

## Workshop on Design for Reliability and Manufacturability in MNT, 25 April 2006, Stresa, Lago Maggiore, Italy

Co-organised by the EC-funded Network of Excellence "Design for Micro & Nano Manufacture" (PATENT-DfMM) and the NEXUS Methodology Working Groups "Reliability & Test" and "Design Modelling Simulation". Main emphasis will be on reliability and test problems, where design methodologies can lead to significant improvements. Industry's design and reliability needs will be discussed and latest research results and new approaches will be proposed by the research community.

Morning session: Industry needs and current research in Reliability and

### Test for MNT

- How do industrial microsystems manufacturers deal with reliability and test?
- What is specific for reliability and test in high-volume production?
- What are the main challenges for research?
- Presentation of current research initiatives and projects in reliability and test

Afternoon session: Building Reliability and Test into the MNT design flow

- How are reliability and test issues currently built into an industrial design flow?

- What do Design, Modelling and Simulation Tools offer to support reliability and test?
- How can methodologies, tools and databases be combined?
- Presentation of current research initiatives and projects to build reliability and test issues into tools
- How can researchers help industry (especially SMEs) to optimise reliability and test?

### Contact:

Patric Salomon  
4M2C, Berlin, Germany  
E-Mail: [Patric.salomon@4m2c.com](mailto:Patric.salomon@4m2c.com)  
[www.patent-dfmm.org](http://www.patent-dfmm.org)

## Technology Roadmapping Event for Packaging of MOEMS and RF MEMS, 16 Feb 06, Edinburgh, UK

### Contact:

Fabien Holler  
Heriot-Watt University, Edinburgh, UK

E-Mail: [f.holler@hw.ac.uk](mailto:f.holler@hw.ac.uk)  
[www.patent-dfmm.org](http://www.patent-dfmm.org)

## New DfMM R&D Projects Funded

The following internal projects have been recently approved for funding as part of the PATENT-DfMM research, education and integration activities:

### **MEMS test structures for materials, process and reliability characterization (WP 3)**

This project will build an offer to industry on MEMS test structures (TS) usable for material and process characterization, but also for evaluating and preventing specific failure mechanisms. Research amongst PATENT partners will be further integrated, Round Robin studies (at partners') are planned on MEMS material, process parameters and failure mechanisms. Contact: Marius Bazu, IMT Bucharest, Romania, E-mail: [Mbazu@imt.ro](mailto:Mbazu@imt.ro)

### **Biocompatible packaging for implanted sensor system (WP 4)**

For in-vivo use, an extremely miniaturised, fully biocompatible package is needed. The development of telemetric devices with biocompatible package is a highly multidisciplinary topic involving areas such as electronic design, material properties study and deposition technology, biomedical engi-

neering and in-vivo testing.

Contact: Jeroen de Coster, KULeuven, Belgium, E-mail: [jeroen.decoester@esat.kuleuven.ac.be](mailto:jeroen.decoester@esat.kuleuven.ac.be)

### **Coupling of Modos into SMASH (WP 7)**

A project aimed to link "MODOS"- as an optimization tool compatible with the widely used "SMASH" simulator to automate the design process of MEMS and other microsystems.

Contact: Dagmar Peters, ITEM, Germany E-mail: [peters@item.uni-bremen.de](mailto:peters@item.uni-bremen.de)

### **Course in MEMS damping (WP 5&6)**

To develop a course that addresses Experimental characterisation of damping, Simulation of fluid damping by means of continuum approaches, Simulation of fluid damping with the tools of kinetic theory: DSMC-BGK, and Simulation of thermoelastic damping.

Contact: Attilio Frangi, Politecnico di Milano, Italy, E-mail: [attilio.frangi@polimi.it](mailto:attilio.frangi@polimi.it)

More information will be published on our website  
[www.patent-dfmm.org](http://www.patent-dfmm.org)

## DfMM Contact

DfMM News is provided to mst-news readers by the project "Design for Micro & Nano Manufacture (Patent-DfMM)", a Network of Excellence funded by the European Commission DG INFSO E5 within the Information Society Technologies (IST) Programme of FP6.



The NoE Patent-DfMM aims to establish a collaborative team to provide European industry with support in the field of "design for micro nano manufacture" to ensure that problems affecting the manufacture and reliability of products based on micro nano technologies (MNT) can be addressed before prototype and pre-production.



NoE Patent-DfMM Co-ordinator:  
Andrew Richardson  
University of Lancaster, UK  
E-mail:  
[A.Richardson@Lancaster.ac.uk](mailto:A.Richardson@Lancaster.ac.uk)

NoE Patent-DfMM News Editor:  
Patric Salomon  
4M2C PATRIC SALOMON GmbH  
E-mail: [DfMM-news@4m2c.com](mailto:DfMM-news@4m2c.com)

[www.patent-dfmm.org](http://www.patent-dfmm.org)