Academic & Industry SIG
'Making Research Relevant to Industry'

16 July 2014

This event is hosted by The Institute for Manufacturing (IfM) and supported by Cambridge Cleantech

Lunch is sponsored by Microlease, Agilent Technologies

*This SIG is championed by Ian Wassell of **University of Cambridge,** Marc Bailey of **Nokia Technologies**, Bozidar Radunovic of **Microsoft Research**, Claudio Marinelli of **Applied Graphene Materials and** Dave Roberts of **Jabooh Software Solutions***

Venue – Institute for Manufacturing (IfM), 17 Charles Babbage Rd, Cambridge CB3 0FS

AGENDA

12:00	Registration & Networking over Lunch
13:00	Introduction to the CW Academic & Industry SIG from **Ian Wassell of University of Cambridge**
13:10	Welcome from our host **Prof. Ian Hutchings, GKN** Professor of Manufacturing Engineering**, IfM**
13:20	Welcome from our lunch sponsor **Simon Wordingham,** Research Account Manager**, Microlease / Agilent Technologies**
	Session chaired by Ian Wassell of University of Cambridge
13:30	**'Inspiring research through industrial collaboration: Opportunities and Challenges'** **Tim Minshall**, Reader in Technology and Innovation Management, **IfM** Working with industry partners can provide academic researchers with exciting research opportunities, sources of funding, and increased likelihood of ensuring the research results lead to impact. There are also many areas where such partnerships can prove challenging for both sides. This talk will present a short overview of the key issues, and the approaches that can be used to improve the chance of mutually successful outcomes.
13:50	Q&A
	'Academic Collaborations'
13:55	**George Matich**, Chief Technologist (Communications & Network Systems) **Selex ES** Selex ES Limited has a long history of collaborating with world class Academic Institutions both in the UK and around the world. This history most probably began when Professor Fleming the inventor of the Thermionic Valve at UCL was employed as a consultant to Guglielmo Marconi to support the development of world leading wireless technology nearly a century ago. Moving on from these beginnings Selex ES Limited continues to maintain many close collaborations with academia. This talk provides an overview of some of their collaborations, together with an sight into experiences of knowledge and technology acquisition via the global Academic Community.
14:15	Q&A
14:20	**Starting Small: SMEs and Research chaired by Marc Bailey** of **Nokia Technologies** Session 1 – **Claudio Marinelli** of **Applied Graphene Materials** Session 2 – **Bill Munday** of **Blendology** Session 3 – **Jonathon Chambers** of **Loughborough University**
14:35	**Refreshment break** with opportunities to visit the poster board displays
	Session chaired by Claudio Marinelli of Applied Graphene Materials
15:15	**'Airborne Ice and Snow Radars (and other EM Sensors)'** **Carl Robinson,** Airborne Survey Engineer, **British Antarctic Survey** BAS will present their future aspirations for antenna, transmission, reception and data logging technologies that will facilitate their future experimental programme. BAS uses airborne radar to study the Antarctic ice sheets and is now working on airborne radar to survey the top hundreds of metres of snow and ice to a resolution of 2cm. This is a 2 to 8GHz CW system employing digital and RF technology to achieve frequency agility. BAS also deploys various Electromagnetic (EM) sensors for sea ice measurement that present unique technical challenges.
16:35	Q&A

	'How to make corporate R&D useful to industry'
16:40	**Dr Chris Winter,** Partner**, New Venture Partners** This talk will look at different ways to think about planning and running R&D based on experiences in intellectual properties (IP) exploitation and the venture model of building companies. R&D has a very low success rate of converting projects in to commerce successes that is reflected in low values typically placed on the IP generated by R&D. The net result is that R&D can destroy value, with the value of the generated IP being less than the aggregated cost. By thinking back from the final product to the start point can we learn new ways to run R&D and derive useful insights on how to balance aspects such as incremental and "blue sky" research focus, disruptive technology and disruptive business models. The talk will draw from experiences in the commercialisation of industrial as well as well academic R&D.
17:00	Q&A
17:05	**Open Forum chaired by Marc Bailey of Nokia Technologies** With all speakers, SMEs, and additional panellist, **Claus Bendtsen**, Head of Computational Biology, **AstraZeneca**
17:30	**Event Closes** Please fill in evaluation forms

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

Profile of Organisers

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 20 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

Profile of Host and Lunch Sponsor

The Institute for Manufacturing (IfM)

The Institute for Manufacturing (IfM) provides a unique environment for the creation of new ideas and approaches to modern industrial practice. Part of the university's Department of Engineering, it takes a distinctive, cross-disciplinary approach, bringing together expertise in management, technology and policy to address the full spectrum of industrial issues. The IfM integrates research and education with practical application in industry.

Prof. Ian Hutchings is the GKN Professor of Manufacturing Engineering. He is also a fellow of St John's College, Chairman of St John's Innovation Centre Ltd. For further information http://www.ifm.eng.cam.ac.uk/people/imh2/

Agilent Technologies

Agilent Technologies, the world's premier measurement company offers a full range of the latest wireless test equipment that spans the entire lifecycle from early design and development through to volume manufacturing, network deployment and service assurance. For more information, please visit: www.**agilent**.co.uk

Microlease

Microlease is the expert in Test Equipment Management. We have over 30 years of experience offering the best test equipment with a range of financing options. With over 4,000 instruments to choose from covering a range of manufacturers and industries, Microlease can help deliver your projects on time and on budget. Whether you need equipment for short or long periods, we can help you easily acquire what you need, when you need it, with options that are ideal for your situation. Our portfolio of services includes rental, leasing and finance, buying new or used equipment, calibration, asset management and auditing and even a programme to buy back your unused equipment. Microlease is also Agilent's Authorised Technology Partner in the UK, Ireland and Italy. Our strong partnership with Agilent gives you

access to the best Agilent equipment supported by an unbeatable range of Microlease financial solutions. For more information please visit: www.**microlease**.com.

Cambridge CleanTech

Cambridge Cleantech is the members' organisation supporting the growth of environmental goods and services or "cleantech" companies in Greater Cambridge and across the region. Their ambitious plans are to further develop Cambridge as a leading cleantech centre in Europe and in doing so help promote the next wave of the Cambridge hi-tech cluster. Cambridge Cleantech will encourage supply chain opportunities for companies in the sector, enable shared experience of innovative growth businesses and provide collective services such as access to finance, government regulatory updates and links to international partners. For more information please visit: www.**cambridgecleantech**.org.uk

Profile of SIG Champions

Marc Bailey, Nokia Technologies

Marc is a Research Leader in the Nokia Technologies Division. 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 Center 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

Bozidar Radunovic, Microsoft Research

Bozidar is a Researcher in the Networks, Economics and Algorithms and Systems and Networking groups at Microsoft Research, Cambridge. His research interests are in design and evaluation of computer systems and algorithms with particular interest in wireless communication and algorithms for processing big data. Bozidar received his PhD in technical sciences from EPFL, Switzerland, in 2005, and his BSc at the School of Electrical Engineering, University of Belgrade, Serbia, in 1999. He was a PhD student at LCA, EPFL from 2000-2005. Then he did a one year post-doc at TREC, at ENS Paris, in 2006. He also did a 6 month internship in IBM Zurich Research Labs in winter 2004/05. In 2008 he has been awarded IEEE William R. Bennett Prize Paper Award in the Field of Communications Systems. 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/

David Roberts, Jabooh Software Solutions

David has been around the software industry for more than 20 years and has worked in some of the UK's top software companies. His experience and interest in mobile platforms goes back over 10 years when he first joined Symbian, initially as Head of a Technical Consulting group which assisted Symbian customers and shareholders in creating products and platforms based on Symbian OS. This was followed by a period as leader of a small research team looking at possible disruptions to, and opportunities in, Symbian's business models and practices. After leaving Symbian/Nokia, David became the CTO of a start-up developing innovative mobile accessories and services. While waiting for this endeavour to make his millions, David became interim Head of Product Management at Citrix for XenServer, one of the world's leading virtualisation platforms that also drives the world's largest clouds. David is currently interim head of

Development for CARET (Centre for Applied Research in Educational Technologies) at the University of Cambridge. For more information please visit www.**caret.cam.**ac.uk

Dr 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

George Matich, Chief Technologist, Selex ES

Selex ES, a Finmeccanica company, is an international leader in electronic and information technologies for defence systems, aerospace, data, infrastructures, land security and protection and sustainable 'smart' solutions. From the design, development and production of state-of-the-art equipment, software and systems to through life support, Selex ES partners with its customers to deliver the information superiority required to act decisively, complete missions and maintain security and protection for operational effectiveness. Selex ES provides C4ISTAR systems, integrated products and solutions for airborne, land and naval applications delivering mission critical systems for situational awareness, self-protection and surveillance based on proprietary radar and electro-optic sensors, avionics, electronic warfare, communication, space sensors and UAV solutions. Selex ES also owns advanced technologies, products and capabilities in the design, manufacture and integration of air and maritime traffic control and management systems, the monitoring and protection of green and blue borders, secure communication networks and the deployment of 'smart' solutions for managing systems and infrastructures. For further information please visit: www.**selex-es**.com

Tim Minshall, Institute of Manufacturing (IfM)

Tim Minshall is a Reader in Technology and Innovation Management at the University of Cambridge - Department of Engineering's Institute for Manufacturing. He researches and teaches on topics including open innovation, investment and incubation of emerging technologies, and engineering education. He is a non-executive director of St John's Innovation Centre Ltd, a member of advisory/steering groups for the ideaSpace Enterprise Accelerator, Colworth Science Park, i-Teams, CU Entrepreneurs, and 100%Open. He is member of the IET's Policy Panel on Innovation and Emerging Technologies. For more information, please view www.**ifm.eng.cam**.ac.uk

Carl Robinson, British Antarctic Survey

Carl Robinson is Head of Airborne Survey Technology at British Antarctic Survey (BAS). BAS is a component of the Natural Environment Research Council (NERC) based in Cambridge. With three survey aircraft capable of Polar operations, BAS operates both in house developed and COTS sensor systems ranging from ice penetrating radar to airborne gravity; to aerial photography to airborne metrological measurements. As well as airborne sensors BAS uses a wide range of ground and sea base instrumentation to collect environmental data from the Polar Regions. For more information please visit http://www.antarctica.ac.uk

Dr Chris Winter, New Venture Partners

Dr Winter is a partner in NVP, a transatlantic VC firm specialising in corporate spin outs. He provides innovation consultancy to major corporations and R&D facilities, and is involved in setting up innovation centres in the UK and Italy. He was formerly CTO at Brightstar, BT's corporate incubator, VP engineering at a Cambridge software company and Head of Futures research at BT. He has been involved in creating more than 30 spin-outs and start-ups. For more information please visit www.**nvpllc**.com

Profile of Panellist

Claus Bendtsen, AstraZeneca

Claus Bendtsen joined AstraZeneca in January 2011 as Head of Computational Biology from Novartis where he held responsibilities for modelling and biostatistics within protein sciences and production. Prior to this he spent several years with Merck & Co providing expertise in modelling and statistics across several functional and therapeutic areas from early discovery to late development and contributed to the development of the Gardasil vaccine. Earlier in his career he co-founded three start-ups and worked in academia which included leading a centre for applied bioinformatics.

He holds a Ph.D in applied mathematics from Danish Technical University and has a Spanish wife and two children. For more information please visit http://www.astrazeneca.co.uk/home

Profile of SMEs

Applied Graphene Materials presented by **Claudio Marinelli.** For more information please visit: http://**appliedgraphenematerials**.com/

Blendology presented by **Bill Munday.**

Presentation will discuss OneTap connected technology and vision to create an e-link conference base that is self-manged and can be programmed by just tapping an iPad, Android Table. For more information please visit http://www.blendology.co.uk.

Loughborough University presented by **Jonathon Chambers.**

This presentation will introduce an on-going successful example of aligning the demands of industry with university research through collaborations between Loughborough, Surrey, Strathclyde and Cardiff Universities supported by key players in the defence sector: QinetiQ, Selex-ES and Thales. For more information please visit http://www.lboro.ac.uk/departments/eese/ourpeople/staff/academics/professors/chambers-jonathon.html