



### 3 August

#### MEASUREMENT SYSTEM ANALYSIS

A course for engineers who require a basic understanding of the factors that affect measurement, enabling them to improve decision-making and efficiency, meet quality standards and ensure customer satisfaction.

Luton. JPD.

[www.jpd.co.uk/courses/rr.htm](http://www.jpd.co.uk/courses/rr.htm)

### 6 August

#### PRODUCT QUALITY PLANNING

A course on Advanced Product Quality Planning and the Production Part Approval Process will explain the benefits of these methods, giving requirements to produce a quality plan that supports the development of a new product or service. The syllabus focuses on meeting automotive supplier requirements but is also applicable to other manufacturing activities.

Luton. JPD.

[www.jpd.co.uk/courses/ap.htm](http://www.jpd.co.uk/courses/ap.htm)

### 12-13 August

#### GAS TURBINE SYSTEMS

Thirtieth annual international forum to present modern gas turbine engine system concepts. Most of the speakers are engineers experienced in gas turbines. The meeting will provide opportunities to network with university staff, students and sponsoring companies.

Cranfield, Bedfordshire. Cranfield University. [www.gtss30th.org](http://www.gtss30th.org)

### 5-6 September

#### SCREW COMPRESSOR TECHNOLOGY

Taking place immediately before the international conference on compressors and their systems, this course will be dedicated to screw compressor geometry. Topics to be covered include: the envelope method as a basis for generating rotor profiles; identification of rotor movement in compressor bearings; tools for rotor manufacturing; and special aspects of rotor design, such as the quantification of manufacturing imperfections.

Examples will be given of how to generate common rotor profiles. London. IMechE Fluid Machinery Group with City University, London.

### 6-11 September

#### WORLD TRIBOLOGY CONGRESS

This fourth congress will focus on tribology as a key discipline for technological innovation. Sessions will include contact mechanics, friction and wear; tribomaterials, texturing, coatings and surface modifications; manufacturing processes; elasto-hydrodynamic, hydrodynamic, and boundary lubrication; molecular tribology, superlubricity, molecular simulations, and microtribology.

Kyoto, Japan. Japan Society of Tribologists. [www.wtc2009.jp](http://www.wtc2009.jp)

### 7-9 September

#### COMPRESSORS AND THEIR SYSTEMS

Featuring the participation of equipment manufacturers, suppliers, users and research organisations, this conference will be a forum for discussion about air, gas and refrigeration compressors, vacuum pumps, expanders, and related systems. Papers have been sought on topics that will include technology development, operation, maintenance and reliability, safety and environmental impact, energy efficiency and carbon footprint, system integration and behaviour, upgrades and refurbishment, design and manufacture.

London. IMechE Fluid Machinery Group. [www.imeche.org/events](http://www.imeche.org/events)

### 8-9 September

#### METALLURGY FOR NON-METALLURGISTS

Namtec's course gives those involved in the production, processing, fabricating, utilising and selling of metals a basic understanding of metallurgy. They learn to appreciate the issues involved in the production of metals and alloys. The emphasis is on ferrous metallurgy.

Rotherham. Namtec.

[www.namtec.co.uk/show/61](http://www.namtec.co.uk/show/61)

### 8-9 September

#### INTRODUCTION TO REQUIREMENTS ENGINEERING

This course will take engineers through the major activities involved in the requirements



### 2 September

#### PROFESSIONAL DEVELOPMENT SEMINAR

The Monitored Professional Development Scheme is the IMechE's preferred route for young engineers to complete their initial professional development, become corporate members of the institution and register as chartered engineers. This seminar, one of a series being held around the country, is designed to advise companies setting up the scheme, as well as the scheme's mentors wishing to update their knowledge. The programme will include sessions on the benefits of being recognised as a registered engineer; standards for professional competence;

eMPDS – an online system to record graduates' progress; mentoring on the scheme; applying for IMechE membership; plus continuing professional development.

Horley, Surrey. IMechE MPDS. [www.imeche.org/events](http://www.imeche.org/events)

process. Activities include stakeholder analysis, goal modelling, scenario development, identifying qualities and constraints, traceability, validation, and tool selection. Delegates will gain an understanding of the requirements process in its engineering context and across a wide range of industries.

London. Institution of Engineering and Technology. [www.theiet.org/events/courses/2009/pd/introduction-to-requirements-2.cfm](http://www.theiet.org/events/courses/2009/pd/introduction-to-requirements-2.cfm)

### 8-10 September

#### INTERNATIONAL CONFERENCE ON MANUFACTURING RESEARCH

This annual event is recognised as the main UK manufacturing research conference, bringing together researchers, academics and industrialists to share knowledge and experience.

Warwick. Warwick Manufacturing Group. <http://go.warwick.ac.uk/icmr09>

### 8-10 September

#### MODERN PRACTICE IN STRESS AND VIBRATION ANALYSIS

International conference on stress and vibration analysis, bringing together physicists, mathematicians, materials scientists and engineers. Will include composite materials, contact mechanics, fatigue and fracture mechanics, impact behaviour, non-linear and parametric vibrations, plasticity, model testing, and biomechanics.

Cambridge. Institute of Physics. [www.iop.org](http://www.iop.org)

### 8-11 September

#### OFFSHORE EUROPE

Engineers, industry leaders and experts will share ideas and debate issues affecting the future

of the upstream industry. Offshore Europe – the largest upstream oil and gas event outside North America – will host more than 1,500 exhibiting suppliers from 100 countries, offering technology and service solutions across the exploration and production process. The show's free conference will address the redesign and rejuvenation of infrastructure, 21st-century well technology, getting more out of reservoirs through management, the challenges of health, safety and the environment, exploration of established basins and new frontiers, and carbon capture and storage.

Aberdeen. Reed Exhibitions. [www.offshore-europe.co.uk](http://www.offshore-europe.co.uk)

### 9 September

#### EMEX 2009

Exhibition of experimental mechanics – “the premier exhibition for manufacturers and suppliers of strain measurement and stress analysis equipment”. Takes place alongside the Institute of Physics' conference on modern practice in stress and vibration analysis (see previous entry).

Cambridge. British Society for Strain Measurement. [www.bssm.org](http://www.bssm.org)

### 9-10 September

#### TRAM 2009

Recent developments in aerospace have seen the introduction of lighter and more environmentally friendly airframe structures and engines. New materials and manufacturing methods are used to gain enhanced performance at lower cost. And the structure of the industry has changed, with a move from large companies designing, manufacturing

components and assembling aircraft, to global supply chains headed by large system integrators. All these changes have brought innovation in design, materials, manufacturing and supply chain management. Taking place at the Advanced Manufacturing Research Centre with Boeing in Rotherham, TRAM 2009 – the international conference on trends in aerospace manufacturing – will examine the implications of these developments, focusing on new materials, manufacturing and assembly technologies, and supply chain management.

Rotherham. AMRC with Boeing. [www.tram-conference.co.uk](http://www.tram-conference.co.uk)

### 9-10 September

#### THE ENERGY EVENT

Exhibition with more than 100 exhibitors, and associated conference focusing on energy procurement, management and efficiency. Top of the agenda will be the Energy Services Directive, the carbon reduction commitment, and the debate about nuclear power. Important legislative reforms will be explored in depth and debated. Entry is free.

Solihull. Western Business Exhibitions. [www.theenergyevent.com](http://www.theenergyevent.com)

### 10-11 September

#### EUROPEANS AND OTHER CULTURES – PREPARING FOR PARTNERSHIP

A masterclass aimed at engineers and technologists that will feature input from leading European industry practitioners on how to undertake successful business in the global market. As well as gaining knowledge of emerging trading blocs, participants will use

generic preparation frameworks to evaluate the effectiveness of preparation in building the relationships necessary to do business. Participants will develop and test the effectiveness of their frameworks in interviews with senior industry practitioners experienced in successful working partnerships outside Europe.  
**Brussels. European Institute for Industrial Leadership. [www.eiil.net](http://www.eiil.net)**

### 10-11 September RESEARCH AND EDUCATION IN MECHATRONICS

International workshop on trends in mechatronics research, applications and education. Topics for which the organisers have sought papers include research in actuators and sensors; co-operating systems; mechatronic measurement; modelling and simulation tools; systems design techniques; micro-, bio- and nano-mechatronics; parallel kinematic machines; vision, modelling and simulation of systems; robotics; and haptic systems. Papers have also been sought on trends in teaching mechatronics, as well as applications of mechatronics to consumer goods, medical equipment and transport.  
**Glasgow. Mechatronics Forum and University of Strathclyde. [www.dmem.strath.ac.uk/rem2009](http://www.dmem.strath.ac.uk/rem2009)**

### 15 September SHAPING THE DIGITAL FUTURE

Over the next three years the government is investing £120 million into researching and developing digital technology. The University of Leeds is hosting a

day of debate and presentations by leading academics and industry key players to spark ideas for new collaborations to take advantage of this funding. As well as presentations on artificial intelligence and computational systems, there will be opportunities for networking and the chance to take part in a live experiment to test the latest digital technology.  
**Leeds. University of Leeds. [www.engineering.leeds.ac.uk/comp](http://www.engineering.leeds.ac.uk/comp)**

### 15-16 September HAZARDOUS AREA EQUIPMENT, LEGISLATION AND SAFE PRACTICE

Sira Test and Certification can claim unparalleled expertise in the field of products and people operating and working within potentially explosive atmospheres. This course offers delegates a solid understanding of explosion-protected equipment, safety legislation and codes of practice. The programme will consider types of equipment used, protection methods and maintenance.  
**Eccleston, Cheshire. Sira Test and Certification. [www.siracertification.com](http://www.siracertification.com)**

### 15-17 September PRACTICAL STRESS ANALYSIS AND FINITE ELEMENT METHODS

Engineers should learn about the strengths of numerical techniques to derive maximum benefit from finite element analysis (FEA) technology, says Nafems, the association

promoting effective use of engineering simulation methods. Its latest course on stress analysis and finite element methods will offer guidance on how to judge which approximations are appropriate for solving a range of practical problems. Advice will be given on taking correct decisions based on results known to be reliable. Interaction will be encouraged throughout the course, with the planning of a FEA project and examples of hand calculations, mesh designs and solution designs being set for the class.  
**Stratford-upon-Avon. Nafems. [www.nafems.org/events](http://www.nafems.org/events)**

### 16 September CHAIRING MEETINGS

A course designed to enhance engineers' abilities at chiring meetings and to develop their management skills more fully. On completion of the syllabus, participants should be able to prepare more effectively for meetings, use a range of strategies to resolve issues, and manage difficult people and situations more effectively.  
**Dublin. Engineers Ireland. [www.engineersireland.ie](http://www.engineersireland.ie)**

### 16-18 September FRICTION, WEAR AND LUBRICATION

This course offers an introduction to and overview of tribology. The key elements of the discipline are complemented by case studies drawn from industrial practice.

The course can be expected to include surface topography and contact mechanics; hydrodynamic, elasto-hydrodynamic and boundary lubrication; rheology and lubricant chemistry; wear and friction of metals, ceramics and polymers; and surface engineering.

**Cambridge. Cambridge Institute for Manufacturing. [www.ifm.eng.cam.ac.uk](http://www.ifm.eng.cam.ac.uk)**

### 17 September COMPRESSORS AND FANS

A course enabling developing engineers, designers, technicians and first-line managers to gain an

understanding of the principles associated with gas compressors and fans. The syllabus includes an introduction to the range and types of machines, their operating characteristics and applications, a foundation in the issues of compressor system design, an introduction to machine specifications and standards, and an outline of safety issues and relevant statutory regulations.  
**HQ. IMechE Fluid Machinery Group. [www.imeche.org/events](http://www.imeche.org/events)**

### 17-18 September UNDERSTANDING RISK IN THE GROWING COMPANY

During this workshop, participants will be guided through the world of decision-making in uncertainty. They will explore the qualities of risk, negative and positive, and discover how these are being managed with more confidence by experienced stakeholders in several enterprises. The workshop will look at risk from the perspective of shareholders and how they manage their exposure and express their risk appetite. It will demonstrate how a banker manages a risk portfolio and, most importantly, say the organisers, will explain how the business manager or project manager can quantify, monitor and manage risk to meet objectives.

**Brussels. European Institute for Industrial Leadership. [www.eiil.net](http://www.eiil.net)**

### 17-18 September HIGH-PERFORMANCE COMPOSITES FOR A CHANGING WORLD

Technical conference to brief engineers and researchers on latest developments in high-performance composites for the aerospace industry.  
**Filton, Bristol. Society for the Advancement of Material and Process Engineering. [www.sampe-europe.org](http://www.sampe-europe.org)**

### 20-23 September PRESSURE VESSEL TECHNOLOGY - ICPVT-12

The latest in a series of triennial international conferences on pressure vessel technology in the field of structural integrity assessment, maintenance and life extension of pressurised process engineering plants. Topics will include design and analysis,

materials and fabrication, inspection, codes and standards, new technology for post construction, and new applications of pressure technology.  
**Jeju, Korea. International Council on Pressure Vessel Technology. [www.icpvt12.org](http://www.icpvt12.org)**

### 22 September POWERTRAIN TESTING - MANAGEMENT AND EVALUATION

A seminar highlighting the latest techniques in engine testing. It will offer an opportunity to assess solutions to test-cell problems. Leading practitioners from aerospace and defence will share experiences. The programme can be expected to include advances in test-cell research; data management in the test-cell environment; emissions measurement, environmental legislation and technology; and hybrid powertrain testing.  
**HQ. IMechE Automobile Division. [www.imeche.org/events](http://www.imeche.org/events)**

### 22 September WAVE AND TIDAL TECHNOLOGIES - WATTS 2009

The seventh annual Watts symposium will examine how the UK can maintain a lead in the marine renewables industry given the deficiencies in financial incentives and consenting regimes. The event will seek to present lessons from other countries, and there will be a small accompanying exhibition.  
**Leasowe, Wirral, Merseyside. Renewable Energy Association. [www.r-e-a.net](http://www.r-e-a.net)**

### 22-23 September NEGOTIATION SKILLS FOR ENGINEERS

An interactive course explaining the negotiation process and how to use it, including the different forms of negotiating such as non-verbal communication.  
**London. IET. [www.theiet.org/careers/courses/professional](http://www.theiet.org/careers/courses/professional)**

**23 September  
TECHNICAL REPORT WRITING**  
"Refine your report-writing skills and communicate more effectively with readers," say the organisers of this course.  
**Dublin. Engineers Ireland. [www.engineersireland.ie](http://www.engineersireland.ie)**

### 15-17 September METOCEAN AWARENESS

Professionals in the offshore and marine renewables industries need to be aware of the effects that the weather, waves, currents and water levels can have on their operations or design work. These influences of meteorology and oceanography are summed up in the term 'metocean'. This course is designed to bring greater awareness of metocean conditions and forecasting to project managers and engineers. There will be short presentations, workshop sessions and a group case study.  
**London. Institute of Marine Engineering, Science and Technology. [www.imarest.org/events](http://www.imarest.org/events)**

