Joint Academic and Industry SIG and ICT KTN Event
'Academia and Industry Working Together: More than a letter of support'
12th December 2013
Lunch is jointly sponsored by Agilent and Microlease

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*This Academic and Industry SIG is championed by Marc Bailey of **Nokia Research Centre,** Alex Butler of **Microsoft Research,** Claudio Marinelli of **Applied Graphene Materials,** David Roberts of **Ogma,** and Ian Wassell of **Computer Lab – University of Cambridge***

Venue: Jane Harrison Room, Newnham College, Sidgwick Avenue, Cambridge, CB3 9DF

AGENDA

13:00	Registration & Networking Lunch
14:00	Welcome and Introduction from Academic and Industry SIG Champion, **Marc Bailey** of **Nokia Research Centre**
14:10	Welcome from **Eddie Murphy, Network Manager** of **ICT KTN**
14.20	Welcome from joint lunch sponsor, **Graham Newton**, UK Sales Manager¸ **Agilent**
14:25	**Chaired by SIG Champion, Marc Bailey** of **Nokia Research Centre** **'Industrial-academic Collaborations in Nanotechnology Research'** **Dr. Tapani Ryhänen,** Head of Laboratory, **Nokia Research Centre** This talk will discuss collaborations with University's from Nokia's perspective and a discussion of the issues faced and the solutions developed to allow the EU Graphene Flagship project to win funding and start work.
14:40	Q&A
14:50	**Chaired by SIG Champion, Dr. Ian Wassell** of **Computer Lab – University of Cambridge** **'Collaboration - The Many Flavours of Technology Transfer'** **Julian Peck,** Technology Associate, **Cambridge Enterprise** There is no "one size fits all". Drawing on several examples, Julian Peck will describe and discuss how businesses can access University technology and expertise in a range of cost-effective ways.
15:05	Q&A
15:15	**Chaired by SIG Champion, Dr. Ian Wassell** of **Computer Lab – University of Cambridge** **'A Perspective on Innovation'** **Prof. Andy Hopper,** Professor of Computer Technology and Head of Department, **Computer Lab – University of Cambridge** Innovation is an important topic being discussed by companies and governments in their quest for economic growth. After giving an assessment of the global context, examples of innovating companies based on personal experience will be highlighted. This will be followed by suggestions encompassing government, universities, and businesses large and small aimed at further improving the chances of winning gold medals for wealth creation.
15:30	Q&A
15:40	**Refreshment Break**
16:25	**Chaired by SIG Champion, Alex Butler of Microsoft Research** **'The Role of CDE Catapult in Academic/Industry Collaborations'** **Maurizio Pilu,** Director – **Connected Digital Economy Catapult** The CDE Catapult is part of a new network of R&D&I centres set up by Government with a £200m investment. In this brief talk Maurizio will first give an overview of the CDE Catapult, our specific role in supporting digital innovation in the UK and our engagement approach. Maurizio will also discuss how academic, the catapult and industry can work together for the benefit the wider innovator's community, including some examples of projects.
16:40	Q&A

| 16:50 | **Chaired by SIG Champion, Alex Butler of Microsoft Research**
'**A Research Council Perspective on Strategic Business Relationships'**
Matthew Ball, Head of Business Relationships, **EPSRC**

The EPSRC has a long history of working closely with key industrial stakeholders to ensure it maintains a portfolio of excellent research and training that delivers against national need. Here Matthew will describe the different ways in which EPSRC works in partnership with universities and industry and highlight some success stories. |
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| 17:05 | Q&A |
| 17:15 | Open Forum with all speakers chaired by SIG Champion, **Marc Bailey** of **Nokia Research Centre**
With additional panellists, **Prof. Daping Chu,** Chair of the **Centre of Advanced Photonics & Electronics (CAPE)** and **Prof. Tim O'Farrell,** Chair of **Wireless Communication, University of Sheffield** |
| 17:45 | **Closing remarks** from SIG Champion, **Marc Bailey** of **Nokia Research Centre**
Please fill in your evaluation forms |

Delegates are invited to attend the Founders' Dinner pre-dinner drinks, taking place at Newnham College, Lucia Windsor Room, Cambridge and kindly sponsored by ICT KTN.

With the permission of the speakers, presentations will be loaded to the Cambridge Wireless website on the day following the event

Profile of Organisers

About Cambridge Wireless (CW)

CW is the leading international community for companies involved in the research, development and application of wireless & mobile, internet, semiconductor and software technologies. With 400 members from major network operators and device manufacturers to innovative start-ups and universities, CW stimulates debate and collaboration, harnesses and shares knowledge, and helps to build connections between academia and industry.

CW's 18 Special Interest Groups (SIGs) provide its members with a dynamic forum where they can network with their peers, track the latest technology trends and business developments and position their organisations in key market sectors. CW also organises the annual Future of Wireless International Conference and Discovering Start-ups competition along with other high-quality industry networking events and dinners. With headquarters at the heart of Cambridge, UK, CW partners with other international industry clusters and organisations to extend its reach and remain at the forefront of global developments and business opportunities. For more information, please visit www.**cambridgewireless**.co.uk

ICT KTN

Creating a competitive advantage for the UK by facilitating knowledge exchange on Information and Communications Technologies and accelerating innovation. This new KTN has been formed from a merger by the Digital Communications and Digital Systems KTNs with the objective of bringing competitive advantage to the UK by facilitating the exchange of knowledge on ICT technologies and capabilities. We plan to do this by acting as a 'Network of Networks', organising a range of events and providing support throughout the UK in association with other communities of interest and centres of excellence. For more information please visit: www.**ictktn.**org.uk

Profile of SIG Champions

Marc Bailey, Nokia Research Centre

Marc Bailey is a Research Leader in the Nokia Research Centre Sensors and Materials Laboratory. After Marc received his PhD from the University of Cambridge he followed a successful academic career including post-doctoral studies at Tufts University in Boston and the Laboratory of Molecular Biology in Cambridge UK. Marc left academia in 2001 to join the UK's Metrology Institute, the National Physical Laboratory, where he established one of the first metrological research teams in the world designed to support the biotechnology industry working with leading multinationals, start-ups and academia. In 2008 he joined Nokia Research Centre and initiated research into the development of new chemo-and biosensors for mobile communications devices and then on their application to the mobile healthcare and wellness sectors. He is currently developing approaches to expand current mHealth applications using contextual awareness and pervasive sensing techniques. For more information please visit: **research.nokia**.com

Alex Butler, Microsoft Research

Alex is a Senior (Research) Hardware Engineer at Microsoft Research, Cambridge in the Sensors & Devices group where he spends his days helping to create new technologies in the area of embedded devices and human computer interaction - including novel multi-touch Surface technologies. He started out spending 10 years at Manchester University doing academic research into optical computing, holographic interconnects, parallel 3D computer graphics, scientific visualisation & virtual reality systems. He then spent another 10 years at Scientific Generics (Sagentia) doing

commercial technology & business consultancy including helping to implement embedded wireless and video-on-demand systems for a number of start-ups such as Ionica, Westica and Imerge. Four tortuous years then followed at Polatis (a photonic switch start-up) where - as part of the founding team - he led the technical development of a novel ultra-low insertion-loss piezo-driven OXC product. At Microsoft Research he is part of a fantastic group of inventive and creative minds hoping to bring rich, new, and playful user experiences to the world of human computer interaction looking 5, 10 or even 20 years ahead. For more information please visit: **research.microsoft**.com

Claudio Marinelli, Applied Graphene Materials,

Claudio had significant experience in numerous aspects of the commercialisation of emerging technologies, including product development and marketing, business strategy and venture investment. He was Open Innovation Director for Nokia Research, responsible for the strategic and operational oversight of the R&D collaboration portfolio of 13 Nokia sites across the globe. Prior to joining Nokia, Claudio was Entrepreneur-in-Residence at the University of Cambridge for Advance Nanotech – a US seed investment fund specialised in academic spin-offs – and Senior Device Engineer at Luxnet Corp – a California based start-up company supplying optoelctronic and telecommunication components. He also held the position of Senior Research Associate in photonics at the Engineering Department of the University of Cambridge, UK. Claudio holds a Laurea degree in Physics from the University of Trieste, Italy, a PhD in Electronic Engineering from the University of Bristol, UK and an MBA from the Judge Business School at University of Cambridge, UK. For more information please visit: http://**appliedgraphenematerials**.com/

Ian Wassell, University of Cambridge - Wireless Communications Team

Dr Ian Wassell joined the University of Cambridge Computer Laboratory as a Senior Lecturer in January 2006. Prior to this, he was with the Department of Engineering for six years. He received the PhD degree from the University of Southampton in 1990 and the BSc. and BEng. (Honours) Degrees (First Class) from the University of Loughborough in 1983. He has in excess of 15 years' experience in radio communication systems gained via positions in industry and academia and has published more than 130 papers. His research interests include broadband FWA networks, wireless sensor networks, radio propagation, coding, and communication signal processing. For more information please visit: www.**cl.cam**.ac.uk

Profile of Speakers

Matthew Ball, EPSRC

Matthew joined EPSRC in 2006 following the completion of a BSc (Hons) in Physics and PhD in Condensed Matter Physics at the University of Liverpool. He spent six years managing the Electronics Materials and Devices academic portfolio and was the EPSRC lead for engaging with the Electronics, Comms and IT industrial research community. During this time he launched the ICT Pioneers initiative, a partnership with industry sponsors which aims to showcase the best PhD researchers in ICT related disciplines to an industrial and government audience, and developed EPSRC's Underpinning Power Electronics initiative, which saw the announcement of an £18m investment to establish a national centre of excellence. He is now Head of Business Relationships, with overall responsibility for managing strategic partnerships with key industrial stakeholders and developing EPSRC overall user engagement strategy. For more information please visit: www.**epsrc**.ac.uk

Prof. Andy Hopper, Computer Lab – University of Cambridge

Andy Hopper is Professor of Computer Technology at the University of Cambridge, Head of Department of the Computer Laboratory, and elected member of the University Council. His research interests include computer networking, pervasive and sensor-driven computing, and using computers to ensure the sustainability of the planet.

Andy has pursued academic and industrial careers simultaneously. In the academic career he has worked at the Computer Laboratory and the Department of Engineering at Cambridge. In the industrial context he has co-founded a dozen spin-outs and start-ups, three of which floated on stock markets, as well as working for multinational companies. He is currently Chairman of RealVNC Group and Ubisense plc.

Professor Hopper received the BSc degree from the University of Wales Swansea (1974) and the PhD degree from the University of Cambridge (1978). He is a Fellow of the Royal Academy of Engineering (1996) and of the Royal Society (2006). He was made a CBE for services to the computer industry (2007). During 2012-2013 he is President of the Institution of Engineering and Technology (IET). For more information please visit: www.**cl.cam**.ac.uk/

Julian Peck, Cambridge Enterprise

Julian spent 17 years commercialising innovations in Newcastle before joining Cambridge Enterprise. A graduate of the IfM (Institute for Manufacturing) and a Chartered Mechanical Engineer, he has considerable industrial and commercial experience and of forming strategic partnerships.

He has first-hand experience of setting up, financing and running three technology development companies. For further information please visit: www.**enterprise.cam**.ac.uk/

Maurizio Pilu, Connected Digital Economy Catapult

Maurizio is a technologist, innovator and strategist with over 20 year experience in the digital sector. He's currently a partnerships director at the Connected Digital Economy Catapult, the new R&D&I centre set up by the Technology

Strategy Board with a £50m investment.   Recently he spent 4 years at the UK's innovation agency, the Technology Strategy Board, where he led on a number of strategic innovation initiatives and multi-million pound investments. He previously worked for 10 years in a corporate R&D environment at Hewlett Packard Laboratories as senior scientist where he led a number of advanced R&D projects in multimedia and imaging. He then spent 2 years as associate director in a private equity firm specialized early-stage funding and of high-technology start-up companies. . Maurizio holds dozens of US patents and has published over 30 scientific articles in refereed conferences and journals. He holds a Doctorate in Computer Vision from the University of Edinburgh and an Executive MBA from the Bath School of Management.   Best place to follow Maurizio is on twitter: @Maurizio_Pilu. For more information please visit: **cde.catapult**.org.uk/

Dr. Tapani Ryhänen, Nokia Research Centre

Dr Tapani Ryhänen, Nokia Research Center, Espoo, Finland. Tapani Ryhänen received his PhD from the Helsinki University of Technology in 1992. After working for four years in Vaisala and VTI Technologies, he joined Nokia in 1995. He is currently heading Nokia Research Center's Sensor and Material Technologies Laboratory in Cambridge, Espoo and Moscow. His teams are focusing on electronics, mechanics, nanotechnologies and pervasive sensing. He is a member of the Nokia CTO Technology Council, and he is responsible for Nokia's research collaboration with the University of Cambridge and the Skolkovo Institute of Science and Technology. Before his current role he was leading Nokia's strategic research in the areas of future user interfaces, future device architectures and interfaces, mechanics and miniaturization in 2004-2007. His previous work at Nokia covers sensor technologies and applications, wellness and health applications, ambient intelligence, RF MEMS, microsystems, architectures of sensor and mass storage solutions. He has authored over 80 publications, and he has over fifty granted patents and several other patent filings. His is one of the creators of Nokia's awarded Morph concept and an author and editor of a book "Nanotechnologies for Future Mobile Devices". For more information please visit: **research.nokia**.com

Profile of Panellists

Daping Chu, Centre of Advanced Photonics and Electronics (CAPE)

Professor Daping Chu is Head of the Photonics & Sensors Group in the Electrical Engineering Division, Cambridge University Engineering Department. He is also a Fellow and Director of Studies in Selwyn College and a Concurrent Professor of Nanjing University in China. He has wide experience in collaborating with both academic and industrial partners. He was formally the Chief Researcher and then the Executive Researcher at Cambridge Research Laboratory of Epson. His research activity has been in the areas of both theoretical and experimental condensed matter physics, semiconductor devices and materials, nanostructures and properties, ferroelectrics non-volatile memory devices, organic electronics and inkjet fabrication process. Currently research interests include: future display technologies including full colour high brightness trans-reflective displays and 2D/3D holography, GHz/THz tunable dielectrics, energy saving and radiation control for the built environment, metal oxide materials and transparent electronics, and printable and flexible electronics and inkjet fabrication. For more information please visit: www-**cape**.eng.cam.ac.uk

Tim O'Farrell, University of Sheffield

Timothy O'Farrell is Chair Professor in Wireless Communication at the University of Sheffield, UK. He is an expert in wireless communication systems specialising in physical layer signal processing, radio resource management and wireless network planning. He has pioneered research on energy efficient mobile cellular communications, the mathematical modeling of CSMA based MAC protocols for WiFi, iterative block coding for wireless communication systems and spreading sequence design for CDMA wireless networks. He is an entrepreneur, being the cofounder and CTO of Supergold Communication (2000-2007), a start-up that participated in the standardisation of IEEE 802.11g with the MBCK proposal. In the framework of Mobile VCE (mVCE), Professor O'Farrell was the Academic Coordinator of the Core 5 Green Radio project (2009-2012) and a leader in establishing energy efficiency as a global research field in wireless communication systems. He has managed 18 major research projects as principle investigator with a total research spend of approximately £10M; he has published over 200 journal and conference papers; holds 8 patents; and has participated in standards, consultancies and expert witness activities within the wireless sector. Currently, Professor O'Farrell is a member of the mVCE Steering Group where he leads the Modus Operandi Focus Group responsible for translating mVCE's research vision into strategic research roadmaps and programmes. Professor O'Farrell is a Chartered Engineer and a member of the IET and IEEE. For more information please visit: www.**sheffield.ac**.uk/**eee**