

ECF in Manufacturing Research



Newsletter Winter 2017

Foreword

Just as the EPSRC ECF meetings take us to all parts of the country to visit world-class manufacturing research facilities, the meetings are also the occasion to celebrate our diversity and be challenged out of our comfort into exciting multi-disciplinary research. In particular, the latest discussions between designers, engineers and scientists during our meeting at the creative Chelsea College of Arts, University of the Arts London, have been animated and inspired! With help from our designer colleagues in the ECF, Kate Goldsworthy (UAL), and myself (HWU), have taken great pleasure at putting this programme together. Personally, this was last my last meeting, and I wish the new cohort joining the forum in March, to make the best out of the forum, be it, new research and collaborations, new friends, and different perspectives on Manufacturing! The newsletter series will be edited by Ian Oswald (Strathclyde) from now on.

Maiwenn Kersaudy-Kerhoas

Belfast

The 16th meeting of ECF in Manufacturing Research was hosted at Queen's University Belfast on 12 -13 September 2017. The topic of this meeting focuses on career progression and effective utilisation of social media for research. Two invited speakers and two forum members shared their career progression experience, and one forum member shared her successful experience on using social media to promote research. Both the topics were passionately discussed over the two days.

Yan Jin

London

The 17th ECF meeting was held in, undoubtedly, the most beautiful venue so far, the banquet suite of the Chelsea College of Arts situated in the listed Royal Army Medical College by the Thames.



Legend: The EPSRC ECF 17th meeting in Chelsea College of Arts (second day)

The theme of the meeting was suited to the location and entitled "Designers meet Scientists and Engineers" and was the occasion to hear more of the work by the designer members of the ECF in a round table workshop. Dr Mhairi Towler from Vivomotion Ltd gave a talk on the benefits of artwork, and video in particular to maximise research impact. Dr Rob Phillips from the Royal College of Arts followed with a walk-through presentation of his past and current projects, most of which involved engineers, which prompted a healthy debate on the challenges and benefits of multi-disciplinary approaches in research.

Kate Goldsworthy

2018 EPSRC ECF in Manufacturing Art and Design competition

To celebrate our meeting at the Chelsea London College of Arts, we asked members to send contributions of artistic and design works related to their research. We received over 50 contributions from over 14 members, ranging from music pieces, to photographs, through to sculptural works! After an online vote, Chris Holland "Disco Worms" composition was chosen as the best contribution. Chris received from the LCA a set of pencils and a beautiful sketchbook. Well done Chris! Louise Horsfall works with Burton-Nitta London studios were well noted and came second and third. We all enjoyed the wide range of supports, and agreed to run the competition annually. All submitted works can be viewed on the ECF website <https://ecfmanufacturingv.org>



Disco worms, Chris Holland



Winner of the 2018 EPSRC ECF Art and design competition: Chris Holland, University of Sheffield (middle) with host of 17th ECF meeting Kate Goldsworthy, University of Arts London, (right) and chair, Maiwenn Kersaudy-Kerhoas, Heriot-Watt University (left).

New Additive Manufacturing centre in Bath

Additive manufacturing (AM) is fundamentally changing the way engineering components are being designed and manufactured, unlocking new levels of geometrical complexity in engineering components. We are now witnessing the uptake of AM within many high-value engineering sectors. The aerospace, power generation and automotive sectors are now using AM to manufacture highly-efficient thermal management systems with lattice structures, light-weight structural components and turbine / impeller blade geometries with complex internal cooling. The medical sector uses complex surfaces and auxetic structures for the next generation of medical implants.

As part of our on-going strategy in Mechanical Engineering at the University of Bath, we have recently commissioned a Renishaw AM250 machine within the new Laboratory for Additive and Subtractive Engineering Research (LASER). We will be actively using the machine to manufacture highly-complex metal components across a range of research projects and teaching activities. It will be the cornerstone of the department's advanced manufacturing capabilities.

Vimal Dhokia



Legend: Vimal Dhokia (second from left) at the Laboratory for Additive and Subtractive Engineering Research (LASER) centre in University of Bath

Highlights

- Rebecca Cain (ECF 3) is now a Reader in Experience Design, Loughborough Design School, at Loughborough University.
- Maiwenn Kersaudy-Kerhoas (ECF 2) was promoted Associate Professor at Heriot-Watt University and received a 4 year £1.3M EPSRC Healthcare Technology Challenges Award starting in February 2018 to investigate novel solutions for sample preparation solutions, with a research axis on the development of sustainable medical microdevices.
- Adam Clare (ECF 1), has been promoted to Professor of Manufacturing Engineering in August 2017 at the University of Nottingham
- Professor Harish Bhaskaran (U.Oxford), ECF 1, has a full page profile in the UK Manufacturing Review 17/18. Bodle Technologies, an Oxford spin out developing digital display technology based on his research, secured £6m in Series A funding in January 2018. Credit: John Cains/ Oxford University Innovation.



On your agenda:

The next meeting will be hosted by EPSRC, jointly with the Manufacturing SAT and chaired by Dr Manish Tiwari (UCL). The meeting will focus on welcoming the 4th EPSRC ECF cohort and a Horizon Scanning exercise.

EPSRC

Engineering and Physical Sciences
Research Council

Polaris House
North Star Avenue
Swindon
SN2 1ET

www.epsrc.ac.uk

Further Information

<https://www.epsrc.ac.uk/research/ourportfolio/themes/manufacturingthefuture/activities/earlycareer/>

Editor: Dr Maiwenn Kersaudy-Kerhoas

- M.Kersaudy-Kerhoas@hw.ac.uk

EPSRC Contact: Dr Rebecca Williams
Portfolio Manager, Manufacturing the Future

- Rebecca.williams@epsrc.ac.uk