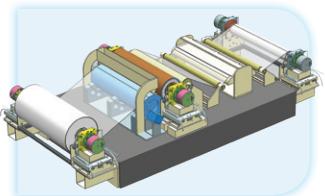
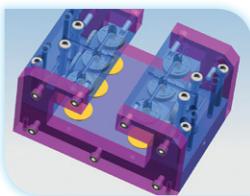
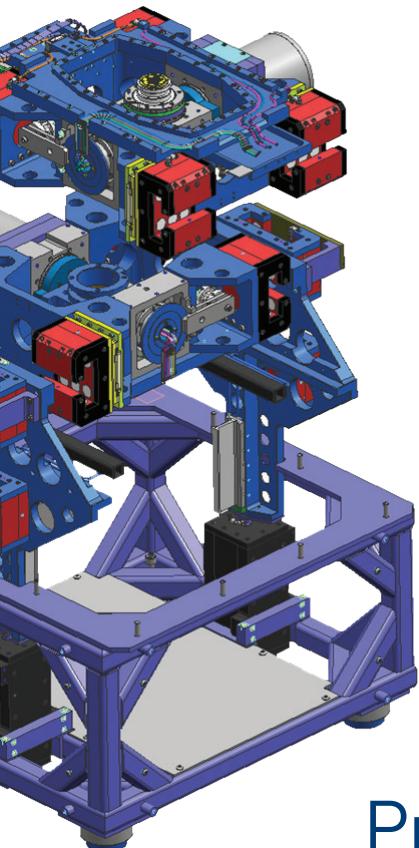




Cranfield
UNIVERSITY



Precision Engineering Industrial Short Course

Venue

Cranfield University, Cranfield,
Bedfordshire, MK43 0AL, UK.

Date

19-23 September 2016

A highly practical, results orientated five day intensive short course covering the basic principles and state-of-the-art concepts to increase the precision, accuracy and reliability of machine tools and products.

Gain knowledge to increase the precision, accuracy and reliability of your machines and products

This results orientated course focuses on how you can increase the precision and accuracy of machines, products and processes. Substantial benefits can be gained in a wide variety of applications ranging from ultra precision to traditional mass production. In design and manufacturing, increasing precision and accuracy can multiply opportunities and capabilities and lead to breakthroughs.

In automotive, optics, machine tools, general manufacturing, micro-electronics, instrumentation and other industries, increasing the precision and accuracy can result in products and processes with greater capabilities, better reliability, and higher quality. This in turn can produce higher productivity, better sales potential, higher profits and improved competitive position.

Gain awareness to help you increase the precision and profitability of manufacturing facilities you develop and purchase

This course will give you the basic precision engineering principles and state-of-the-art concepts for designing higher precision and accuracy into your machines, products and processes, whether they are ultra precision or otherwise.

As an engineer you will find the basic principles to be simple yet powerful tools for improving machine performance; the latest concepts will put you at the forefront of precision engineering technology. The course will emphasise practical information that

you will be able to apply immediately and profitably to your design and manufacturing efforts.

Gain a valuable reference manual from the extensive course documentation

You will receive an extensive course manual that includes all the course content and a broad selection of pertinent papers from a variety of sources. The manual will complement the lectures and provide an invaluable reference tool in your workplace.

Find solutions to your 'real' design and manufacturing problems from this interactive learning opportunity

Throughout the course the speakers will encourage your questions, comments and participation. You are invited to come prepared with questions, issues and problems for discussion in relation to your specific design and manufacturing operations. Break times, lunches and evenings provide the opportunity for ongoing discussions with the instructors and also fellow participants. In addition, the final day of the course includes scheduled time for discussion and debate.

Opportunities for discussion with respected, and internationally recognised, precision engineering experts

This course is based on the highly successful short course series developed by Professors Pat McKeown, John Corbett and Paul Shore at Cranfield University. It has previously been provided in Europe, the USA and numerous Asian countries during the last 20 years. With constant updating of content and with newly engaged internationally renowned instructors this course offers a unique blend of the most current technical knowledge.

Who should attend?

Engineers working in the machine tool, automotive, aerospace, optics and semiconductor industries. It is highly appropriate to individuals involved in purchasing high value precision engineering facilities where accuracy capability is critical to profitability and success.

Course speakers

Professor Paul Shore

Prof Shore is the Head of Engineering Divisions at the National Physical Laboratory and Professor of Precision Engineering at Cranfield University. He led Cranfield's Precision Engineering Institute from 2002-2015, where he developed its activities to be world leading with unrivalled precision engineering research facilities and laboratories. Paul is a Fellow of the Royal Academy of Engineering and Past President of the European Society for Precision Engineering and Nanotechnology [[euspen](#)].

Paul Morantz

Paul Morantz is the Director of the EPSRC Centre in Ultra Precision, based in the Precision Engineering Institute at Cranfield University. Paul is an expert in precision metrology and has devised the mathematical bases for the complex tool-path and metrology techniques utilised across a wide range of platforms. He has extensive academic research interests and industrial experience in ultra precision control, metrology and machine design.

Dr Paul Comley

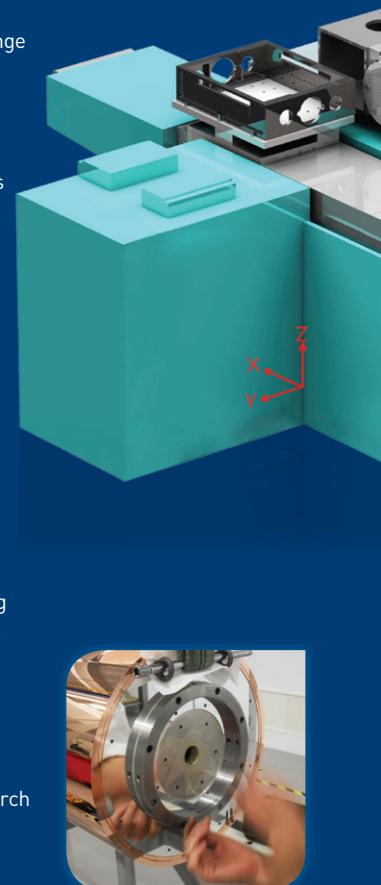
Dr Paul Comley is a professional research engineer with over twenty years of industrial experience in precision engineering, with a PhD in the field of super abrasive grinding, MSc in Metrology and a BSc in Mechanical Engineering. Paul joined the Precision Engineering Institute at Cranfield University in 2008. Professional accreditations include CEng, MIET, CQP, and FCQI. Paul has worked in senior roles over the last ten years with managerial responsibilities and budgetary control of large R&D based projects. His research areas are within the field of process technologies which include diamond turning, super abrasive grinding, metrology and large scale roll to roll film manufacturing technologies.

Dr Xavier Tonnellier

Xavier is a Research Fellow at Cranfield University and has active research activities in areas including large scale ultra precision surface technologies and process development; advanced optical fabrication for space and astronomy; high precision grinding technology; robotic polishing technology and Concentrated Solar Power (CSP) technologies (solar tubes coating technology).

Dr Renaud Jourdain

Dr Renaud Jourdain is a Research Fellow at Cranfield University. Renaud has developed advanced fabrication techniques using plasmas, lasers and computer numerical controlled (CNC) machine tools. His research aims to establish a new plasma figuring method for metre scale optical surfaces. Renaud's other research interests include dwell time based figuring technique, heat transfer, and numerical modelling.



International speakers

A selection of international speakers from academia and/or industry will be lecturing on this course, eminent in their relevant field of expertise.

Further information

Course fee

£1,750. The course fee includes tuition, course notes and materials, refreshments, lunch and the course dinner.

Registration and accommodation

Accommodation is not included in the course fee.

For details about registration and accommodation please visit: www.ultraprecision.org/courses/short-courses

Contacts

Registration and accommodation enquiries:

professionaldevelopment@cranfield.ac.uk

General and technical enquiries:

info@ultraprecision.org

Short courses are subject to Cranfield University's booking terms and conditions. We reserve the right to amend published information.

