

10th International Conference on:

4M2013

Multi-Material Micro Manufacture

Conference Chair: Sabino Azcarate, TEKNIKER, Spain

Conference Co-Chair: Stefan Dimov, Birmingham University, UK



8th-10th October 2013

San Sebastian

Organised by TEKNIKER and the 4M Association

IK4  TEKNIKER
Research Alliance



<http://www.4m-association.org/conference/2013>

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 techniques 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.



4M2013 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 technologies and process chains
- **Systems:** novel product designs and assembly technologies
- **Process modelling and simulation**
- **Process characterisation** including process chains
- **Metrology:** on-line monitoring and inspection systems/methods
- **Materials:** processing and characterisation of smart materials and material systems

These six sub-topics represent the intended content of the 4M2013 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 projects.

Invited Speakers:

Professor Jian Cao, [Northwestern University](#)

Professor Christian Hopmann, [Institut für Kunststoffverarbeitung](#)

Professor Richard Leach, [National Physical Laboratory](#)

Professor Yasunori Saitome, [Tohoku University](#)

Organising Committee:

Sabino Azcarate, TEKNIKER, Spain **(Chair)**

Stefan Dimov, University of Birmingham, UK **(Co-Chair)**

Nadja Adamovich, TUWien, Austria

Chantal Khan-Malek, CNRS, France

Bertrand Fillon, CEA, France

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Hans Nørgaard Hansen, DTU, Denmark

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Hast Jukka, VTT, Finland

Mael Moguedet, PEP, France

Victoire de Margerie, RONDOL Ltd, UK

Christian Griffiths, Manchester University, UK

Ulf Engel, University of Erlangen-Nuremberg, Germany

Kornel Ehmann, Northwestern University, USA

Jian Cao, Northwestern University, USA

Antony H.C.Lee, MIRDC, Taiwan

Dan Dascalu, IMT-Bucharest, Romania

G. Maccarini, Università Degli Studi Di Bergamo, Italy

Thomas Velten, Fraunhofer IBMT, Germany

Susan Anson, KIT, Germany

Steffen Scholz, KIT, Germany

Lars Mattsson, KTH, Sweden

Rhett Mayor, Georgia Institute of Technology, USA

Eleonora Ferraris, KULeuven, Belgium

Martin Richter, FhG EMFT, Germany

Andreas Schoth, University of Freiburg, Germany

Volker Schulze, KIT, Germany

Heinz Kück, HSG-IMAT, Germany

Holger Reinecke, HSG-IMIT & 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

Alexander Stuck, CSEM, Switzerland

Helmut Loibl, FOTEC, Austria

Samuel Bigot, Cardiff University, UK

Christopher Matthews, Cardiff University, UK

David Gardner, C-Tech Innovation, UK

Natalie Withenshaw, C-Tech Innovation, UK

Submission of Full Papers

- **Submission site opens: 13th February 2013** **Deadline: 27th March 2013**
- **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:

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| ○ Submission site will open: | 13th February 2013 |
| ○ Submission deadline for full papers: | 27th March 2013 |
| ○ Feedback from the peer review to authors: | 8 th May 2013 |
| ○ Submission deadline of revised paper: | 8 th June 2013 |
| ○ Notification of acceptance in Final Publication: | 2 nd July 2013 |
| ○ Submission of Final paper: | 27 th July 2013 |
| ○ Authors Final Registration: | 15 th August 2013 |
| ○ Public Final Registration: | 28 th September 2013 |

Proceedings:

All final papers accepted for presentation may be included in the 4M2013 Proceedings to be published by Research Publishing Services. Selected papers may be considered for publication in Special Issues.

Conference Secretary

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