



# International

*Innovation in Knowledge Based and Intelligent Engineering Systems*



## INVITED SESSION SUMMARY

**Title of Session:**

**Computational Modelling for Sustainable Manufacturing Processes**

**Name, Title and Affiliation of Chair:**

Dr. Mingming Tong, University College Dublin, Ireland.  
Co: Chaired by: Nicholas Lavery, Senior Lecturer, Swansea University

**Details of Session (including aim and scope):**

Computational modelling techniques are widely used to predict performance, potentially reducing the time and cost of bringing a new product or process to market. Furthermore, optimisation techniques can allow the material used to be reduced without sacrificing functionality, and can also assist in predicting and maximising the lifespan of a component.

This session is open to papers outlining modelling methods, optimisation techniques and more generally, novel computational tools developed to improve sustainability. The improvements can be obtained, for example, through product/process design or improvement and material selection/development/utilisation. Papers are invited on the following research themes:

- Structural Modelling
- Computational Fluid Dynamics
- Optimisation techniques
- Mathematical modelling

Papers should focus on how these approaches have been adopted to solve problems relating to Sustainable Manufacturing.

Submission of extended abstract: 24th of January 2014 (1-page including figure)

Notification of Acceptance: 17th of February 2014

Receipt of publication files: 7th of March 2014

**Main Contributing Researchers / Research Centres (tentative, if known at this stage):****Website URL of Call for Papers (if any):****Email & Contact Details:**

Dr. Mingming Tong, University College Dublin, Ireland  
mingming.tong@ucd.ie

Nicholas Lavery, Senior Lecturer, Materials Research Centre, Swansea University  
N.P.Lavery@Swansea.ac.uk