
Editorial

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Biographical notes: Professor Richard Bibb graduated from Brunel University in 1995 with a BSc (Hons) in Industrial Design, followed by a PhD from the *National Centre for Product Design & Development Research (PDR)* at Cardiff Metropolitan University in 1999. Following the PhD, Richard established the *Medical Applications Group* at PDR to conduct collaborative applied research and engage in knowledge transfer activities with a wide group of collaborators. Richard is currently Professor of Medical Applications of Design and Associate Dean-Research at Loughborough Design School, where he continues to use his background in industrial design and additive manufacturing research expertise specifically for design and medical applications.

Dr Allan Rennie graduated from Glasgow Caledonian University in 1995 with a BSc in Computer Aided Engineering, before moving to the *Centre for Rapid Design and Manufacture* at Buckinghamshire College and graduating with a PhD in additive manufacturing from Brunel University in 2001. In 2002, Allan moved to Lancaster University and established the Lancaster Product Development Unit (LPDU), using EU funding to enable the development of collaborative research relationships between academia and the private sector with a focus towards engineering design, product development and additive manufacturing. To date, LPDU have successfully delivered projects in excess of £13M, collaborating with in excess of 750 businesses and other organisations. Whilst retaining his function as Director of LPDU, in 2012 Allan accepted an academic role and is also currently a Senior Lecturer in Manufacturing Engineering within the Engineering Department at Lancaster University.

The *Rapid Design, Prototyping and Manufacturing Conference (RDPM)* is a key event in additive manufacturing in the UK, where students, postgraduate researchers and early career academics can come together and present their research, discuss topics of mutual interest, elaborate upon ideas and network with peers, all within the safe, supportive, rigorous yet constructive peer-reviewed environment that the Conference has established over the course of the 20 years that it has been operating. For many research students, the

RDPM Conference has been their first experience of presenting their research in public, to an audience of like-minded colleagues.

Originally conceived by the *Centre for Rapid Design and Manufacture* (CRDM) at Buckinghamshire College to allow dissemination for the small number of UK institutions involved in research in what was then known as 'Rapid Prototyping', the Conference has grown along with the additive manufacturing sector to incorporate a much wider group of participants from academia both in the UK and internationally, with contributions also forthcoming from Industry. It has stayed true to its original intentions of providing this platform free from the financial constraints of many symposia/fora, and is run as a non-profit making conference with fees kept as low as possible to encourage participation of, in particular, young researchers and new academics looking to test their research ideas and gain feedback and input from others.

More than 220 papers have been published and presented by over 400 researchers since the series of RDPM Conferences began in 1995. The vast majority have been contributed by PhD students, many of whom have gone on to successful careers in industry and academia. We are proud that many of the researchers active in additive manufacturing today presented their first paper at this conference, including the Guest Editors of this Special Issue of the *International Journal of Rapid Manufacturing*.

Having alternated between CRDM and Lancaster University for many years, the organisation of the RDPM Conference has witnessed some changes in recent years, now moving around the UK with annual coorganisation from other key institutions active in additive manufacturing research. The recent 14th RDPM Conference was hosted within the excellent facilities of the Loughborough Design School at Loughborough University, well established for their contributions to the field of additive manufacturing. A packed program of 15 presentations based on the work of 45 authors from eight educational institutions and four companies made for an excellent event. Presented within this Special Issue are significantly enhanced versions of some of the best of this research activity from UK Universities and their research partners in Europe.

These papers have a wide focus within the additive manufacturing subject area, covering fundamental processes for growing structures through material aggregation (Blaney et al.), high-speed sintering (Norazman et al.) and improving the performance of fabricated components through fibre reinforcement (Brooks et al.). As has been witnessed from the widespread adoption of additive manufacturing as a production technology, there is a significant focus on the application of these technologies, and the design capabilities required to enable such applications through, for example, the customisation of products so that they are bespoke to the user. Research presented within this special issue includes the personalisation of products from user-specific data (Green et al.), to the design of next-generation prosthetics (Bodkin et al.). The research presented by Smith and Mortati also touches on the subject of prosthetics manufacture, using the e-Nable Project as the basis for their Collaborative Commons Production and open-source approach to product fabrication for the wider population. Finally, Wooldridge and Hackney consider the importance of additive manufacturing within a mass production environment, focused upon the automotive sector.