The International Workshop on Digital Design and Manufacturing Technologies
- Embracing Industry 4.0 and Beyond

12-13 April 2016, Northumbria University, Newcastle NE1 8SW, UK

Agenda

Avenue: Northern Design Centre, Abbott's Hill, Gateshead, NE8 3DF

Our workshop program is scheduled as follow:

Day 1: 12 April, 2016

12.00-14.00  Registration
Session 1: Conference Keynotes and Opening, chaired by Prof Shengfeng Qin, Northumbria University

14.00-14.10  Conference Opening, Prof George Marston, PVC, Northumbria University (TBC)
14.10-15.10  Keynote 1—Smart Manufacturing, by Prof. Egon Müller, Chemnitz University of Technology, Germany

15.10-15.25  Break
Session 2: Factory Automation, chaired by Prof Robert Harrison, WMG, Warwick Uni.

15.25-15.45  Marketing study of Crowdsourced Product Design Development, by David Van der Velde, Consult and Design Ltd, Manos Chatzakis, Northumbria University, Terry McStea, RTC

15.45-16.05  Development of the Customer-driven Manufacturing System for Vari-focal Lenses in the Context of Industry 4.0, by Junli Liu & Kai Cheng, Brunel University

16.05-16.25  A collaborative simulation method with spatiotemporal synchronization process control for designing complex mechatronics system, by Yisheng Zou, Southwest Jiaotong University, John Tan and Shengfeng Qin, Northumbria University

16.25-16.45  Optimal Hybrid Wind/PV/Biodiesel Power System for a Household in the UK, by Chunqiong Miao, Ya Gao, Jie Ji and Yaodong Wang, Newcastle University

16.45-17.00  Break
Session 3  System Modelling and Data-Driven Intelligence, chaired by Prof Jihong Yan, HIT

17.00-17.20  A complex product systems modeling-based method to analyze design change in conceptual design, by Haizhu Zhang, Rong Li and Guofu DingSouthwest Jiaotong University

17.20-17.40  Study of Wireless Device Connection Problems and Design Solutions, by Ji-Won Song, Brunel Univerity, Tek-Jin Nam, KAIST, Don Norma, CUSCD, Shengfeng Qin, Northumbria University

17.40-18.00  Knowledge mining and data characterization of multi-source heterogeneous spatial data in Industry 4.0 environment, by Jihong Yan, Yue Meng, Lei Lu and Lin Li, Harbin Institute of Technology

18.00-18.20  Development of the supply chain oriented quality assurance system for aerospace manufacturing SMEs and its implementation perspectives, by Abdullahi Hussein and Kai Cheng, Brunel University

18.20-18.40  Networking and Free Discussion

Session 4:  Conference Dinner; chaired by Dr John Tan, NU

19.00—21.00  Conference dinner
  Avenue: Great Hall in Sunderland Building, Northumbria Uni. NE1 8ST

Day 2:  13 April, 2016

8.00-8.45  Registration

Session 5  Conference Keynote Talk, chaired by Prof Kai Cheng, Brunel University

8.45-9.45  Keynote 2-Smart Factories, by Prof Robert Harrison, WMG, Warwick University, UK

9.45-10.00  Break

Session 6  Smart Product and Design Technology, chaired by Prof Ling Shao, NU

10.00-10.20  Rediscovering long-term value of products through change in perception, by Mersha Aftab and Helen Rusli, Northumbria University

10.20-10.40  Research on method of Design model simplification for complex electromechanical products based on network theory and grey relational analysis, by Xin Han and Jian Zhang, Southwest Jiaotong University

10.40-11.00  Digital Relief Generation from 3D Models, by Meili Wang, Yu Sun and Dongjian He, Northwest A&F University and Min Jiang, Kun Qian and Jian Chang, Bournemouth University

11.00-11.20  An integrated method for interaction of manufacturing process and machine tool simulation, by Wanqun Chen, Dehong Huo and Xiang Yu Teng, Newcastle University and Wenkun Xie, Harbin Institute of Technology
11.20-11.30        Break

Session 7        Smart and Intelligent Manufacturing, chaired by Prof Guofu Ding, SWJTU

11.30-11.50    Digital evaluation of sitting posture comfort in human-vehicle system under Industry 4.0 framework, by Qing Tao, Wenlei Sun, Zhaobo Li and Xiao Huo, Xinjiang University, and Jinsheng Kang, Brunel University

11.50-12.10    Multidisciplinary requirement modeling of complex electromechanical products, by Xiaojie Ma and Wenpei Huang, Southwest Jiaotong University

12.10-12.30    Exploring challenges in developing a smart and effective assistive system for improving the experience of the elderly drivers, by Sebin Jung, General Motors Korea, Hongying Meng, Brunel University, Shengfeng Qin, Northumbria University

12.30-12.50    Enhancement of thermal conductivity of absorbents mixing with nanoparticles, by Qibai Wu, Xiaofen Yu, and Haiyan Zhang Guangdong University of Technology, and Ke Tang, Yiji LU and Yaodong Wang, Newcastle University

12.50-13.30     Sandwich lunch

Session 8      New Manufacturing Business Models and Challenges, chaired by Prof Müller

13.30-13.50    Investigation on simulation based energy-resource efficient manufacturing integrated with in-process virtual management, by Kanet Katchasuwanmanee and Kai Cheng, Brunel University and Richard Bateman, Coventry University

13.50-14.10    Research on the expression and multi-disciplinary collaborative adaptive design of the principle solution of complex mechanical product, by Jian Wang and Guofu Ding, Southwest Jiaotong University

14.10-14.30    Research on design space reduction and optimal design method of complex electromechanical products, by Jie Jiang, Southwest Jiaotong University

14.30-14.50    Form Gene Clustering Method about Pan-Ethnic-Group Products Based on Emotional Semantic, by Dengkai Chen, Jingjing Ding, Minzhuo Gao, Danping Ma and Donghui Liu, Northwestern Polytechnical University

Session 9   The Special Issue Reviewing and Closing

14.50-15.10    Conference closing, Chaired by Prof Kai Cheng and Prof Shengfeng Qin