

Technology Management

The newsletter of the Centre for Technology Management (CTM)

March 2017

TIM training course 2017

Jesus College provides a wonderful setting for CTM's annual Technology and Innovation Management (TIM) training course, 28-30 March. This course covers a range of key frameworks, tools and techniques, including topics such as open innovation, roadmapping and intellectual property management, delivered by a team of academics and researchers.

This popular course has been running since 2006, and is oversubscribed again this year. The schedule combines presentations, discussion and practical activities, and the opportunity to meet peers from other companies and sectors facing similar generic technology and innovation management challenges. The TIM course provides a broad overview of technology and innovation management – specialised courses are available for particular modules, including customised in-company training.



If you would like to express interest in attending the 2018 course please get in touch: ifm-events@eng.cam.ac.uk

STIM event hosted by Grundfos

STIM (Strategic Technology & Innovation Management) is a practice-oriented research and networking collaboration between participating companies and the Centre for Technology Management. STIM 2017 comprises 22 companies from a wide range of sectors, and 17 diverse research projects, ranging from an exploration of the cost of delay to R&D projects to the translation of complex societal challenges into future business opportunities.

An annual series of events provides an opportunity for research and practice exchange, with the first for 2017 hosted by Grundfos in Bjerringbro, Denmark, 21-22 February. The schedule included presentations, discussions, workshops and two excellent tours of a world-class production facility and the company museum. As the host, Grundfos had the opportunity to involve local colleagues and to pose two interesting challenges for discussion in the Members' Forum.

For more information about STIM, please contact **Dr Rob Phaal**: rp108@cam.ac.uk



PhD student presents research to RADMA trustees

Yuta Hirose, a 3rd year PhD student in CTM, was invited to give a presentation about his PhD research at the RADMA Trustees' Meeting, held at the IfM on 9 February. The aim of his PhD research is to characterise the emergence of technology ventures by applying roadmapping, and utilise insights from his research to explore opportunities to support technology entrepreneurs' and managers' strategic thinking in practice.

In his presentation, he discussed his research results showing that there are four emergence patterns, and discussed how technology entrepreneurs and managers require different approaches to strategy and innovation depending on the innovation systems in which the technology ventures operate. Yuta's research is based on case studies conducted in the United Kingdom, The Netherlands, Japan, Australia and the United States. Yuta holds an award for RADMA Doctoral Studies Programme.

For more information contact Yuta: yh359@cam.ac.uk

Exciting new roles for CTM members

CTM's new head, **Dr Tim Minshall** is taking on an additional new role as Deputy Head at the Institute for Manufacturing. This has been driven by some very exciting developments at the heart of the University relating to the way in which university-industry engagement is managed.



The Head of the Institute for Manufacturing, **Professor Andy Neely** has been appointed to the post of Pro-Vice-Chancellor for Enterprise and Business Relations, leading the University's strategy to enhance and develop its engagements and partnerships with industry and

commerce, and the wider enterprise economy in the region. Professor Neely will remain as Head of IfM for the rest of this academic year but Dr Tim Minshall as Deputy Head will take on much of the day-to-day-running of IfM.

We are also delighted to report that **Dr Clive Kerr** has been promoted to Senior Research Associate. This is very well deserved recognition for his sustained high quality research activities that are pushing the boundaries of knowledge and practice in areas including visual strategy, roadmapping, and the development and deployment of novel technology management tools.



Congratulations to the new Dr

Dominik Deradjat successfully defended his PhD thesis on 16 December last year and joined CTM as a Research Assistant in January. His work will focus around the implementation of Additive Manufacturing for mass Customisation. He will continue his work as a member of the Bit-by-Bit research project: www.dfab.info



4th Strategic IP Forum

On 1 December last year, CTM welcomed a group of about



60 people interested in the management of intellectual property for the fourth time since 2014 to the Strategic IP Forum (SIPF) jointly organised with Avidity IP. Four excellent speakers shared their insights into the IP-related challenges of making collaborations work between large and small firms. As always, the talks were selected to cover different, but complementary, perspectives, ranging from insights into technology licensing at Caterpillar, the approach of managing IP at Cambridge Display Technology

(now part of the Sumitomo group), but also exploring the perspective of an entrepreneur and issues around trade secrets. We will continue to run the SIPF as a free event for interested colleagues, primarily targeted at people from manufacturing firms.

The fifth SIPF is scheduled for Thursday 18 May with the theme likely to be focused on IP strategies for software.

Event and programme details: bit.ly/2nG6y83

Registration webpage: bit.ly/2mFjMQO

International roadmapping workshop on 'The Future of Patent Analytics'



On 3 March, CTM hosted an international workshop bringing together 25 experts from a range of different stakeholders, including industrial users, patent offices, software providers and academics to jointly explore the future of patent analytics. The group ran a roadmapping exercise led by IfM ECS colleagues focused on five current problems, discussing and mapping possible technological solutions. The outcome of the workshop will be published in a report that may contribute to the future development of the field through facilitating a conversation about how patent analytics may develop over the next 10 to 20 years. The workshop is part of an EPSRC funded project, supported by the Cambridge Big Data Strategic Research Initiative and Aistemos.

Keeping up with developments in R&D Management

The R&D Today website (see www.rndtoday.co.uk), launched last year and as reported in our previous newsletter, provides a rich source of knowledge and ideas around key topics in R&D Management. Currently, main themes are:

- Creativity and ideation
- Roadmapping
- Technology Strategy
- Managing International R&D
- Managing R&D Pipeline
- Open innovation

Several CTM members are involved in supporting this RADMA initiative, which has now been joined by a monthly newsletter, which highlights topics of immediate interest and new developments.

If you are interested in signing up to the newsletter mailing list, go to www.rndtoday.co.uk/contact

People news

Cecilia Maria Angioletti is an Italian visiting PhD student from Politecnico di Milano. Her current research focuses on the efficiency and sustainability of manufacturing, particularly on the opportunities that arise from the industrialisation of additive manufacturing technologies.



Her work explores additive manufacturing's ability to trigger better industrial performance by means of the circular economy paradigm.

Serena Flammini has joined the Bit by Bit project as a Research Assistant. She is continuing her research on technology commercialisation and business model dynamics of new digital manufacturing technologies in established markets, with a particular interest in 3D printing in the food industry.



Serena is completing a Ph.D. course from the Department of Business Studies at Roma Tre University. She graduated in Strategy and Management at Roma Tre University and she has conducted part of the research for her master thesis at the Haas School of Business at UC Berkeley. Serena has spent the last year of the PhD as Academic Visitor at CTM supervised by Dr Letizia Mortara.

Benjamin Schönfuß has joined CTM as a visiting scholar from RWTH Aachen University. He is working with Thomas Bohné on developing a framework to translate complex societal challenges into future business opportunities.



The aim of his research is to help entrepreneurs and companies identify how they can maximize their positive impact on our world.

Benoit Tezenas du Montcel is a second year PhD student from the National Conservatory for Arts and Craft (Cnam). He is working on

how companies adapt to digital manufacturing and the consequences for their value networks.



He will be working with CTM and CSTI under the supervision of Tim Minshall, Frank Tietze and Charles Featherston until June 2017.

Bang Yang Yong is a visiting student from the Management & Science University (MSU) in Malaysia, currently pursuing a Bachelor's degree in Games

and Animation. He is deeply passionate about the arts and has skills in both fine (sketching, painting, handcrafting) and digital (3D modelling, graphic designing, photo editing) arts.

Bang Yang intends to utilize his skillset for his project to develop customised virtual reality software for the IfM.



He will be working with Tim Minshall until the end of August 2017.

Science, Markets & Society: Crossing boundaries, creating momentum

Continuing the recent series of successful R&D Management Conferences, this year's event will be held at KU Leuven, one of the oldest universities in Europe, where six centuries of scholarship combine with cutting-edge science.



Conference Chairman, Professor Koenraad Debackere, writes:

Dear colleagues,

Looking forward to meeting you at the 2017 R&D Management Conference in Leuven.

After a successful and exciting R&D Management Conference in Cambridge, the 2017 R&D Management Conference will take place at the University of Leuven from 3 July till 5 July and will be preceded by a Doctoral Colloquium on 1-2 July.

We thank our colleagues in Cambridge for a job well done and we look forward to meeting you in Leuven very soon now. Having received over 300 abstracts and multiple workshop proposals both by academia and industry, the conference promises to offer a wealth of scientific contributions, multiple opportunities to discuss recent research insights and results, as well as rich possibilities to develop your collegial network.

Our agenda lists a variety of challenges that require constant scholarly attention and insight. In their wake, we will explore exciting new journeys like the relation between science, art and innovation, or the impact of public science on fostering private innovation thereby democratizing the innovation process. We invite you to have a look at the conference website: kuleuvencongres.be/rnd2017/articles.

So we are convinced that you will enjoy the interesting mix of familiar and less familiar, established and novel, areas of enquiry and insight. Thanks to a portfolio of excellent contributions by a plethora of researchers and practitioners eager to share their insight and understanding across our community.

Leuven offers an appropriate ecosystem to do this. You will also discover a pleasant, dynamic city. So we look forward to welcome you in July.

Warm regards.

Koenraad Debackere

On behalf of the Organising Committee



Technology management research at Cambridge

- Strategic technology management
- R&D project selection
- Software sourcing in manufacturing
- Enhancing creativity in new product development
- New product introduction collaboration
- Technology management: a process approach
- Technology selection
- Technology evolution in hi-tech firms
- Innovation management in hi-tech firms
- Emergence of technology based industry
- Technology scanning and intelligence
- Technology acquisition
- Intellectual property management
- Strategic make-or-buy
- Industrial make-or-buy decisions
- Sustainability and technology insertion
- Technology valuation
- Technology foresight

New publications

Ahn, J. Mortara, L. Minshall, T. (2017). Understanding the human side of openness: CEO influence on open innovation adoption in innovative SMEs. *R&D Management*

Flammini, S., Arcese, G., Lucchetti, M.C., Minshall, T., Mortara, L., 2016, Business Models for the Commercialisation of Digital Technologies in Established Markets: 3D Food-Printing, III WOIC conference, Barcelona.

Foegel, J. N., Lauritzen, G. D., Tietze, F., & Salge, O. (2017). Value Appropriation in Crowdsourcing Activities: How Solvers Enable Richer Trading Zones. Paper to be presented at the Academy of Management, Atlanta, US.

Goffin, K., Mitchell, R. *Innovation Management: Effective Strategy and Implementation*. Edition 3. Palgrave Macmillan 2016

Guo, M., Shi, X., & Tietze, F. (2017). Ecosystem Strategies in Technology Licensing. Paper to be presented at the Academy of Management, Atlanta, US.

Lütjen, H., Tietze, F., & Schultz, C. (2017). Service transitions of product-centric firms: An explorative study of service transition stages and barriers in Germany's energy market. *International Journal of Production Economics*, forthcoming (Special Issue on "Service Implementation on Manufacturing Firms: Strategy, Economics and Practice").

Pieper, T., Tietze, F., Schultz, C., & Herstatt, C. (2017). To share or not to share - Exploring the impact of sharing behaviour on user innovativeness. Paper to be presented at the Academy of Management, Atlanta, US.

Sternkopf, J., Tietze, F., Eppinger, E., & Vimalnath, P. (2017). Open IP strategies for enabling sustainability transitions. Paper to be presented at the TEMSCON, Santa Clara, US.

Sternkopf, J., Tietze, F., Eppinger, E., & Vimalnath, P. (2016). Open IP strategies for enabling sustainability transitions. CTM working paper series, (10/16). Cambridge, UK.

Tietze, F., & Holgersson, M. (2017). Sharing innovative and best-practice approaches for teaching Intellectual Property Management: A workshop report. *World Patent Information*, forthcoming.

Diary 2017

www.ifm.eng.cam.ac.uk/events

May		
11	<i>IFM Briefing Day</i>	Open Event IfM, Cambridge
18	<i>Strategic Intellectual Property Forum</i>	Event IfM, Cambridge
June		
14-15	<i>Strategic Roadmapping Course</i>	Two-day Course fM, Cambridge

Contact us

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Frank Tietze in The Manufacturer and Financial Times

Dr Tietze appears in this month's *The Manufacturer* magazine with an article titled: "What happens to IP when David meets Goliath?"

In this article, he explores strategies that enable established companies and start-ups avoid the pitfalls and reap the rewards of cooperation. Read the article here: bit.ly/2nGmWoZ

Frank has also been asked to comment on the issue of the sudden increase in patent applications in China by the *Financial Times*. You can find the article "China poised to top global corporate patents" here: bit.ly/2nADlcm

