

Without a significant and sustained effort in basic and applied research and development, we will not have the innovations needed to lead us to a desirable future. Coupling the multidisciplinary strengths of the US Department of Energy national laboratories, including Oak Ridge, with the efforts of other government institutions and the academic and industrial research communities around the world provides a means of addressing a challenge even greater in scope than the national security drivers that gave rise to the national laboratory system in the first place.

### Biography

Dr Thomas E. Mason is Director of Oak Ridge National Laboratory (ORNL). He joined ORNL in 1998 as Scientific Director for the Spallation Neutron Source (SNS) project. He was named Associate Laboratory Director (ALD) for SNS in 2001 and ALD for Neutron Sciences in 2006.

Before joining ORNL, Dr Mason was a faculty member in the Department of Physics at the University of Toronto. From 1992 to 1993, he was a Senior Scientist at Risø National Laboratory. He held a Natural Sciences and Engineering Research Council of Canada (NSERC) postdoctoral fellowship at AT&T Bell Laboratories from 1990 until 1992.

Dr Mason's research background is in the application of neutron scattering techniques to novel magnetic materials and superconductors using a variety of facilities in North America and Europe. As Director of the U.S. Department of Energy's largest science and technology laboratory, he has an interest in advancing materials, neutron, nuclear, and computational science to drive innovation and technical solutions relevant to energy and global security. He is a Fellow of the AAAS, APS, and NSSA.

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[http://www.cityu.edu.hk/vprt/distinguished\\_lecture\\_series/upcoming.htm](http://www.cityu.edu.hk/vprt/distinguished_lecture_series/upcoming.htm)

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