

Modelling in Science and Engineering Seminar Programme*
18 October 2017 at the Doubletree Hotel, Manchester

Registration and networking from 9.00 with a 09.30 start

Welcome from the Chair: Professor Moji Moatamedi, The Multiphysics Society

Opening keynote sessions

Dr Paul Howarth, Managing Director of the National Nuclear Laboratory
The importance and direction of modelling and simulation direction in our global Nuclear Industry.

Dr Akira Yamaguchi, Professor in the University of Tokyo
Modelling and Simulation for Nuclear Safety and Risk Assessment

Panel Session One: Nuclear Materials Modelling

The focus will be on exploring the materials used in the nuclear industry, covering both new materials and behaviours under extreme conditions

Chaired by **Professor Siân Hope OBE**
Executive Director of Innovation and Professor of Computer Science at Bangor University

Professor Mike Smith Director of the EDF Modelling and Simulation Centre, Manchester University
Avoiding plausible rubbish - the challenges of validated multi-scale modelling

Professor Christopher Race Research Fellow, Dalton Nuclear Institute

Professor Steve Graham Principal Scientist, National Nuclear Laboratory
Modelling & Simulation: A Nuclear Industry Perspective

Networking Lunch

Welcome from the Chair

**Dr Fiona Rayment OBE, National
Nuclear Laboratory**

Panel Session Two: Nuclear Reactor Safety

It will concentrate on failure modes and regulations exploring severe nuclear accident scenarios and investigations

Chaired by **Professor Ali Tehrani**
Principal Inspector – Nuclear Safety, Office for Nuclear Regulation

Dr John Lillington Chief Technologist, Nuclear Reactors, AMEC Foster Wheeler
Modelling requirements for new build reactors

Dr Fulvio Mascari Researcher at ENEA, Italian National Agency for New Technologies
Code applications for accident progression analyses and full scale predictive modelling challenges in nuclear reactor safety

James Dyrda Nuclear Scientist, Division of Nuclear Science Nuclear Energy Agency (NEA)
OECD Collaborations in Multi-physics Experimental Data, Benchmarks and Validation

Panel Session Three: Environmental Modelling

The final session will cover the impacts and effects of large-scale radiation leaks and dissipations of radioactive materials

Chaired by **Professor Paul Smith**
Manager & Technical Lead, AMEC Foster Wheeler

Professor Chris Pain Head of Applied Modelling & Computational Group Science and Engineering
Imperial College

Dr Andy Buchan Lecturer in Engineering Science, Queens Mary University London
Advanced numerical methods for radiation shielding applications

Shehu Saleh Senior Environmental Specialist, Horizon Nuclear Power
Radiological impact modelling to support permitting and consenting applications

Final discussion and reflection will draw this seminar to a close no later than 16.30

*Circumstances may occur that prevent as published participation and could lead to a slight speaker, topic or timing alteration