

International Conference on:

Multi-Material Micro Manufacture (4M)

Conference Chair: Prof. Wolfgang Menz, Germany
Conference Co-Chair: Dr. Stefan Dimov, Cardiff University, UK

20th – 22nd September 2006

**Minatec, European Centre for Micro and Nano Technology,
Grenoble, France www.minatec.com**



Prime contractor : Conseil Général de l'Isère - Representative :
Territoire 38 - Contracting Authority : Groupe 6, Setec Industrie, Faure Ingénierie et Adret

Organized by: 4M Network of Excellence
(**www.4m-net.org**)

Sponsored by the EC



Scope

Micro-manufacturing is now a key value-adding element for many sectors of industry - and the predicted nanotechnology future will also be largely delivered by micro-technologies. The silicon-based microelectronics revolution of the late 20th Century is about to be overtaken in its scope. Micro- and nano-manufacturing technologies in the 21st Century need to be directed to take advantage of the variety of materials, components and knowledge-based technologies now emerging. These provide functionality and intelligence to highly miniaturised systems for personal, portable and wireless products, and sensors for health, environment and transport-related applications. The present suite of micro-technologies alone will not be able to meet the manufacturing demands for high-aspect-ratio structures, enhanced-force micro actuators, improved environmental resistance and high precision micro components. These are the biggest challenges to micro product development that also represent promising research and development areas for innovation and value creation. In this context, the main goal of the Conference is to provide a forum for experts from industry and academia to share the results of their in-depth investigations and engage in interdisciplinary discussions about micro-technologies for batch-processing of metals, polymers and ceramics, and the development of new production platforms for multi-material micro products.

Themes

Papers are invited on all aspects of manufacturing of metal, polymer and ceramic microstructures and their application in microsystems-based products, in particular but not limited to:

Micro-TECHNOLOGIES

- Polymer Processing
- Processing of Metals
- Processing of Ceramics
- Metrology
- Assembly and Packaging

APPLICATIONS

- Microoptics
- Microfluidics
- Micro-Sensors and Actuators

The above eight sub-topics represent the intended topics of the thematic sessions of the Conference to which the authors are invited to submit papers.

Submission of papers

Submission will be electronic only via: www.4m-net.org/4M_Conference

Detailed instructions will be posted in due time on the Conference web site. Questions may be directed in the meantime by e-mail to: 4m_conference@4m-net.org

Paper Review

To ensure a high-quality Conference all papers will be reviewed by Programme Committee members under the leadership of the Conference Chair.

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: 10 January 2006
- Submission deadline of full papers: 28 February 2006
- Feed back from the peer review to authors: 13 April 2006
- Submission of final paper: 5 May 2006
- Notification of acceptance: 2 June 2006
- **Authors Final Registration: 9 June 2006**
- Public Final Registration: 8 September 2006

Location

The conference will take place at Minatec, European Centre for Micro and Nano Technology, Grenoble, France www.minatec.com/

Proceedings:

All final papers accepted for presentation may be included in the 4M2006 Proceedings to be published by a well known International scientific publisher. Selected papers may be considered for publication in the Proceedings of the Institution of Mechanical Engineers (IMEchE), Part B, Journal of Engineering Manufacture and a special issue of the Proceedings of IMechE, Part C, Journal of Mechanical Engineering Science.

Organising Committee:

Prof. Wolfgang Menz, Germany (**Conference Chair**)
Dr. Stefan Dimov, Cardiff University, UK (**Conference Co-Chair**)
Dr. Andreas Schoth, IMTEK, University of Freiburg, Germany
Prof. Lars Mattsson, Royal Institute of Technology, Stockholm, Sweden
Mr. Erik Jung, The Fraunhofer Institute for Reliability and Microintegration, Berlin, Germany
Prof. Ulf Engel, University of Erlangen-Nuremberg, Germany
Dr. Per Johander, IVF Industrial Research and Development Corporation, Sweden
Mr. Sven Carsten Lange, Fraunhofer Institute of Production Technology, Aachen, Germany
Dr. Martin Richter, The Fraunhofer Institute for Reliability and Microintegration, Munich, Germany
Dr. Paul Kirby, University of Cranfield, UK
Dr. Bertrand Fillon, Commissariat à l'énergie Atomique, DTEN, Grenoble, France

Conference Secretary

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More Information

More information about the 4M Network of Excellence and the 4M Conference is available at: www.4m-net.org