



Dear Patric Salomon,

The Network of Excellence (NoE) Patent-DfMM aims to establish a collaborative team to provide European industry with support in the field of "Design for Micro & Nano Manufacture (DfMM)" to ensure that problems affecting the manufacturing and reliability of products based on micro & nano technologies (MNT) can be addressed before prototyping and production. For more information: www.patent-dfmm.org

Welcome to the new edition of our bi-monthly E-Newsletter, which will keep you updated on project related activities, but also on other DfMM activities that run outside of the project.

We apologise in case you have been added to our database in error: if so, please reply by e-mail with "UNSUBSCRIBE" in the subject field.

We welcome your comments and contributions.

Happy reading!

Patric Salomon
NoE Patent-DfMM News Editor

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www.patent-dfmm.org

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News from the NoE Patent-DfMM

Second annual PATENT-DfMM Project Meeting 29-30 Nov, Leuven

The second annual PATENT-DfMM project meeting took place at IMEC facilities in Leuven from 29-30 Nov 2004. It combined meetings of the workpackages, Industry Advisory Board (IAB), the Assembly of all partners representatives, and a Management Board meeting.

The meeting was attended by 63 project participants, including 10 members of the industrial advisory board (IAB).

As the meetings have not been public, there will only be a limited amount of information available to the public. To obtain more information, please contact the leaders of the work packages (see website www.patent-dfmm.org) directly.

Patric Salomon

Call for DfMM Project Proposals to be published end Dec 2004

The Network of Excellence in Design for Micro & Nano Manufacture "PATENT-DfMM" plans to publish the next call for project proposals before end Dec 2004. Both project partners and external organisations will be able to benefit from the budget that is planned to be allocated through the call. For more information, please consult the website www.patent-dfmm.org or contact the project coordinator.

Contact: Andrew Richardson, Lancaster University, E-Mail: a.richardson@lancaster.ac.uk

DfMM Training Course Development Projects launched

Being an FP6 Network of Excellence, PATENT-DfMM has a very flexible approach to distribute budgets within the project. In an annual (internal) review, which is supported by the Industry Advisory Board (IAB), priorities for the next period will be set. Internal calls for project proposals will then be launched throughout the year.

PATENT-DfMM has recently decided to fund training course developments in the following areas:

- Thermal Management for Heterogeneous System Integration
- MEMS Packaging Modelling & Test
- Techniques for Failure Analysis of MEMS and MEMS packages
- Thermal transient testing & Electro-thermal simulation of MEMS devices
- Modeling Technology to Support MEMS Manufacture

More information is available from the PATENT-DfMM website or from the Coordinator of the Training and Education Workpackage [George Bell](#).

Patric Salomon

Lancaster University receives NWDA UK Grant for Course Development

Prof. Andrew Richardson at Lancaster University has been awarded EUR200K by the North West Development Agency in the UK to develop a new course in Micro & Nano Systems Engineering. The course aims to provide a skill base to the new National Microsystems Packaging Centre currently being launched in the North West of England although it is the intention of the team to link the material development into the PATENT-DfMM training portfolio.

Contact: Andrew Richardson, Lancaster University, E-Mail: a.richardson@lancaster.ac.uk

PATENT-DfMM Workshop planned before DTIP 2005

A public workshop on "Design for Micro & Nano Manufacture" is planned to take place on 30-31 May in conjunction with DTIP. This workshop will be co-organised with the NEXUS MWG Design Modelling Simulation and will feature intermediate results from the Network of Excellence "Design for Micro & Nano Manufacture", and also discuss industry's needs in this area.

DTIP (Symposium on Design, Test, Integration and Packaging of MEMS/MOEMS) will take place at Hotel Eden au Lac, Montreux, Switzerland, 1-3 June 2005. For more information: <http://tima.imag.fr/Conferences/dtip>

Contact: Patric Salomon, E-Mail: info@patent-dfmm.org

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

The first public 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 solely contained 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 at micro & nano" (Virgil Ilian, IMT Bucharest), Late news: "About a new STREP in microfluidics" (Catalin Tibeica, IMT Bucharest). Other speakers were: Hoc Khiem Trieu from Fraunhofer IMS Duisburg, Erwan de Gourcuff from Heriot-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.

Contact:

Marius Bazu, IMT, E-Mail: MBazu@imt.ro

Ingrid De Wolf, IMEC, E-Mail: dewolfi@imec.be

New PhD student joined the Lancaster team

The Lancaster team led by Prof. Andrew Richardson has recently recruited Hongyuan Liu (Hong) as a PATENT-DfMM research student from Bath University where he has just completed his MPhil in diagnostic algorithms for analogue systems. Hong will work on the PATENT-DfMM WP1 project in DfT for Bio-sensors and Bio-systems.

Contact: Andrew Richardson, Lancaster University, E-Mail: a.richardson@lancaster.ac.uk

Events/ Conferences, and Calls for Papers

TIME (Training in Microsystems Engineering) courses at Heriot-Watt University, Edinburgh, Scotland

The following courses we will be running for an MSc programme in Microsystems Engineering. These courses are also suitable for attendance by industrial people for continuous professional development of their career. The fee on a daily basis is £220 and for the whole week it is £600.

17 Jan - 21 Jan 2005 Laser Microengineering
31 Jan - 04 Feb 2005 RF MEMS
14 Feb - 18 Feb 2005 Bio MEMS
28 Feb - 04 Mar 2005 The Business of Microsystems

Contact: Dr. Resh S. Dhariwal, Heriot-Watt University, Edinburgh, Email: R.S.Dhariwal@hw.ac.uk

Other DfMM-related News

EC IST Call 4 (information society technologies programme) published

The European Commission has published the fourth call for proposals under the Sixth Framework Programme's 'information society technologies' (IST) programme. This is one of the areas covered by the 'Integrating and strengthening the European Research Area' specific programme.

The areas covered by this call are:

- 2.4.1. nanoelectronics (instruments: IPs, STREPs, CAs, SSAs) - indicative budget 74 million euro;
- 2.4.2. technologies and devices for micro/nano-scale integration (IPs, STREPs, CAs, SSAs) - 75 million euro;
- 2.4.3. towards a global dependability and security framework (IPs, NoEs, STREPs, CAs, SSAs) - 63 million euro;
- 2.4.4. broadband for all (IPs, NoEs, STREPs, SSAs) - 65 million euro;
- 2.4.5. mobile and wireless systems and platforms beyond 3G (IPs, NoEs, STREPs, SSAs) - 138 million euro;
- 2.4.6. network audiovisual systems and home platforms (IPs, NoEs, STREPs, CAs, SSAs) - 63 million euro;
- 2.4.7. semantic-based knowledge systems (IPs, NoEs, STREPs, SSAs) - 112 million euro;
- 2.4.8. cognitive systems (IPs, NoEs, STREPs, SSAs) - 45 million euro;
- 2.4.9. ICT research for innovative government (IPs, NoEs, STREPs, SSAs, CAs) - 46 million euro;
- 2.4.10. technology-enhanced learning (IPs, NoEs, STREPs, CAs) - 54 million euro;
- 2.4.11. integrated biomedical information for better health (IPs, STREPs, SSAs, CAs) - 75 million euro;
- 2.4.12. eSafety - cooperative systems for road transport (IPs, NoEs, STREPs, SSAs) - 82 million euro;
- 2.4.13. strengthening the integration of the ICT research effort in an enlarged Europe (STREPs) - 63 million euro.

Future and emerging technologies proactive initiatives (total indicative budget 54 million euro) :

- 2.3.4. (viii) advanced computing architectures (IPs, NoEs) ;
- 2.3.4. (ix) presence and interaction in mixed reality environments (IPs) ;
- 2.3.4. (x) situated and automatic communications (IPs, NoEs) .

The total indicative budget for this call is 1,120 million euro. The deadline for submitting proposal documents is 22.3.2005.

http://fp6.cordis.lu/fp6/call_details.cfm?CALL_ID=174

PATENT-DfMM will assist project partners in the preparation of bids wherever possible. This will include providing feedback on proposals (dummy evaluations) and suggestions for additional partners. Every attempt will be made to keep fully up to date with EU calls and priorities to ensure that proposals prepared by PATENT-DfMM partners address the key EU priorities.

Contact: Andrew Richardson, Lancaster University, E-Mail: a.richardson@lancaster.ac.uk

softMEMS has bought the CAD Business Unit from MEMSCAP

softMEMS has been created in 2004 by Mary Ann Maher, previously CTO and head of the CAD Business Unit at MEMSCAP, to focus on the CAD tools business. MEMSCAP has sold to softMEMS an exclusive license to sell, market and develop its MEMS design tools, including MEMS Pro and MemsMaster. softMEMS has also hired most of the previous employees of the MEMSCAP CAD

Business Unit, so the transition happened without loss of know how. softMEMS is maintaining the same product strategy. softMEMS is now a member of the PATENT-DfMM Industry Advisors Board.

Contact: *Ridha Hamza, Director European Operations, softMEMS, France/USA*
E-Mail: ridha.hamza@softmems.com, Web: www.softmems.com

PhD Job Opportunity at HWU

The MicroSystems Engineering Centre is looking for an EU PhD candidate for this newly open position within the Scottish Manufacturing Institute. The candidate must have expertise in software programming (C++ based or Java) and a working knowledge of microsystems technology. The work will deal with haptic based sensing design for the manufacturing and simulation of MEMS. More details can be obtained from the contact.

Contact: *Marc Desmulliez, Heriot Watt University, MISEC, Edinburgh, Scotland*
E-Mail: m.desmulliez@hw.ac.uk, Web: www.hw.ac.uk

Job Application as an "process/development engineer"

Experience:

- four years in a clean room environment at a state-of-the-art materials research laboratory.
- thorough understanding of the development, fabrication and evaluation in microsystem technology (MST), as well as an understanding of the equipment used for these processes.
- good analytical skills and a good knowledge in design using AutoCAD.

Contact: *Mikael Karlsson, R&D Engineer, Sweden, E-mail: micke.karlsson@angstrom.uu.se*

Next issue: **03 Mar 2005** (deadline for contributions: **01 Mar 2005**)

Please feel free to send us any DfMM-related news that might be of interest for our readership.

This e-mail newsletter contains public information, only. Please feel free to distribute it to anyone who might be interested in the topics.

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