

## Nuclear Technology Public Seminar

# Nuclear Energy: Future Technologies and Challenges for Growth

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**Date:** 22 March 2016 (Tuesday)

**Time:** 6:45pm–8:00 pm

**Venue:** Room 3614, Academic Building 2, City University of Hong Kong

**Registration:** On-line free registration is via,  
<http://www.hkarms.org/Registration/EventRegister.php?Event=67>  
on a **first-come-first-served** basis.

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### Abstract

The Fukushima nuclear accident has brought to light key issues to be addressed related to the future of nuclear energy in the context of global warming, emerging renewable energies, demographic growth and public fear of nuclear. The lessons to be drawn have led to a reconsideration of risk assessment and risk management.

I shall address some of the scientific and technological challenges regarding the fission chain reaction benefits, while reducing further the risks of accident and diversion of nuclear materials for weapons. The promise from the next generation of breeder reactors which can ensure long-term energy security will be discussed. Special attention will be given to the fuel cycle, from fabrication, reprocessing and geological disposal of ultimate waste forms emphasizing the different time scales.

As in many technologies, progresses in the design of new functional materials and the predictability of their long-term performance constitute a major bottle-neck, which can however be solved through a combination of material multiscale simulations and highly controlled experiments. Examples will be given.

**Attendance/CPD Certificate will be provided**

### Supporting Organisations: