4M/IWMF 2016 Conference

11th International Conference on Multi-Material Micro Manufacture (4M2016) co-organised with 10th International Workshop on Microfactories (IWMF2016)

Conference Chair: Guido Tosello, DTU, Denmark

Conference Co-Chair: Hans Nørgaard Hansen, DTU, Denmark
Kornel Ehmann, Northwestern University, USA
Stefan Dimov, Birmingham University, UK

13th-15th September 2016

Kgs. Lyngby, Denmark

Organised by DTU, 4M Association, IWMF and University of Birmingham

http://www.4m-association.org/conference/2016

Scope

In today's market, miniaturised and microsystems-based products represent key value-adding elements for many industrial sectors and thus are an important contributor to a sustainable economy. Following the silicon-based microelectronics revolution of the late twentieth century, a number of micro and nano manufacturing technologies have been developed and implemented into process chains for the fabrication of Micro Electro Mechanical Systems (MEMS). Especially, these technology developments have targeted niche markets and as a consequence, a number of MEMS devices are now being effectively exploited commercially. To address the continuing trend for product miniaturisation and the constantly growing demand for novel products enabled by Micro and Nano Technologies (MNTs) the 4M Conference series has, **since 2005**, been bringing together researchers and industrialists engaged in multi-disciplinary research and development of micro and nano manufacturing platforms and their various existing and emerging application areas.

4M2016 will once again create a forum for the presentation of, and discussions about, the latest advances in manufacturing capabilities to meet the demands for:

- **Product miniaturisation** through innovative integration and development of knowledge-based technologies and production concepts (especially micro and nano) for the processing of non-silicon materials;
- **Prediction of product and process performance** to reduce/manage the risk during product development and production, and to reduce time to market for the next generation of microsystems-based products;
- **Future product platforms** to meet the requirements of the next generation of microsystems-based products, and of more stringent regulations and environmental legislation; and
- **Production scale-up** to ensure effective and efficient transfer of product and technology ideas from laboratories to serial production.

Themes

Papers are invited that present original research and development in processes and process chains for multi-material micro and nano manufacture, in particular but not limited to:

- **Components:** fabrication and assembly technologies
- **Systems:** novel product and system designs
- **Process modelling and simulation**
- **Process characterisation** including process chains
- **Metrology:** inspection and characterisation methods
- **Novel materials:** characterisation and processing
- **Micro and Nano Additive Manufacturing Technologies**

In addition, contributions to the International Workshop on Microfactories (IWMF2016) on the following topics are invited:

- **Micro and Desktop Factory Concepts, Systems, Components and Modules**

- **Standardization in Micro Manufacturing and Micro Factories**
- **High Precision Production of 3D Micro-parts**
- **Micro-assembly and Micro-handling**

These topics represent the intended content of the 4M/IWMF 2016 thematic sessions, to which the authors are invited to submit papers. The Conference will also feature invited special sessions focussed on the latest technology and application advances achieved in major EC-funded and national programmes. The follow special session has already been agreed:

- **High throughput Integrated technologies for multi-material functional MIcro Components** (EU FP7 HINMICO project)
- **Micro Technologies for Hearing-Aid Systems**
- **Micro Manufacturing of Terahertz Technology Devices**

Invited Speakers:

Ole Sigmund, Technical University of Denmark, Denmark
Placid Ferreira, University of Illinois, USA
Helmut Schift, Paul Scherrer Institute, Switzerland

Joint 4M/IWMF Programme Committee:

Chair: Guido Tosello, DTU, Denmark
Co-Chairs: Hans Nørgaard Hansen, DTU, Denmark
Kornel Ehmann, Northwestern University, USA
Stefan Dimov, University of Birmingham, UK

Nadja Adamovich, TUWien, Austria
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Michael-Fu, MIRDC, Taiwan
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Thomas Velten, Fraunhofer IBMT, Germany
Susan Anson, KIT, Germany
Kiwamu Ashida, AIST, Japan
Dong-Woo Cho, Postech, Korea
Kai Cheng, Brunel University, UK
Nico de Rooij, EPFL, Switzerland
Kuniaki Doda, Northwestern University, USA
Fengzhou Fang, Singapore Inst. of Manuf. Tech
Sergej Fatikow, University of Oldenburg, Germany
Ho-chung Fu Metal Industries Research & Development Centre, Taiwan
Dae-Gab Gweon, Korea Adv. Institute of Science and Tech
Yong Huang, University of Florida, USA
Shiv Kapoor, Univ. of Illinois at Urbana/Champaign, USA
Byeong-Hee Kim, Kangwon University, Korea
Jongwon Kim, Seoul National University, Korea
Tae-Jo Ko, Youngnam University, Korea
Liu Kui, Singapore Institute of Manufacturing Tech.
Thomas R. Kurfess, Georgia Institute of Technology, USA
André Zimmermann, Hahn-Schickard, Germany
Y.S. Liao, National Taiwan University
Ming-Chyuan Lu, Nat. Chung Hsing Univ., Taiwan
Akihiro Matsumoto, Toyo University, Japan
Bernd Michel, Fraunhofer Institute, Germany
Bradley Nelson, ETH Zurich
Jun Ni, University of Michigan, USA
Hitoshi Ohmori, Riken, Japan
Yuichi Okazaki, AIST, Japan
Simon Park, University of Calgary, Canada
Hyung-Wook Park, UNIST, Korea
Jong-Kweon Park, KIMM, Korea
Duc-Truong Pham, University of Birmingham, UK
Svetan Ratchev, University of Nottingham, UK
Stephane Regnier, Universite Marie-Curie, France
Steffen Scholz, KIT, Germany
Lars Mattsson, KTH, Sweden
Rhett Mayor, Georgia Institute of Technology, USA
Eleonora Ferraris, KU Leuven, Belgium
Martin Richter, FhG EMFT, Germany
Andreas Schoth, University of Freiburg, Germany
Volker Schulze, KIT, Germany
Holger Reinecke, Hahn-Schickard&IMTEK, Germany
Pieter Bolt, TNO, Netherlands
Maurice van der Beek, Philips, Netherlands
Iban Quintana, TEKNIKER, Spain
Xabier Mendibil, TEKNIKER, Spain
Jose Ignacio Esmoris, TEKNIKER, Spain
Luis Gerardo Uriarte, TEKNIKER, Spain
Elis Carlström, Swerea-IVF, Sweden
Helmut Loibl, FOTEC, Austria
Samuel Bigot, Cardiff University, UK
Emmanuel Brousseau, Cardiff University, UK
David Gardner, C-Tech Innovation, UK
Seung-Kook Ro , KIMM, Korea
Mitchell Tseng, Hong Kong Univ. of Sc. and Tech.
Reijo Tuokko, Tampere Univ. of Tech., Finland
Min-Yang Yang KAIST, Korea
Quan Zhou, Aalto University, Finland

Submission of Full Papers

- **Submission site opens: 1st of January 2016 Deadline: 25th March 2016**
- **Submission site:** http://conference.4m-association.org/openconf.php

Paper Review

To ensure a high-quality Conference all papers will be reviewed by fellow authors under the leadership of the Session Chairs.

Oral and Poster presentation

Submitted papers may be selected for oral or poster presentation. All oral and poster presentations will be included in the Conference Proceedings.

Important Dates:

Submission **site will open:**	**1st of January 2016**
Submission **deadline for full papers**:	**25th of March 2016**
Feedback from the peer review to authors:	16th May 2016
Submission deadline of revised final paper:	3rd June 2016
Notification of acceptance in Final Publication:	24th June 2016
Authors Final Registration:	15th July 2016
Public Final Registration:	31st August 2016

Proceedings:

All final papers accepted for presentation may be included in the 4M2016 Proceedings to be published by Research Publishing Services. Selected papers may be considered for publication in Special Issues.

Conference Secretary

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