

# Advanced Materials Characterisation Workshop From Macro to Nanoscale

Henry Royce Institute  
The University of Sheffield, UK  
Wednesday July 31<sup>st</sup> 2019



- 09:00** Registration & Coffee
- 09:25** Welcome and Introduction  
**Prof Mark Rainforth**, University of Sheffield – Henry Royce Institute  
**Boume Boudjelida**, Bruker Nano Surfaces
- 09:30** General Friction and Wear from Life Science to Railway Engineering  
**Prof Roger Lewis**, Department of Mechanical Engineering, The University of Sheffield
- 09:55** Advanced Materials Characterisation with Nanoindentation: An Applications Overview  
**Jaroslav Lukes**, Bruker NanoIndentation, Europe
- 10:20** Advanced Material Performance with Tribology  
**Steve Shaffer**, Bruker Tribology & Mechanical Testing, San Jose, USA
- 10:55** Refreshments & Networking
- 11:30** Practical Workshops:  
a. **Nanoindentation: Introduction and High-Speed property mapping with XPM**  
**Nanoindentation TI Premier**  
b. **Tribology: Introduction – Scratch Testing and High Temperature Materials Characterisation**  
**Tribolab Universal Mechanical Tester, Contour Optical Profiler, Bruker Alicona Focus Variation**
- 12:30** Lunch
- 13:30** Practical Workshops:  
a. **Tribology: Introduction – Scratch Testing and High Temperature Materials Characterisation**  
**Tribolab Universal Mechanical Tester, Contour Optical Profiler, Bruker Alicona Focus Variation**  
b. **Nanoindentation: Introduction and High-Speed property mapping with XPM**  
**Nanoindentation TI Premier**
- 14:30** Refreshments & Networking
- 15:00** Metals, Ceramics, Composites: Advanced Materials Characterisation  
**Prof Mark Rainforth**, Department of Materials Science and Engineering, University of Sheffield
- 15:25** Tribo-corrosion, Bio-tribology and surface science  
**Dr Michael Bryant**, School of Mechanical Engineering, University of Leeds
- 15:50** In-situ Nano-indentation and EBSD of lithium  
**Prof David Armstrong**, Department of Materials, University of Oxford
- 16:15** Effect of surface structuring in soft tribological contacts  
**Dr Doris Khaemba**, The Manufacturing Technology Centre MTC, Coventry
- 16:40** Close