

Design for Micro & Nano Manufacture (DfMM) News



The "Design for Micro & Nano Manufacture (**PATENT-DfMM**)" Network of Excellence aims to establish a new technical community that will address the underlying engineering science to ensure that problems affecting the manufacture and reliability of products based on MNT can be addressed before prototype and pre-production.

PATENT is a reactive initiative that will attempt to realise the vision of providing innovators whether they be members of small

companies, universities or multinationals a "predictable" route from M&NT based product concept to product. This will be achieved by realising in the medium to long-term a new concurrent engineering or Design for Micromanufacture Methodology (DfMM) methodology for M&NT-based products that provides designers with the means to design for performance, testability, robustness and dependability competitively, whatever the operating environment.

First public workshop organized by Reliability & Characterisation Cluster of PATENT-DfMM

Held on 7-8 October 2004, Sinaia, Romania

The first workshop of the Reliability & Characterisation Cluster of PATENT-DfMM network of excellence was held in Sinaia, Romania, 7-8 October, as a joint event with the IEEE International Semiconductor Conference (CAS 2004).

The program contained solely contributions given by cluster members:

- "RF-MEMS reliability research at IMEC" (Ingrid de Wolf, IMEC Leuven),
- "Reliability research at IXL Bordeaux" (Claude Pellet, IXL Bordeaux),
- "Accelerated testing: from Microelectronics to MEMS" (Marius Bazu, IMT Bucharest),
- "Laser accelerated aging of semiconductor chips" (Lucian Galateanu, IMT Bucharest),
- "BUTE activities in material characterisation" (Andras Poppe, BUTE Budapest),

- "WP3 database - first results" (Adrian Frumuselu, IMT Bucharest),
- "Recent work at IEF on materials, testing and packaging of MEMS" (Alain Bosseboeuf, IEF Paris),
- "Material characterisation at LAAS Toulouse" (Karim Yacine, LAAS Toulouse),
- "Standardization for MEMS" (Virgil Illian, IMT Bucharest),
- "About a new STREP in microfluidics" (Catalin Tibeica, IMT Bucharest).

Other speakers were: Hok Khiem Trieu from Fraunhofer IMS Duisburg, Erwan de Gourcuff from Herriot-Watt University, and various participants in CAS 2004. On the second day, the main issues for the next period were discussed during an internal meeting of Reliability & Characterisation Cluster of PATENT-DfMM.

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Call for Proposals for New Contractors (deadline: 7 Mar 2005): EC FP6 Network of Excellence "Design for Micro and Nano Manufacture (PATENT-DfMM)"

The PATENT-DfMM project aims to build a new technical community to address the problems of designing Micro & Nano Technology based products that are reliable, testable and manufacturable. This involves integrating researchers and teams and spreading skills, knowledge and "excellence" across the technical community. The project was launched on 1 Jan 2004 and has currently a portfolio of activities in the fields of Design for Testability, Modelling & Simulation, Reliability Engineering and Packaging Engineering. There is also a major dissemination and networking initiative and a training program integrated into the project. The Network of Excellence has identified a need for additional partners in the following areas:

- Design for Testability: Objective – increase the total number of researchers contributing to the area
- Packaging of μ Fluidic based devices and systems
- μ Fluidics and Bio-MEMS Reliability Engineering

The Network of Excellence will accept proposals from universities, research centres and companies who have a proven international reputation in the above fields. As the existing partners have committed a significant resource of their own to the program in preparation, negotiation and in-kind support to the objectives of the project, applicants should clearly demonstrate not only what they skills and resources they would make available to the Network of Excellence but also what their institute or company will contribute. Note in this context, the European Commission expect the total cost of the program to be greater than the grant they are providing. Applicants should submit a proposal to the NoE coordinator – Prof. Andrew Richardson (A.Richardson@lancaster.ac.uk) by Monday 7 Mar 2005.

Proposals should contain:

- Evidence of the International Standing of the applicant.
- A statement of skills and resources that inclusion would bring to the Network of Excellence.
- A statement of commitment to the goals of the NoE together the contribution the institution or organisation is prepared to make.

For more information on the Network of Excellence "Design for Micro and Nano Manufacture (PATENT-DfMM)" please consult the web-site www.patent-dfmm.org.

Contact: Andrew Richardson, Lancaster University, UK, E-Mail: A.Richardson@lancaster.ac.uk

PATENT-DfMM at Hanover Fair 11-15 April 2005, Hanover, Germany

PATENT-DfMM will have a booth at this year's *Hanover Fair*. The booth will be shared with the EC-funded Europractice project and will be located within the IVAM pavilion at the "Microtechnology special area", Exhibition Hall 15, Booth D 36.

A presentation "*European service offers for the design and manufacturing of MNT-based systems*" by Patric Salomon is scheduled within the "Microtechnology special area" for 13 April, 15:40.

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