

## Tokyo-Cambridge Voices

**Title:** Engineering the Future by Design: anticipating and responding to disruption and transformative change through collaboration

**Time:** 9-10am GMT; 6-7pm JST, Thursday 10th December 2020

**Summary:** This session will focus on practical approaches for improving the effectiveness of futures thinking and analysis, which is crucial if society is to deal with the systems-level challenges we are facing – pandemics, climate change and biodiversity loss, for example. Integrated system-level collaborative approaches are essential. Firstly, design thinking is impacting on many fields, including foresight, providing systematic human-centred problem-solving techniques and processes. Secondly, visually-rich methods such as scenario planning and roadmapping can be helpfully combined in toolkit design for futures analysis and strategic planning. In this session the academics involved will present and discuss their research, and the benefits of collaboration in this field.

**Keywords:** Futures, Foresight, Design, Engineering Strategy, Innovation, Sustainability

**Language:** English

**Audience:** Industry (engineers, technologists, managers, strategists), government (policy makers and programme managers), university (researchers, students)

**Format:** Mix of presentations, Q&A and semi-structured discussion, from two research collaborations

**Agenda:**

09:00/18:00: Welcome (YK), Introductions

- Background to UoT-UoC collaboration, and this session

09:05/18:05: Prof Miles Pennington

- Design Led X - Integrating design thinking into engineering and science research environments

09:30/18:30: Dr Rob Phaal & Prof Yusuke Kishita

- Scenario-based roadmapping for sustainability

09:55/18:55: Wrap up (RP)

- Learning points from industrially-engaged collaborative research

10:00/19:00: Close

## Bios:

Prof Miles Pennington has been based at The University of Tokyo since September 2017, where he helps direct the DLX Design Lab. Previously he was at the Royal College of Art in London as Head of Programme of the Innovation Design Engineering (IDE) programme. He was also Founder and Head international exchange programme Global Innovation Design (GID).

Links: DLX Design Lab [ <https://www.designlab.ac/> ]



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/> ]



Dr Yusuke Kishita is Lecturer 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: Kishita Lab [ [http://www.susdesign.t.u-tokyo.ac.jp/kishitalab/index\\_en.html](http://www.susdesign.t.u-tokyo.ac.jp/kishitalab/index_en.html) ]

