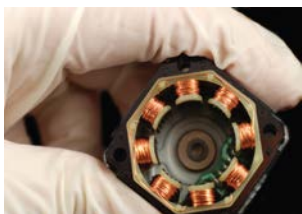


TECHNOLOGY SHOWCASE 2012



Technology Showcase Visitor Information Guide

**Thursday 13 September, 2012.
09.00 – 15.00, Campus Centre,
De Montfort University, Leicester.**



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Your guide to the Technology Showcase

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TECHNOLOGY SHOWCASE 2012

Welcome and Introduction

Welcome to the 2012 Technology Showcase presented by De Montfort University, Leicester.

We hope that you will benefit from attending this year's Showcase, which, as last year, extends beyond the Faculty of Technology to include research groups from across the University, all of whom work within the Technology domain.

Research areas exhibiting today will cover security, transport, computing, health, sustainability, nano technology, manufacturing, design, media, creativity and mobile technologies.

The day promises to be informative and interactive for all, and we look forward to building lasting partnerships with industry and academic colleagues. Please use this guide to make the most of your time and if you have any questions or queries please direct them to the organisers, each wearing a name badge with a white stripe on the top.

Enjoy your day and do not hesitate to find us at the event, alternatively send us an email via the address listed below.

Professor Andy C Collop

Pro Vice-Chancellor/Dean of Technology

Professor Bob John

Deputy Dean/Head of Informatics

For further information, feedback, or any general enquiries please email: tech-development@dmu.ac.uk

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Essential Information

- **First Aid and Health & Safety**

We have First Aid representatives on call throughout the event. If you need First Aid treatment, please telephone Ketna on 07966 683996 or Gurminder on 07969 242842. Alternatively, please approach one of the Events Team (identifiable by white name badge holders) at any point.

If you spot a Health and Safety risk during the day (i.e. spillage, trip hazard) please do not hesitate to bring it to the attention of any members of the Events Team.

- **Use of laptops**

WiFi access in the Campus Centre

To access WiFi you will need to scan for available wireless networks and connect to the **DMU-Guest SSID**. Open a web browser and enter the username and password to login.

If you have any queries please email wireless@dmu.ac.uk

=====

Username: ats2012

Password: ats2012

- **Help and advice**

The Events Team, identifiable by wearing a badge with a white strip across the top, will be on duty throughout the event, please do not hesitate to contact them for assistance. They will be able to advise you about timings and events taking place, or even help to identify specific academics that you may wish to speak to during the day. The main point of contact during the event will be the **Registration Desk** on the ground floor of the Campus Centre.

- **Refreshments**

Coffee and tea will be available upon registration in both the Queens Building and the Campus Centre. Further refreshments will be available throughout the day and a free buffet lunch will be served just before midday, on both the ground floor and second floor of the Campus Centre.

- **Photography and video disclaimer**

In accordance with the De Montfort University policy on image capture we must inform you that this event will be photographed and/or videoed and/or otherwise captured in image form.

Images may be used in the University prospectus or course brochures and other publicity material and may be provided to the media for publication in local or national newspapers or educational magazines. It is also possible that representatives from print and broadcast media may attend this event and capture their own images for publication or broadcast.

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IT IS NOT POSSIBLE OR PRACTICAL TO SEEK CONSENT FOR IMAGE CAPTURE FROM EACH INDIVIDUAL ATTENDING THIS EVENT

The University will therefore conclude that by attending/remaining at the event participants agree to their images being captured for the purposes stated above. If you do object to your image being captured please write to the event host at the address given: the University will respect your decision.

If you have any queries or complaints, please contact the event host in the first instance or contact **Fraser Marshall, Records Manager** on **0116 257 7655**.

- **Networking and making contact**

Your visitor pack contains details of other delegates who are happy to share their details. All event exhibitors and external guests will be identifiable via their name badges.

- DMU exhibitors and academics – **Black** name badge holders
- External delegates – **Red** name badge holders
- Events Team – **White** name badge holders

- **Research expertise on offer at the exhibition:**

Communications Engineering • Interactive and Media Technologies • Creative Technology Studios • Institute of Creative Technology • Centre for Computing and Social Responsibility • Centre for Computational Intelligence • Textiles Engineering and Materials • Energy and Sustainable Development • Mechanical Engineering • Mobile Technologies • Emerging Technologies • Mechatronics • Water Software Systems • Lean Engineering • Additive Technology • New Product Design/Retail Lab • Earth & Planetary Remote Sensing Laboratory • Imaging & Displays • Centre for Secure Computing • Software Technologies Research laboratory • Pharmaceutical Technologies • Bio Health Informatics

- **Information about the afternoon presentations, tours, demonstrations and seminars**

Each research group will be delivering its own unique activities during the afternoon of the Technology Showcase. Please endeavour to attend as many of the tours, presentations, etc, as possible, as it will provide you with an excellent insight into our research. This guide lists all the in-depth detail around the afternoon schedule including type of activity, locations and timings. Afternoon tours and presentations will leave the related group stands at 12.45pm, 1.30pm and 2.15pm (note some of the one-off seminars start on the hour). Please make your way to the relevant research group exhibition stands at the designated times. See the floor plans on page 7 and 8, and turn to page 9 of this guide for afternoon activities by group.

Research group contact details can be found on the respective stands and within this guide.

www.dmu.ac.uk/techshowcase

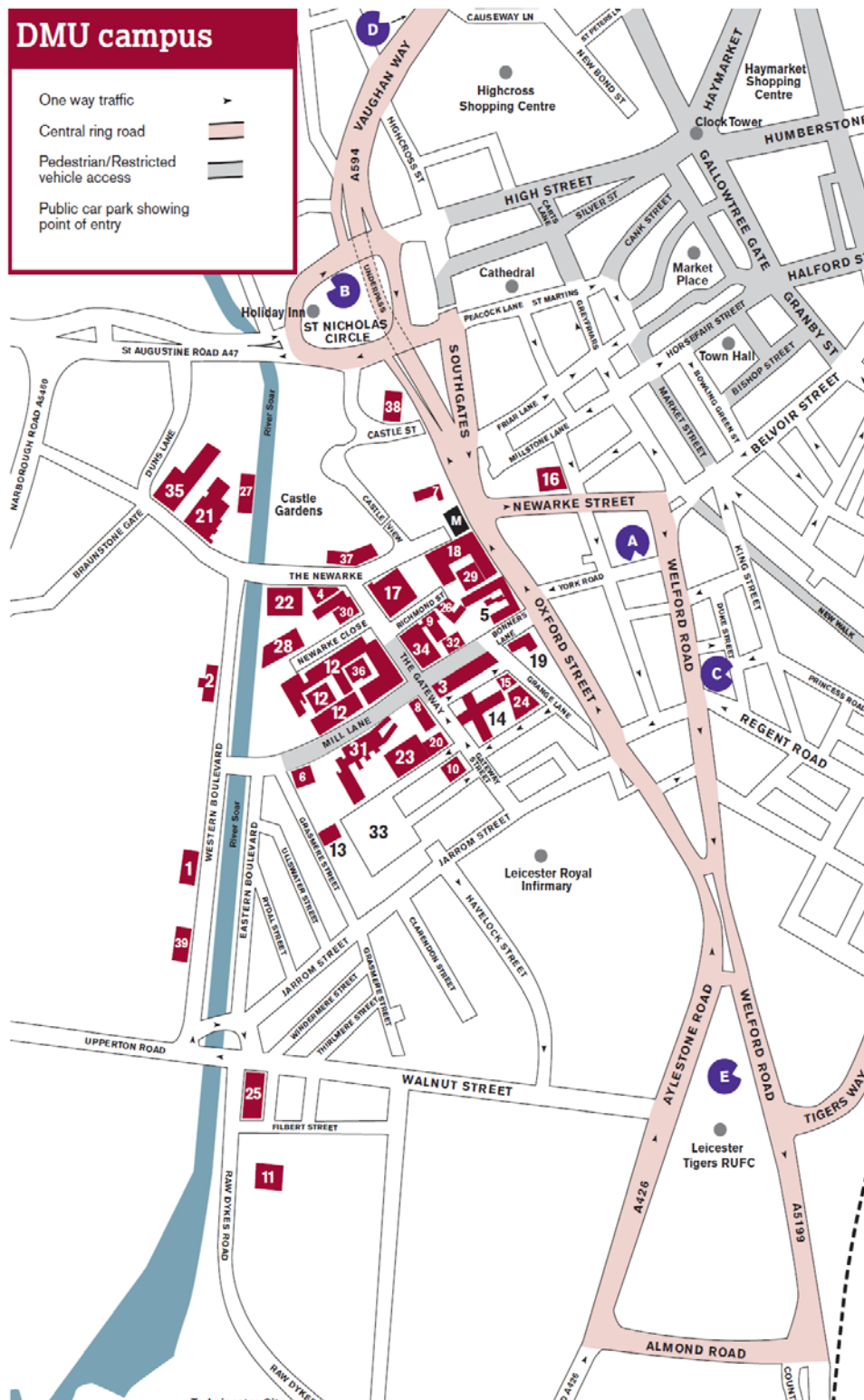
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Programme and Timings

09.00 – 11.00	Registration and refreshments, Ground Floor, Queens Building (09.00 – 11.00) and Campus Centre (all day)
10.00 – 10.10	Welcome and Introduction; Professor Andrew C. Collop, Pro Vice-Chancellor/Dean of Technology, De Montfort University
10.10 – 10.20	Event Overview
10.20 – 10.45	Keynote Speaker: David Chalmers – Chief Technologist for Hewlett Packard Enterprise Servers, Storage and Networking, EMEA
10.45	Keynote Session and Presentation Session Closes
09.00 – 15.00	Campus Centre for the Technology Showcase Exhibition
11.45 – 12.45	Buffet Lunch and Networking
12.45, 13.30, 14.15	Showcase - Exhibition, Presentations, Tours, Seminars (45 minute slots)
15.00	Technology Showcase Closes

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Orientation – DMU Campus Map and Building Location Guide



VISTOR CAR PARK
OPPOSITE Building Number 19 and next to 32. (Advance booking only – look out for the signs).

Building Number 3.
Campus Centre Building incorporating Students' Union.

Building Number 12.
Fletcher Building, Art and Design.

Gateway House 14.
Faculty of Technology

Building Number 17.
Hawthorn Building, Health and Life Sciences.

Building Number 19.
Innovation Centre.

Building Number 31.
Queens Building, Technology and IESD.

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Ground Floor Campus Centre, Exhibitor and Afternoon Tour Information

Afternoon tours leave the related group stands at 12.45pm, 1.30pm and 2.15pm (unless otherwise stated)

Stand	Exhibitor Name	Exhibitor and Tour Details	Location	Staff
1	Centre for Computing and Social Responsibility (CCSR)	CCSR is the only research centre in the UK, specialising in the ethical and social issues of computing and information systems. CCSR will be networking on the exhibition stand. Group contact details: Bernd Stahl T: +44 (0)116 207 8252 E: bstahl@dmu.ac.uk W: dmu.ac.uk/ccsr	Campus Centre	Ben Fairweather, Sara Wilford
2	Cyber Security Centre (CSC)	CSC has access and insight into an otherwise expensive technology, with the resources and expertise to resolve forensics and security issues. CSC will be networking on the exhibition stand. Group contact details: W: dmu.ac.uk/csc	Campus Centre	Tim Watson, Peter Norris, Kath Garnett, Clinton Ingrams, Ian Bryant
3	DMU Interdisciplinary Group in Intelligent Transport Systems (DIGITS)	DIGITS are specialists in intelligent transport and transport infrastructure solutions. The group will be networking on the exhibition stand, with a video display. Seminar: 13.30 in the Queens Building 0.12 Challenges Facing Urban Transport – DIGITS Transport Seminar There are significant pressures on the transport sector to reduce congestion, increase capacity, reduce environmental impact, and increase convenience. The effective development and deployment of intelligent mobility (IM) systems has the potential to bring significant societal and business benefits. This seminar, which is lead by our DIGITS	Campus Centre for exhibiting. The DIGITS seminar will take place at 13.30 in the Queens Building Ground Floor 0.12 look out for directional signage	David Elizondo, Eric Goodyer Ben Passow, Phil Wilson, Clare Edwards

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		<p>research group, aims to bring people together to discuss key challenges facing our towns and cities.</p> <p>The seminar will include a panel discussion led by Dr Eric Goodyer, who will lead transport experts through a narrative picture of the future of urban transport systems focusing on:</p> <ul style="list-style-type: none"> • Better use of existing infrastructure - which includes congestion reduction and traffic management • Air quality and other social and health impacts • Use of the transport infrastructure to support local economic objectives • Modal shift and social inclusion <p>This will be followed by a lively conversation between the panel and the audience exploring some of the key challenges identified by the panel.</p> <p>Group contact details: David Elizondo E: elizondo@dmu.ac.uk Francisco Chiclana E: chiclana@dmu.ac.uk W: dm.ac.uk/digits</p>		
4	Centre for Computational Intelligence (CCI)	<p>CCI develop fundamental theoretical solutions to real world problems using a variety of computational intelligence.</p> <p>CCI will be exhibiting, networking, providing demonstrations and running a seminar.</p> <p>Demonstrations include:</p> <ul style="list-style-type: none"> • Eye-gaze, enables people with physical disabilities to control games and other applications in a way that is much faster than other types of assistive devices controlled, for example, by switches. • Thorlux Lighting - a huge display and demo of a web-enabled lighting maintenance system • BGlobal Smart Metering - latest Smart metering solutions with ZigBee 	<p>Campus Centre</p> <p>The CCI seminar will take place at 14.00 in the Queens Building ground Floor 0.09 look out for directional signage.</p>	<p>Eric Goodyer, Howell Istance, Dave Stephenson</p>

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		<p>Seminar: 14.00 in the Queens Building 0.09</p> <p>Computational Intelligence Applied to Solve Real World Problems in Industry Seminar. Presenting a range of computational expertise, which can be applied to solve strategic problems in industry such as; decision-making, planning or forecasting. The CCI seminar will provide visitors with a clear explanation of techniques involved and give examples of applications in biomedical systems, consumer behaviour analysis and forecasting, logistics, supply chain, complex process analysis and data mining.</p> <p>Group contact details: Bob John T: +44 (0)116 207 8491 E: rij@dmu.ac.uk W: dmua.ac.uk/cci</p>		
5	Software Technologies Research Laboratory (STRL)	<p>STRL are experts in designing and developing computer systems and tools.</p> <p>They will be networking on the exhibition stand and providing demonstrations of:</p> <ul style="list-style-type: none"> AnaTempura - a framework for Runtime Verification and related specification and verification tools SPAT - a security policy analysis tool Fermat - a software maintenance tool that allows to evolve legacy assembly code into more maintainable C or even Object-Oriented code <p>Group contact details: Hussein Zedan T: +44 (0)116 250 6152 E: zedan@dmu.ac.uk W: dmua.ac.uk/STRL</p>	Campus Centre	Feng Cheng, Ali Alzahrani
6	Earth and Planetary Remote Sensing Laboratory (EAPRS)	<p>EAPRS are world-leading experts in analysis and interpretation of remote sensing, with an emphasis on radar instruments and satellite radar altimetry.</p> <p>They will be networking on the exhibition stand and delivering a presentation of various projects.</p>	Campus Centre	Philippa Berry, Richard Smith

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		Group contact details: Philippa Berry T: +44 (0)116 207 8501 E: pamb@dmu.ac.uk W: dmua.ac.uk/EAPRS		
7	Imaging and Displays (IDRG)	IDRG conduct research into the design, development and evaluation of next-generational 3D displays and holography. Network and watch their Three-Dimensional video of HRH The Queen made by the group during her visit to De Montfort University. Tours to the HOLOGRAPHIC LAB where delegates will be shown the very latest holographic technology and its applications to industry. Experience Digital Holograms, 3D Movies, Lenticular prints and 3D Television (Fletcher Building). Group contact details: Martin Richardson E: MRichardson@dmu.ac.uk Ian Sexton E: sexton@dmu.ac.uk W: HELIUM3D.eu	Campus Centre and Fletcher Building	Martin Richardson, Ian Sexton, Ashley Watts, Tove Noorjahaan,
8	Textiles Engineering and Materials (TEAM)	TEAM undertake multidisciplinary research to improve materials performance and processing. Visit the TEAM laboratories and meet the experts behind textiles technology. See samples of the textiles and specialist equipment. Network with group members. <ul style="list-style-type: none"> • Environmentally friendly textiles - production and processing • Technical, medical and smart textiles • Novel fibre crops such as flax, hemp, nettles • Application of enzymes in textile processes • Industrial textiles, including aerospace and military textiles, protective clothing and composites • Modelling the structure and properties of textile fibres, yarns and fabrics 	Campus Centre Tours to the Gateway House labs: Second floor 2.30 Third floor 3.11 and 3.31	Jinsong Shen, John Williams, Edward Smith

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		Group contact details: Jinsong Shen E: jshen@dmu.ac.uk T: +44 (0)116 207 8786 W: dmu.ac.uk/team		
9	Bio-Health Informatics	Bio-Health Informatics specialise in gene analysis and computational intelligence techniques for medical diagnosis. The Bio Health Informatics experts will be networking on the exhibition stand.	Campus Centre	Huseyin Seker
10	Pharmaceutical Technologies (PT)	Pharmaceutical Technologies contribute to the development of new products and services within the pharmaceutical, healthcare and food industries. PT will be networking on the exhibition stand and giving a demonstration of facilities: Pharmaceutical Industries - Continuous Processing Demonstration, delivered by Pharmaceutical Technologies and S3 Process Limited. This demonstration will include the opening of the new GMP process development laboratory facility at De Montfort University. S3 Processing will be running tours taking visitors to look at the machinery, DMU facilities and providing an overview of continuous processing. Contact details: Geoff Smith T: +44 (0)116 250 6298 E: GSmith02@dmu.ac.uk	Campus Centre for exhibiting and networking Hawthorn Building Third floor 3.4 for the demonstrations.	Steve Boswell
11	HEALTH - Interactive and Media Technologies	IMT specialise in a number of areas from multi-modal technologies, 3D visualisation to augmented reality. They will be networking on the exhibition stand and giving a demonstration of their healthcare related technologies. Group contact details: Lorenzo Picinali E: LPicinali@dmu.ac.uk W: dmu.ac.uk/imt	Campus Centre	Lorenzo Picinali
12	Prolinx Limited	Prolinx Limited is a trusted IT solutions provider specialising in the development of	Campus Centre	Nick Humphries

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		<p>secure IT as a Service (ITaaS) environments. Prolinx works in partnership with organisations to intelligently provision and manage IT resources reducing costs, enhancing growth and mitigating risk. Prolinx services span desktop, data centre, cloud, cyber security and more.</p> <p>For over a decade Prolinx has provided technologies, solutions and services to major public and private sector organisations and institutions. Prolinx is a shared services provider to the UK government and military organisations.</p> <p>Privately owned and based in Oxfordshire, UK, Prolinx provides a nationwide capability. Much of the company's work involves integrating new technologies with existing infrastructures, business processes and operations.</p> <p>Prolinx is an expert in security - We have the best-qualified consultants, specialist engineers and project managers providing core competencies in end-to-end security accredited up to IL3 and forensics, who can assist any business. Our security service is built on knowledge, trust and expertise and a commitment to deliver results that demonstrate tangible return on investment.</p> <p>By working closely with partners like HP, Microsoft and VMware, the company has the road-map level insight to support long-term, low risk solution recommendations. Partners also trust Prolinx to deliver customer consulting on their behalf. Company accreditations include Microsoft Gold Partner, VMware Premier Partner and Technology Alliance Partner (TAP) and HP Gold Accredited Preferred Partner.</p> <p>Why Prolinx?</p> <ul style="list-style-type: none"> • End-to-end integration capability • Rigorous assessment and needs analysis 		
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		<ul style="list-style-type: none"> • Business benefit focus for all technology and services • Desktop, data centre, cloud and security expertise • Support for all solutions • Major public and private sector clients • Trusted by leading IT partners • ISO certified solution and service provider <p>Contact Details Telephone: +44 (0) 1844 279 199 Email: contact@prolinx.co.uk Web: www.prolinx.co.uk</p>		
13	Technology Business Services	<p>Meet and network with the Business Development Managers representing DMU Technology. Find out more about contract research, professional training, and bespoke consultancy services.</p> <p>E: Nomar@dmu.ac.uk</p>	Campus Centre	Nadia Omar, Gary Trappitt, Dipa Patel
14	DMU Business Services	<p>Meet the corporate Business Development Team and find out about working in partnership with DMU in other areas.</p> <p>E: businessservices@dmu.ac.uk</p>	Campus Centre	Aidan Friend, Nadia Omar, Gary Trappitt, Dipa Patel
15	DMU Placements Units	<p>Find out about recruiting DMU students for your business or organisations.</p> <p>Contact details: Suki Clayer E: sclayer@dmu.ac.uk</p>	Campus Centre	Linda Spence
16	ProspectIP®	<p>ProspectIP® is an intellectual property (IP) management company.</p> <p>Our modular and professional IP services help research-based and innovative organisations to overcome the challenges they face in developing and profiting from their intellectual assets.</p> <p>Contact details: T: 0845 625 4825 E: info@prospectip.com W: prospectip.com</p>	Campus Centre	Derek Palmer, Peter McLeod

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17	DMU Knowledge Transfer Partnerships	<p>Knowledge Transfer Partnerships enables businesses to access higher education resources and expertise, and apply them to strategic projects stimulating innovation, expansion, and performance improvements. Meet the team at the Campus Centre to find out more.</p> <p>Contact details: Jo Bailey - Head of Knowledge Exchange T: +44 (0) 116 250 6211 E: jlawrence@dmu.ac.uk</p>	Campus Centre	Joanna Bailey, Benoit Welch, Sharon Hall
18	European and UK Funding	<p>Access Government and European funding for your business or organisation.</p> <p>Visit the Funding Exhibitors for:</p> <p>Technology Strategy Board Dr Sarah Taylor - Malone Knowledge Transfer Deputy Manager and Government Research Officer T: +44 (0) 116 257 7653 E: smalone@dmu.ac.uk</p> <p>European Funding Framework Programme Seven (FP7) Dr Stephen Ison MInstP European and International Research Officer T: +44 (0) 116 250 6310 E: sison@dmu.ac.uk</p>	Campus Centre	Dr. Sarah Taylor-Malone, Dr. Stephen Ison

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Second Floor Campus Centre, Exhibitor and Tour Information

Afternoon tours leave the related group stands at 12.45pm, 1.30pm and 2.15pm (unless otherwise stated)

Stand	Exhibitor Name	Exhibitor and Tour Details	Location	Staff Participation
19 & 20	Institute of Creative Technologies (IOCT) and New Product Design (NPD)/RETAIL LAB	<p>The IOCT lab is a custom designed facility specifically used for music and creative technologies.</p> <p>NPD is a multidisciplinary group that specialises in a range of areas from design for industry, innovations in packing, to medical products and services.</p> <p>The group was formed to perform pioneering research – empirical, theoretical, collaborative and practical – in both established and emerging domains. Special research interests include:</p> <ul style="list-style-type: none"> • Additive manufacturing in design • Design for industry • Medical products and devices • Innovations in packaging • User informed design • Retail, consumers and technologies • Resource-efficient design • Historical, cultural and future issues in design <p>The Retail Lab is a state-of-the-art research and development facility, as well as a 'mock shop' retail laboratory, the unit also has a virtual test space for concept evaluations; a dedicated area for conducting training and exhibitions; and a knowledge bank focusing on five specialist areas of legislation, supply chain, build, fit and consumer experience.</p> <p>The research experts will be networking on the exhibition stand, and giving <i>tours of the Usability Lab (IOCT)/ Retail Lab (NPD).</i></p> <p>Visitors can explore the creation and evolution of a diverse range of products, from consumer items to spatial concepts in retail.</p>	<p>Campus Centre</p> <p>Fletcher Building for the Retail Lab tour and the IOCT for the Usability Lab tour.</p>	Tracy Harwood, Martin Jones, Peter Ford

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		Group contact details: Tracey Harwood - Retail and Usability lab E: tharwood@dmu.ac.uk T: +44 (0)116 207 8028 Peter Ford - Rapid Prototyping Suite E: pbford@dmu.ac.uk T: +44 (0)116 257 7429		
21	Communications Engineering (CE)	<p>CE offer engineering solutions which span a wide range of diverse areas from digital broadcast systems to video communication systems.</p> <p>The group will be networking on the exhibition stand and giving demonstrations in the Games Studio of:</p> <ul style="list-style-type: none"> • Demo of peer-to-peer live video streaming: The demo will show a prototype of the peer-to-peer live video streaming system developed within the EU funded Community Network Game project (http://www.cng-project.eu/). • Demo of video streaming over LTE networks with the neatbox real-time emulator: The neatbox emulates the network configuration, the mobile channel and the physical layer in a multi-cell, multi-user environment that models all effects on user as experienced in a real system. The user can configure the network layout, the number of users, UE capabilities, underlying traffic models, network parameters, etc. The real-time capability of the emulator enables application developers, service providers and network operators to test applications and services under live conditions. <p>Contact details: Raouf Hamzaoui T: +44 (0)116 207 7056 E: rhamzaoui@dmu.ac.uk W: dm.ac.uk/cece</p>	Campus Centre and Gateway House 6.30/33	Raouf Hamzaoui, Shakeel Ahmad
21	Mobile Technologies	<p>Mobile Technologies specialise in intuitive apps and interface design.</p> <p>They will be networking on the exhibition</p>	Campus Centre	Thom Corah

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		stand. Contact details: Tom Corah E: thom@mungo-media.co.uk		
23	Interactive and Media Technologies (IMT)/Creative Technology Studios (CTS)/Fused Media	<p>IMT specialise in a number of areas from multi-modal technologies, 3D visualisation to augmented reality.</p> <p>They will be networking on the exhibition stand, giving a demonstrations of the O-BOW, and <i>tours of the Creative Technology Studios and Fused Media Lab:</i></p> <p>Demonstration of O-BOW: The O-Bow is a bow controller consisting of an optical movement sensor mounted to measure the bow speed and horizontal angle with high resolution. Depending on the actual sensor used the bow can be almost any surface, including a wooden stick.</p> <p><i>The Creative Technology Studios (CTS)</i> encompass video, audio, and interactive media and are at the cutting-edge of current technology. The tour of the CTS will include the visit to the following facilities:</p> <ul style="list-style-type: none"> • Industry-standard video, audio and radio production suites • A suite of twenty-one High-Definition (HD) video workstations, using the very latest industry-standard HD editing software • Television studios with HD video cameras, green-screen and virtual-studio capabilities • Two fully-equipped recording studios, featuring analogue and digital recording systems and surround sound monitoring • Broadcast-standard radio production studios with professional playout and management systems • Audio and video laboratories with high specification test equipment for signal analysis • Fused-media and motion-capture studios for the teaching and research of 3D image capture, modelling and display 	<p>Campus Centre</p> <p>Queens Building first floor 1.30 for the Fused Media lab and the Creative Technology Studios</p>	Lorenzo Picinali, Dylan Menzies

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		<ul style="list-style-type: none"> A high-speed, high-definition, data backbone, enabling the integration of audio, video and computer-generated media projects Hybrid technologies, using the best of current analogue and digital media <p>Group contact details: Lorenzo Picinali E: LPicinali@dmu.ac.uk W: dmu.ac.uk/imt</p>		
24	The Emerging Technologies Research Centre (EMTERC)	<p>EMTERC specialise in micro and nano electronic solutions.</p> <p>The group will be networking on the exhibition stand and giving <i>tours of EMTERC's extensive electronic device and material research facilities:</i></p> <ul style="list-style-type: none"> Semiconductor and thin film fabrication laboratories including clean room and PECVD system Electrical characterisation laboratory. This includes dedicated set ups for solar cell, memory cells, biological sensors and power semiconductor devices. Micro and Nano metrology laboratory. Includes a range of microscopy equipment <p>Group contact details: T: +44 (0)116 207 8548 E: spaul@dmu.ac.uk W: tech.dmu.ac.uk/emterc</p>	Campus Centre and Hawthorn Building 00.43	Richard Cross, Shashi Paul, Konstantin Vershinin
25	Mechanical Engineering (MERG)	<p>MERG are mechanical and aeronautical engineering experts.</p> <p>Mikhail will be networking on the exhibition stand.</p> <p>Group contact details: T: +44 (0)116 250 6156 E: mgoman@dmu.ac.uk W: dmu.ac.uk/research/technology/mechanical</p>	Campus Centre	Ibrahim Abdulla, Nickolay Abramov and Hobina Rajakaruna
26	Centre for Electronic and Communications Engineering (CECE)	<p>CECE offer engineering solutions which span a wide range of diverse areas from semiconductor physics to signal processing.</p> <p>The group will be networking on the</p>	Campus Centre and Queens Building Q2.02/04	John Gow, Chris Oxley

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		<p>exhibition stand and giving <i>tours of the power electronics lab and the infra-red microscope lab.</i></p> <p>Group contact details: Alistair Duffy E: apd@dmu.ac.uk Chris Oxley E: choxley@dmu.ac.uk W: dmua.ac.uk/cece</p>		
27	Institute of Energy and Sustainable Development (IESD)	<p>IESD focuses on improving the built environment through the application of computer modelling and performance monitoring, behavioural studies, and the development of energy and environmental policies for a low carbon future.</p> <p>IESD will be networking on the exhibition stand where there will be demonstrations of the Wattbox energy control system. IESD will also be <i>running three seminars</i> on the day in the Queens Building, and giving a demonstration of new electrochromic glazing technology:</p> <p><u>Seminar 1: 12.45 in the Queens Building 0.10 Cloud-backed optimisation for building design</u> To achieve better building designs for a low carbon future; architects and engineers rely more and more on simulation tools to evaluate energy performance of a building at the design stage.</p> <p>This presentation demonstrates the future building simulation and optimisation technologies that we are currently developing at the Institute. We will start with a few architectural drawings, create computer models for them, identify alternative design options, run simulations, and visualize the best design solution. By harnessing the cutting-edge optimisation technology and the power of cloud computing, we will bring this new design process to every architect's desktop in the near future.</p>	<p>Campus Centre and the Queens Building Ground floor 0.10 and 0.11 for seminars and demonstrations.</p> <p>Seminar 1 will take place at 12.45 in the Queens Building ground Floor 0.10 look out for directional signage.</p>	<p>Andy Wright, Paul Cropper, Rick Greenough, Graeme Stuart, Yi Zhang</p>

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		<p>Seminar 2: 13.15 in the Queens Building 0.11 Building energy consumption data: Analysis, visualisation and feedback Modern automatic meter reading (AMR) systems provide high resolution energy consumption data collected from hundreds of meter points to a single point of data storage. Access to such data provides a massive amount of hitherto unavailable information to energy management. However, most systems rely on manually checking all datasets on a regular basis for anomalies. For energy managers of large building portfolios this can be impractical. Consumption modelling can be used to produce a sophisticated statistical representation of the patterns of consumption. Such models enable the production of simple visualisations and performance indicators to represent consumption patterns. When coupled with automated event detection algorithms such modelling provides a means to identify buildings where persistent changes have occurred and may lead to automated exception management systems with detailed diagnostic reports.</p> <p>Seminar 3: 13.45 in the Queens Building 0.10 Industrial Energy Awareness The Institute will demonstrate how the analysis of power drawn by production equipment (e.g. machine tools) can be used to identify idle and active energy times, using adapted speech recognition algorithms. Monitoring the energy used by industrial equipment and general machine performance will help to identify energy saving opportunities and provide advance warning of possible process failures. The seminar provides 'energy awareness' to process owners through the use of computational techniques such as complex event processing. Register for the showcase and see the prototype developed for use on the cylinder head machine line of a truck engine plant.</p>	<p>Seminar 2 will take place at 13.15 in the Queens Building ground Floor 0.10</p> <p>Seminar 3 will take place at 13.45 in the Queens Building ground Floor 0.10</p>	
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TECHNOLOGY SHOWCASE 2012

		<p>Demonstration: 14.15 in the Queens Building 0.11 Electrochromic glazing</p> <p>Electrochromic (EC) glazing is an emerging technology that has the potential to transform the way we use glass in buildings. An EC window has a coating that enables the glass to change its level of tint in response to an applied voltage. This means that users can switch the window to control light transmission or it can be controlled automatically based on analysis of data from light sensors near the window. DMU has installed the first working EC glazing in system the UK. The windows have been installed in the Clephan Building where IESD researchers will study the impact of the glazing in a typical busy office by analysing the experiences of the office workers and the changes to the physical environment of the office.</p> <p>Group contact details: T: +44 (0)116 257 7962 E: iesd@dmu.ac.uk W: iesd.dmu.ac.uk</p>	<p>The Demonstration will take place at 14.15 in the Queens Building Ground Floor 0.11</p>	
28	Water Software Systems (WSS)	<p>WSS are specialists in computer-based methods for solving engineering problems in the water industry.</p> <p>They will be networking on the exhibition stand and giving demonstration tours to the Water Software Systems Lab:</p> <ul style="list-style-type: none"> • Burst Detection software demonstration • Pump Scheduling/Model Simplification • Waste Water Treatment Modelling <p>Group contact details: Bogumil Ulanicki T: +44 (0)116 257 7058 E: bul@dmu.ac.uk W: watersoftware.co.uk</p>	<p>Campus Centre</p> <p>Tours to the Lab in the Hawthorn Building 00.26</p>	<p>Bogumil Ulanicki, Piotr Skworcow, Tomasz Janus</p>
29	Additive Technology Research Group (AMTG)	<p>AMTG deliver effective solutions in product realisation and advanced manufacturing.</p> <p>They will be networking on the exhibition stand and giving demonstration tours of a range of commercial Additive Manufacturing Techniques:</p>	<p>Campus Centre and Tours to the Innovation Centre Demo area.</p>	<p>Adam Moroz, Jason Jones, David Wimpenny</p>

TECHNOLOGY SHOWCASE 2012

		<ul style="list-style-type: none"> Reverse engineering techniques (laser scanning and Renishaw Cyclone) Direct writing of bioceramics Selective Laser Printing of High Performance Polymers (<i>SPRINT</i>) Remanufacturing by Laser Cladding, Inspection and Machining (RECLAIM) Laser Printed Electronics <p>Group contact details: Adam Moroz E: AMoroz@dmu.ac.uk W: rpmg.dmu.ac.uk</p>		
30	Mechatronics (MRC)	<p>The MRC has an international reputation for its research in computer controlled machines and machine systems, systems engineering and integration.</p> <p>They will be networking on the exhibition stand and demonstrating tours of:</p> <ul style="list-style-type: none"> Smart Home Open Platform: A solution utilized standards to enable resources sharing in delivering various services (e.g. care, well-being, energy management and security) simultaneously. <p>Group contact details: Chi-Biu Wong T: +44 (0)116 257 7053 E: cbwong@dmu.ac.uk W: mrg.dmu.ac.uk</p>	Campus Centre and demonstrations in the Queens Building Q0.25	Chi-Biu Wong, Xi Chong
31	Lean Engineering (LEAN)	<p>LEAN provides design and operations management services to industrial and services organisations.</p> <p>The researchers will be networking on the exhibition stand and delivering demonstrations of their virtual reality technology including a presentation of Lean Engineering.</p> <p>Group contact details: T: +44 (0)116 257 7074 E: stockton@dmu.ac.uk / W: dmucfm.co.uk</p>	Campus Centre	Dave Stockton, Derek Steeple, Riham Khalil
32	Centre for Computational Intelligence (CCI)	Robotics demonstrations	Campus Centre	

TECHNOLOGY SHOWCASE 2012

Thank you for visiting the Technology Showcase, look out for future DMU events by checking our website www.dmu.ac.uk/research. For further information or to provide us with your comments or feedback please email: tech-development@dmu.ac.uk

Alternatively contact:

Sue Williamson
Research & Innovation Office
De Montfort University
The Gateway
Gateway House 4.64
Leicester
LE1 9BH