Masterclass in Design Methods for Global Challenges

Global Challenges Initiative – University of Cambridge

19th March 2018, Maxwell Centre

The Global Challenges community at Cambridge focuses on research that can contribute to addressing the United Nations’ Sustainable Development Goals (SDGs), with a particular focus on the poorest half of the world’s population. The intended impact of such research is dependent on the efficient consideration of the needs of communities in the Global South. How should the direct understanding of global challenges from the perspective of end-users in developing world contexts be articulated as the starting point for the definition of appropriate research questions? How can the productivity of the dialogue between researchers and end-users in the Global South be maximized throughout the entire research cycle? How can the definition and the answer to appropriate research questions embed an implementation route for the resulting innovation that is adequate to the end-users?

The Masterclass will explore the similarities and differences between the approaches to co-creation with end users that have been adopted by each of following disciplines:

● Consultative selling for multidisciplinary systems design
● Public health-oriented methodologies
● Customer research for product development
● Participatory development research

This will be conducted as a way to identify translation points of specific disciplinary co-creation methodologies to the context of scientific research that intends to positively benefit communities in developing countries.

The format of the event is inspired by the set-up of a music masterclass, in which students perform a piece prepared in advance to receive advice from a master, while an audience watches the interaction. Expert practitioners from the aforementioned disciplines will lead informal one-to-one discussions with established Cambridge researchers, focussed on the exploration of the synergy between different co-creation methodologies and particular case studies of scientific research for developing world applications.

The Masterclass will include cases of ongoing research that might be shaped by the discussions with co-creation practitioners, as well as cases of completed research that will allow a reflection about the interaction of co-creation practices with the full lifecycle of a scientific project.

To register for the event, please complete the online form. This Masterclass is part of the focus of the Global Challenges Initiative in facilitating the dialogue and co-creation between Cambridge researchers and end-users in the developing world. Please find related opportunities here.
Speakers

Co-creation methodologies

Alan Blackwell
Professor of Interdisciplinary Design, Computer Laboratory, University of Cambridge
Consultative selling for multidisciplinary systems design
With a background in Electrical Engineering, Computer Science and Psychology, Alan’s past work in technology consultancy and corporate research, and current research and teaching at Cambridge focuses on themes related to software and interface design. Key elements of this practice are SPIN (stakeholder buy-in, identifying the decision-maker; contextual interviews (material /information artefacts, social and physical environment); paper prototypes and agile; management of expectations and contractual obligations.

Tine Van Bortel
Director of Research in Public Health, Cambridge Institute of Public Health, University of Cambridge
Public Health-oriented methodologies
Tine is a practitioner consultant and researcher of Global Health and Sustainable Development with a focus on mental health, health policy and overall wellbeing across the life course. Her work involves mixed-method approaches, qualitative approaches (including community based approaches, anthropological approaches, action research and community mobilisation) and whole systems and whole person approaches.

Simon Pulman Jones
Head of Innovation Consulting, GfK
Customer research for product development
With expertise in Business Anthropology, Simon’s co-creation work for major global companies across all different sectors is informed by the inter-related fields of participatory design, human-centred design and design thinking.

Matt Jones
Head of the College of Science and Professor of Computer Science, Swansea University
Participatory development research
Matt has worked with several industry partners such as Microsoft Research, Reuters, Orange, Nokia and IBM in human-computer interaction, software engineering and computing in social science, arts and humanities. His research currently focuses on mobile research and particularly on issues of lower computational and textual literacy in the context of developing world users.
Cambridge academic research

**Ljiljana Fruk**  
Research Group Leader, Department of Chemical Engineering and Biotechnology, University of Cambridge  

**Water remediation**  
Ljiljana researches the use of synthetic chemistry, molecular biology and various instrumental techniques to design bio-nano elements and hybrid materials for application in catalysis and medicine. Her research and her interest in the cultural and societal impacts of new technologies such as nanotechnology and synthetic biology can impact the lives of the world’s poorest 3 billion people through the development of novel, robust and affordable medical diagnostic devices and materials for water remediation.

**Chris Lowe**  
Professor of Biotechnology, Cambridge Academy of Therapeutic Sciences, University of Cambridge  

**Biosensor technology**  
Chris has carried out research in areas of healthcare biotechnology, including biosensors, biopharmaceuticals, diagnostics and enzyme, protein and microbial technology. His work has been highly interdisciplinary and ranging from fundamental to strategic applied science and he has been actively engaged in commercialization and entrepreneurship, having spun off 11 companies.

**Jim Haseloff**  
Research Group Leader, Department of Plant Sciences  

**Reprogramming plant development**  
Drawing on his pioneer establishment of plant synthetic biology tools, Jim’s research currently focuses on building a new generation of genetic circuits that incorporate intercellular communication and which could be used to generate self-organized behavior at the cellular level. Jim’s expertise in reprogramming plant development and morphogenesis and his commitment to the application of this knowledge in sustainable bioproduction and in the response to global threats presented to crops (such as new pathogens, climate change, soil degradation, restricted land use, salinity and drought) has the potential to impact the lives of the poorest half of the world’s population.

**Andy Neely**  
Pro-Vice-Chancellor (Enterprise & Business Relations)  

**Academia-Industry relations for the strategic research development of University of Cambridge**  
Andy is widely recognized for the servitisation of manufacturing and performance measurement and management, being Head of the Institute for Manufacturing (IfM) and of the Manufacturing and Management Division of the Engineering Department, as well as Fellow of the British Academy of Management and of the Academy of Social Science and of the European Operations Management Association. Andy also has a long track record on global partnerships between businesses and universities, being the Founding Director of the Cambridge Service Alliance, which brings together BAE Systems, IBM, IfM and Judge Business School in developing new understanding and approaches to complex service systems.
Programme

The presentation of a case study of academic work by each of the Cambridge researchers (20 minutes) will be followed by the discussion of its application in developing countries with a practitioner of co-creation (40 minutes).

10.30 - 10.50: Registration and coffee

10.50 - 11.00: Opening remarks

11:00 - 12.00: Ljiljana Fruk (research case study: water remediation) and Alan Blackwell (co-creation expertise: consultative selling of multidisciplinary systems design)

12:00 - 13.00: Chris Lowe (research case study: biosensor technology) and Tine Van Bortel (co-creation expertise: public health-oriented co-creation methodologies)

13.00 - 14.00: Lunch break

14:00 - 15.00: Jim Haseloff (research case study: reprogramming plant development) and Simon Pulman-Jones (co-creation expertise: customer research for product development)

15:00 - 15.45: Configuring Cambridge science for International Development: understanding approaches to entrepreneurship and partnership between universities and private sector companies Andy Neely (academia – industry relations) and Matt Jones (co-creation expertise: participatory development research)

15.45 - 16.00: Coffee break

16.00 - 17.00: Discussion and concluding remarks

17.00 - 18.00: Reception