

Engineering the Future by Technology Innovation

Monday 25th September

Organised by

University of Cambridge Institute for Manufacturing (IfM) and The University of Tokyo School of Engineering & Institute of Industrial Science (IIS)

Date & Time

2 : 30 - 5 : 00 pm GMT, 2023 (face-to-face only)

Location

Seminar Room 3, Institute for Manufacturing, 17 Charles Babbage Rd, Cambridge, CB3 0FS

Language

English

Agenda

- 14 : 30 Welcome (Dr Robert Phaal, University of Cambridge)
- 14 : 30 Brief introduction of collaboration between two institutes (Dr Yusuke Kishita, The University of Tokyo)
- 14 : 40 "Metal-plastic direct joining using nano/micro textures" (Prof Yusuke Kajihara, The University of Tokyo)
- 15 : 10 "(Best) Practices in the integration of Social and Digital Decision - Making across Industries"
(Dr Letizia Mortara, University of Cambridge)
- 15 : 40 Digital poster session by students (2 min short presentation for each +30 min poster session)
 - "Engineering Change with Roadmapping" (Ms Anna-Marie Greenaway, University of Cambridge)
 - "Digitalizing Backcasting Scenario Design in Toyama City, Japan" (Mr Taiki Yokota, The University of Tokyo)
 - "Flow modifier effects on metal-polymer injection molded direct joining" (Mr Wang Shuohan, The University of Tokyo)
 - "Lapping tool surface control by optimizing material" (Ms Hu Bei, The University of Tokyo)
 - "BIM-based data model and Information Delivery Manual for hospital effectiveness"
(Ms Momoko Nakaoka, University of Cambridge)
 - "Proposal of the Development Method of Engineering Navigation System based on Digital Triplet"
(Mr Mizuki Kato, The University of Tokyo)
- 16 : 25 Wrap up (Dr Robert Phaal, University of Cambridge)
- 16 : 30 Announcement & Close (Prof Yusuke Kajihara, The University of Tokyo)
- 16 : 30 Overview of IfM and Automation Lab tour (Dr Robert Phaal & Mr Alan Thorne, University of Cambridge)
- 17 : 00 Close

https://sp.t.u-tokyo.ac.jp/UTokyo_Cam/activities/engineering-the-future-by-technology-innovation/



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Bios:



Letizia Mortara

Dr Letizia Mortara is a Lecturer (Associate Professor) at the University of Cambridge and a Senior Fellow at Newnham College, Cambridge. She leads the Decision-Making for Emerging Technologies group which aims to provide theoretical and practical approaches to help managers dealing with

the complex decisions of investing in emerging technologies. She is a recognised expert in technology intelligence and open innovation, she is an Associate Editor for the R&D Management journal. Her specific research interests include technology intelligence (i.e. activity set-up in order to keep abreast with the latest developments in technology), open innovation, and the advent of digital technologies in manufacturing (e.g. 3D printing) and in technology management (e.g. AI and VR) and their implications for business.

Links: [<https://www.ifm.eng.cam.ac.uk/people/lm367/>]



Yusuke Kajihara

Dr Yusuke Kajihara is a Professor at the Institute of Industrial Science, the University of Tokyo. He is also a member of DLX Design Lab. His research interests include dissimilar joining, passive nanoscale imaging, and terahertz measurements. He received his PhD in additive manufacturing from the University of Tokyo, Japan.

Links: [http://www.snom.iis.u-tokyo.ac.jp/index_e.html]



Yusuke Kishita

Dr Yusuke Kishita is Associate Professor at the University of Tokyo. He was Visiting Academic Fellow at University of Cambridge (December 2019-February 2020). His research interests include scenario design for sustainable futures, circular economy, roadmap design, and backcasting. He holds PhD in mechanical engineering from Osaka University, Japan.

Links: [http://www.susdesign.t.u-tokyo.ac.jp/kishitalab/index_en.html]



Robert Phaal

Dr Robert Phaal is based in the Department for Engineering at the University of Cambridge. He conducts research in the area of strategic technology management, with a particular interest in the development of practical management tools in technology-intensive firms. He is a chartered engineer, with a PhD in

computational mechanics.

Links: [<https://www.ifm.eng.cam.ac.uk/people/rp108/>]



Anna-Marie Greenaway, MEI

Anna is currently completing a PhD at the IfM, University of Cambridge, following a 30-year career in international energy. Her research is focused on Engineering Change with Roadmapping to support University-Industry innovation partnerships in addressing global challenges. Her industry roles included VP Science and Technology at bp plc and Global Director of bp's International University Partnerships. This role encompassed developing and leading BP's worldwide strategy for engineering, innovation, and policy research collaborations, focused on decarbonising energy pathways for multiple industrial sectors, systems and regions. Anna currently serves as a member of the UK Government Science Advisory Council for the Department for Transport and from 2015 to 2020, she served on the governance boards of the BP Institute and the International Centre for Advanced Materials as well as advisory committees of the Cambridge Centre for Risk Studies, Scott Polar Research Institute and the Clean Energy Centre at Tsinghua University, Beijing. Her academic background is in Earth Sciences, and she holds a BSc from the University of London, and a master's degree in Sustainability Leadership from the University of Cambridge. Anna is a Senior Fellow of the University-Industry Demonstration Partnership and a Member of the Energy Institute.

Links: [<https://www.ifm.eng.cam.ac.uk/people/amg70/>]