



**Leading Edges in Welding: Summer School in Modelling of
Welding
30 July - 2 August 2012
TWI Ltd, Granta Park, Great Abington, Cambridge CB21 6AL**

Lectures will be given by international experts in industry and universities covering the theory and application of modelling modern welding techniques. Afternoons will be dedicated to providing hands-on experience with the relevant computer programmes to simulate key phenomena in welding.

The school is intended primarily for engineers, technical staff and technologists, PhD students, Post-docs, researchers at academic and research institutions as well as at welding companies, already working or interested to orient their future research in the field of welding and modelling of welding. Students will gain a grounding in modelling techniques and applications of various type of welding processes, and have the opportunity to hear about the latest developments in welding and modelling of welding.

Fees

The cost of this Summer School is £730 + VAT. This fee covers all meals, accommodation, course material and a dinner at St Catharine's College, Cambridge on Wednesday 1 August.

Programme

The programme will include the following lectures in the morning and practical sessions in the afternoon. The exact timings of each day will be finalised shortly. There will be an opportunity to arrive at TWI on Sunday 29th July to check into the accommodation and there will be a dinner on that evening.

An introduction to welding
TBC, TWI Ltd

Finite element modelling of weld failure
Dr Olga Barrera, Prof Alan Cocks, Oxford University, UK

Stress evaluation using neutron and synchrotron
X-ray diffraction
Dr Shu Yan Zhang, ISIS, Rutherford Appleton Laboratory, UK

Modelling of rolling methods for weld residual stress and distortion reduction
Dr Paul Colegrove, Cranfield University, UK

Weld modelling for dummies - sorry users
Prof Stewart Williams, Cranfield University, UK

Finite element modelling of weld residual stress and distortion and its application in industry
Dr Shuwen Wen, TATA Steel UK

Understanding and improving fusion welding by computational fluid dynamics
Anton Kidess, Dr Sasa Kenjeres, Prof Chris Kleijn, TUDelft, The Netherlands

Microstructure and property modelling for friction stir welding
Dr Joseph Robson, Manchester University, UK

Coupling thermodynamic and kinetic data to calculations using an adaptive interpolation scheme
Dr Lars Hoglund, KTH, Sweden

Molecular dynamics modelling of solid-liquid interface
Dr Ruslan Davidchack, Leicester University, UK

Synchrotron as a tool in material science and engineering
Prof Ragnvald Mathiesen, NTNU, Norway

Modelling of grain structure formation in welding
Dr Mingming Tong, Dr David Browne, UCD, Ireland

Microstructure modelling of solidification
Prof Hongbiao Dong, Leicester University, UK, Prof Jon Dantzig, EPFL, Switzerland

Register

To find out more information and to register for the summer school, please use the following link
www.eventsforce.net/mintweld

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