



## Mixture of Human and Machine Intelligence in Digital Manufacturing

Guest Editors:

**Dr. Yang Lu**

School of Science, Technology and Health, York St John University, York YO31 7EX, UK

**Dr. Ming Zhang**

College of Engineering and Physical Sciences, Aston University, Birmingham B4 7ET, UK

**Dr. Ziwei Wang**

Department of Bioengineering, Imperial College London and School of Engineering, Lancaster University, Lancaster, UK

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### Message from the Guest Editors

Dear Colleagues,

Industry 4.0 and digital manufacturing describe new paradigms for seamless human–machine interface (HMI). A number of definitions of HMI emphasized the significance of understanding how user interface technologies that aim to develop useful, usable and artistic software and hardware are designed. Modern interaction technology has moved from simple use of computers as tools to the establishment of human relationships with autonomous entities, which gradually emphasizes human factors in various steps of interaction process (De Visser and Shaw, 2018). As such, organic combination between human and machine would leverage their intelligence in a dynamic way and motivate computational intelligence development, providing more opportunities for traditional manufacturing system design. While machines interact with manufacturing systems and make human-relevant decisions, new design patterns in perception, control, and arbitration are required to support the integration of human expertise. In addition, sensory data collection and analysis can further aid digital decision-making.





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## Editor-in-Chief

### **Prof. Dr. Joshua M. Pearce**

Department of Electrical &  
Computer Engineering, Western  
University, London, ON N6A 3K7,  
Canada

## Message from the Editor-in-Chief

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*Designs* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

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