



PROGRAMME

Tuesday 25th February 2020

- 10:00 - 10:30** Registration, Coffee and Networking
- 10:30 - 10:40** **Welcome and Introduction**
Chris McDonald, Chief Executive Officer, Materials Processing Institute
- 10:40 - 11:40** **Session 1: Characterisation and Modelling**
Chair Session 1: Dr. Richard Thackray (University of Sheffield)
1. A comprehensive model for the coupled modelling of MnS inclusion and macrosegregation.
Presenter: Duanxing Cai (University of Leicester)
2. Development of novel coatings for the reduction of high temperature oxidation in carbon steel conveyance.
Presenter: James Grant (Swansea University)
3. The application of machine learning in material research: An overview.
Presenter: Shuo Feng (University of Leicester)
- 11:40 - 12:00** **First Perambulation**
Poster Exposition
- 12:00 - 13:00** **Session 2: Steel Property Measurement and Characterisation**
Chair Session 2: Gill Thornton (Liberty Powder Metals Ltd)
1. Multi-scale characterisation of hot rolled AHSS for improved toughness and bendability.
Presenter: Cameron Bee (University of Warwick)
2. Effect of microstructure and test parameters on hydrogen permeation in ultra-high-strength steels.
Presenter: James Lelliot (Swansea University)
3. Effects of hydrogen on edge dislocation mobility in bcc iron by molecular dynamics.
Presenter: Angel Alberto Izquierdo Sanchez (Newcastle University)
- 13:00 - 14:00** **Lunch and Networking**
St. George's Den - Bessemer Pitches (Library 13:30 – 13:50)
- 14:00 - 15:20** **Session 3: Development of Steel Grades and Properties**
Chair Session 3: Professor Hongbiao Dong (University of Leicester)
1. A best practice guide for welding of newly developed duplex stainless steel (UNS S82551) seamless pipes.
Presenter: Kenta Yamada (University of Leicester)
2. Investigating the elevated temperature deformation of iron-base hard facing alloys.
Presenter: Benjamin Poole (Imperial College London)
3. Revealing deformation mechanisms of FCC alloys at low temperature range: in situ neutron diffraction.
Presenter: Lei Tang (University of Birmingham)
4. Microstructural evolution of neutron irradiated T91 ferritic-martensitic steel in the advanced test reactor.
Presenter: Thomas Davis (University of Oxford)

- 15:20 - 15:40** **Second Perambulation**
Poster Exposition
- 15.40 - 16:00** **Awarding of Prizes by the Armourers and Brasiers' Materials Science Committee**
1. Millman Scholarship
2. Best Presentation and Runner-up
3. Best Poster
4. Best Pitch

16:00 - 16:40 **Keynote Speaker**
Jon Bolton, Senior Adviser, Liberty Steel Group (UK)

16:40 - 16:50 Vote of Thanks
Dr. Simon Pike, Technical Director, Liberty Steel UK

16:50 - 18:30 Drinks Reception



VENUE:

Armourers' Hall,
Armourers & Brasiers' Company,
81 Coleman Street,
London EC2R 5BJ

Contact the organisers:

Tel: 01642 382000
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Please join us:

Eventbrite registration: <http://bit.ly/2H3GkZ7>

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POSTER EXPOSITION

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1. Exploring the effects of cryogenic treatment on engineering coating systems.

Christian Chiadikobi (University of Leicester)

2. Sulphur release from pulverised coal injection.

Chay Davies-Smith (Cardiff University)

3. Blistering formation in high strength steels (HSS) during hot rolling and the effect of Mn composition.

Rebecca Dewfall (Swansea University)

4. Robotic plasma processing vehicle chassis.

Adel Gani (University of Strathclyde)

5. Evolution of carbides in high speed steel during heat treatment.

Yang Liu (University of Leicester)

6. Using rapid alloy prototyping to understand the effects of residual elements on a low alloy steel.

Caroline Norrish (Swansea University)

7. Rapid, accurate metallic iron analysis for ironmaking materials.

Daniel Stewart (Swansea University)

8. Austenite stability in carburised bearing steels – Influence of austenitisation temperature and stacking fault energy.

Adriel Wong (University of Cambridge)



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