ULTRA PRECISION ENGINEERING CONFERENCE

Institute for Manufacturing, 17 Charles Babbage Road, Cambridge CB3 0FS

MONDAY 9 MAY 2016

PROGRAMME

08:45 **Registration & sign-up for lab tours during lunch**

09:25 **Welcome from the MRes conference team**

09:30 **Introduction to the Centre for Innovative Manufacturing in Ultra Precision**

Martin O'Hara, National Strategy Manager, Cranfield University

09:50 **Challenges in Ultra Precision Manufacture**

Professor Paul Shore, Head of Engineering Divisions, National Physical Laboratory

10:20 **Precision for Nuclear Fusion: Challenges, Solutions & Opportunities**

Michael Porton, Head of Engineering Realisation, Culham Centre for Fusion Energy

10:50 **Morning Break**

11:10 **Challenges and Opportunities for Ultra Precision in a Space and Aerospace Context**

Martin Agnew, CIS R&T and Innovations Coordinator, Airbus Defence and Space

11:40 **Precision Manufacturing of Nano-photonic Holograms**

Professor Tim Wilkinson, Professor of Photonic Engineering, University of Cambridge

12:10 **Lunch and Tours**

13:10 **High Density Electrical Interconnect and Microfluidic Packaging of MEMs Devices**

Gary Truett, Prototype Manager, Xaar Plc.

13:40 **Microtargetry Challenges for Enabling Future Beam Sources**

Martin Tolley, Target Fabrication Group Leader, STFC Rutherford Appleton Laboratory

14:10 **Helium Ion Microscopy: High Resolution Imaging and sub-10 nm Nanostructuring**

Peter Gnauck, Business Development Manager, Carl Zeiss

14:40 **Afternoon Break**

15:00 **Femtosecond Lasers for Precision Frequency and Distance Metrology**

Professor Derryck Reid, Head of Photonics and Quantum Sciences Research Institute, Heriot Watt University

15:30 **Recent Advances in UV LED Semiconductors Heralds a New Era in Precision Polymerisation**

Jason Smith, CTO, Integration Technology Ltd.

16:00 **Ultrafast to Ultra Precision**

Joris van Nunen, Product Marketing Manager, Coherent Inc.

16:30 **Closing Remarks**

Professor Bill O'Neill, Course Director: Centre for Doctoral Training in Ultra Precision

16:35 **Drinks and Canapés**

Registration is free but spaces are limited, email up.conference.2016@my-ifm.net to register