Scope

Industry 4.0 has become a synonym for a vision of future product creation and production engineering environments in which networks of horizontally and vertically integrated smart design and manufacture systems will be the norm. With the Industrial Internet of Things and its Cyber-physical Systems as a backbone, game-changing new ways of product design and manufacture in a hyper-connected globalized world are emerging. In addition, a new and rapidly growing industrial service-sector focusing on Product-Service-Systems has begun to form. Some of the challenges in realizing the overall vison of Industry 4.0 concern the integration, management, control and communication of cyber-physical production engineering systems, the integration of state-of-the-art technology with legacy systems, data security and broader cyber-security aspects, as well as national and international public policy issues. Lastly, given the profound impact of this so-called 4th Industrial Revolution on society as a whole, the changing landscape of tomorrow's job market and hence the training and education of the next generation workforce need to be addressed as well.

The objective of this special issue is to seek high-quality and unpublished papers that advance research and thus the state-of-the-art in all facets of Cyber-physical Product Creation in the broader context of Industry 4.0. Contributions may include theoretical foundations, open technical challenges, innovative applications and implementations in industry, business case studies, experimental studies, associated design-and manufacture education initiatives, as well as outstanding review papers.

Special Issue

Call for Papers

Cyber-Physical Product Creation for Industry 4.0

Contact

Taylor & Francis
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Guest Editors

- Dirk Schaefer
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- Dazhong Wu
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Schedule

- Title and abstract due date (by email to
  d.schaefer@bath.ac.uk): October 1, 2016

- Full paper submission deadline:
  November 1, 2016

- First author notification: January 15, 2017

- Revised paper due: March 1, 2017

- Final author notification: April 15, 2017

- Expected publication: Summer 2017

Instructions for submission

Manuscripts must not have been previously published nor currently under review by other journals or conferences. If the paper was published in a conference, the submitted manuscript should be a substantial extension of the conference paper, with at least 30% of novel contributions. Authors are also required to submit their published conference articles and a summary document explaining the enhancements made in the journal version.

Papers must be submitted through the International Journal of Computer Integrated Manufacturing website at www.tandfonline.com/loi/tcim, where guidelines for the manuscript preparation can also be found (www.tandfonline.com/action/authorSubmission?journalCode=tcim20&page=instructions)

To ensure that all manuscripts are correctly identified for consideration by the Special Issue, the authors should select „Special Issue: Cyber-physical Product Creation for Industry 4.0" when they reach the "Article Type" step in the submission process.

Topics

- Cloud-based Design & Manufacturing Systems and Processes
- Architectures of Cyber-physical Product Creation Systems
- Modeling and Simulation of Cyber-physical Systems
- Interoperability in Cyber-physical Production Systems
- Internet of Things (IoT) and Internet of Services (IoS) in Industry 4.0
- Cloud-based Design and Manufacturing Service Brokerage
- Smart Manufacturability Analysis for Digital Product Creation
- Scheduling and Logistics in Cyber-physical Networks
- Cloud-based CAD/CAE/CAM Software Systems
- Big Data Analytics for Digital Design and Manufacturing
- Scalability in Cloud-Manufacturing Networks
- Democratization of Innovation, Design and Manufacturing
- Social Product Development
- Crowdsourcing and Crowdfunding in Product Development
- Servitization in the Design and Manufacturing Industry
- Business Models for Service-oriented Product Development