



8th International Conference on:

4M2011

Multi-Material Micro Manufacture

Conference Chairman: Heinz Kück, HSG-IMAT & University of Stuttgart, Germany

Co-Chairmen: Holger Reinecke, HSG-IMIT & IMTEK, University of Freiburg, Germany
Stefan Dimov, Cardiff University, UK

8th-10th November 2011

Stuttgart, Germany



Organised by HSG-IMAT, HSG-IMIT and the 4M Association with the kind support of the State of Baden-Württemberg



www.4m-association.org/conference/2011

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). In particular, these technology developments have targeted niche markets and as a consequence, a number of MEMS devices are now being effectively exploited commercially. Interest towards product miniaturisation and Micro and Nano Technologies (MNTs) in general has increased in recent years and **since 2005** the 4M Conference series has brought together researchers and industrialists engaged in this important area of manufacturing to share the results of their research.



4M2011 will once again create a forum for the presentation of, and discussions about, the creation of manufacturing capabilities in the following areas:

- **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 therefore invited that present the latest advances in developing new processes and process chains for multi-material micro manufacture in particular but not limited to:

- **Novel materials:** characterisation and processing;
- **Process modelling and simulation;**
- **Process chains** including their **characterisation and control;**
- **Metrology:** inspection and characterisation methods;
- **Components:** fabrication and assembly technologies;
- **Systems:** novel product and system designs.

The above six sub-topics represent the intended content of the thematic sessions of the Conference, to which the authors are invited to submit papers. The Conference will also feature at least four invited special sessions focussed on the latest technology and application advances achieved in major EC-funded projects (Cotech, Multilayer, MultiPLAT and IntegMicro).

Organising Committee:

Heinz Kück, HSG-IMAT, Germany (**Chairman**)
Stefan Dimov, Cardiff University, UK (**Co-chair**)
Holger Reinecke, HSG-IMIT, Germany (**Co-Chair**)
Christine Neu, mstbw, Germany
Sabino Azcarate, TEKNIKER, Spain
Stéphane Bredeau, CEA, France
Luc Federzoni, CEA, France
Hans Nørgaard Hansen, DTU, Denmark
Per Johander, Sverea IVF AB, Sweden
Erik Jung, FhG IZM-Berlin, Germany
Christian Wenzel, FhG IPT, Germany
Dan Dascalu, IMT, Romania
Pieter Bolt, TNO, Netherlands
Per Johander, Swerea-IVF, Sweden
Sjoerd Haas, IMEGO, Sweden
Victoire de Margerie, RONDOL Ltd, UK
Bertrand Fillon, CEA, France

Matthias Kautt, FZK, Germany
Paul Kirby, Cranfield University, UK
Lars Mattsson, KTH, Sweden
Christoph Baum, FhG IPT, Germany
Humbert Noll, FOTEC, Austria
Martin Richter, FhG IZM-Munich, Germany
Andreas Schoth, University of Freiburg, Germany
Ulf Engel, University of Erlangen-Nuremberg, Germany
Nadja Adamovich, TUWien, Austria
Manfred Schubert, HSG-IMAT, Germany
Volker Schulze, KIT, Germany
Dumitru Ulieru, Sitex45 S.A., Romania
Chantal Khan-Malek, FEMTO-ST, France
Karl-Peter Fritz, HSG-IMAT, Germany
Rainer Guenzler, HSG-IMIT, Germany
Chris Matthews, Cardiff University, UK

Submission of Full Papers

- **Submission site opens 1st March 2011. Deadline 8th April 2011.**

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.

Provisional Dates:

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| ○ Submission site will open: | 1st March 2011 |
| ○ Submission deadline of full papers: | 8 th April 2011 |
| ○ Feedback from the peer review to authors: | 10 th June 2011 |
| ○ Submission deadline of revised paper: | 1 st July 2011 |
| ○ Notification of acceptance in Final Publication: | 1 st August 2011 |
| ○ Submission of Final paper: | 16 th September 2011 |
| ○ Authors Final Registration: | 30 th September 2011 |
| ○ Public Final Registration: | 31 st October 2011 |

Proceedings:

All final papers accepted for presentation may be included in the 4M2011 Proceedings to be published electronically by a well known international scientific publisher. Selected papers will be considered for publication in Special Issues.

Conference Secretary

Chris Matthews, Manufacturing Engineering Centre, Cardiff University, Cardiff, CF24 3AA, UK
Tel: +44 (0)29-20870016; Fax: +44-(0)29-20874880; E-mail: matthewscw@cf.ac.uk