

Dear reader,

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:

<http://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.

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www.patent-dfmm.org

We welcome your comments and contributions.

Happy reading!

Patric Salomon
NoE Patent-DfMM News Editor

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News from the NoE Patent-DfMM

NoE PATENT-DfMM Workshop at DTIP May 2005 - Presentations now available

Presentations from the workshop are available from the PATENT-DfMM website free of charge. If you are interested in regular updates from the project, please subscribe to the bi-monthly Email newsletter which is also available free of charge - register on our website!

Contact: Patric Salomon, E-Mail: patric.salomon@4m2c.com, www.patent-dfmm.org

DfMM Summer School, 5-7 September, Montpellier, France - Detailed Programme now available

The DfMM Summer School is an annual event which provides an introduction to MEMS technology and an overview of research topics undertaken by partners involved in the IST FP6 PATENT-DfMM Network of Excellence involving Design for Manufacturable Micro and Nano Systems. The programme this year includes invited talks from relevant IST projects (MACROS and AMICOM).

Summer School outline program:

- DfMM Markets & Roadmaps – Patric Salomon, 4M2C
- Commercialisation of Research results – MEMS Business Case Study, NOVAMEMS
- Design Considerations for Testable & Reliable Manufacture – Pascal Nouet / Florence Azais, LIRMM
- Advanced Modelling of Damping in MEMS - Attilio Frangi, Politecnico di Milano
- DfM CAD Tools - Gerold Schropfer, COVENTOR
- Integrating Mechanical fault modelling in electronic simulations for robust system design – Lars Vosskaemper, Dolphin Integration
- Applications of the MACROS methodology - Biagio De Masi, STMicroelectronics
- Multi-Physics – Chris Bailey, Greenwich University of London
- Modelling of Microfluidic Mixers – Krzysztof Cieslicki, Warsaw University of Technology
- Tutorial – Failure Analysis 1 - Ingrid De Wolf, IMEC
- Tutorial – failure Analysis 2 - Ingrid De Wolf, IMEC
- Producing affordable RF MEMS - Stepan Lucyszyn, Imperial College London
- RF Microsystems, AMICOM

The summer school programme starts at lunchtime on Monday 5th September and finishes around 5pm on Wednesday 7th September. There is a dinner organised for both Monday and Tuesday evenings.

All partners please register for the event now, as we have already registrations from delegates outside PATENT ! <http://www.sli-institute.ac.uk/pdf/news/ssappform.pdf>

The detailed programme is now available at: www.patent-dfmm.org
Contact: George Bell, ISLI, UK, E-Mail: george.bell@sl-i-institute.ac.uk

The following papers are now available from the PATENT-DfMM website (publications):

- Interview with Benedetto Vigna, Chairman of the PATENT-DfMM Industry Advisory Board, Published in mstnews, June 2005
- Nanosciences and nanotechnologies, an action plan for Europe 2005-2009 COMMUNICATION FROM THE EUROPEAN COMMISSION, June 2005
- New Manufacturing technologies for miniaturised ICT, an EC IST workshop, final report, February 2005

Event Announcements

COMS - Commercialization of Micro and Nano Systems Conference 21 - 25 Aug 2005, Baden Baden, Germany

The 10th International Conference on the Commercialization of Micro and Nanosystems (COMS 2005) is the leading conference on the commercialization of MEMS/MST/micromachining and nanotechnology. COMS 2005 will be jointly organized by Forschungszentrum Karlsruhe and the Micro and Nanotechnology Commercialization and Education Foundation (MANCEF). The Conference fosters the commercialization of micro and nanotechnologies and addresses commercialization issues unique to these emerging and disruptive technologies. COMS 2005 will bring together key people from across the world and from every sector of industry, including leading practitioners in the field, equipment suppliers, end users, customers, Government representatives, education and financial experts.

More details: <http://www.mancef-coms2005.org/>

MEMS Industry Group's MEMS Executive Congress, Pittsburg, PA, USA, 20 Sep 2005

The MEMS Industry Group (MIG), the trade association representing the MEMS and microstructures industries, will feature numerous industry leaders at its first-ever MEMS Executive Congress. The Congress will be Tuesday, September 20, 2005 in Pittsburgh, PA at the Sheraton Station Square Hotel. The Congress will be held the day before METRIC (MEMS Technology Roadmap and Industry Congress), MIG's annual members' meeting and technology conference.

A full list of the multitude of speakers, including bios, is available at:

<http://www.memsiindustrygroup.org/executivecongress/speakers/>.

The MEMS Executive Congress is open to all executives with an interest in MEMS. Registration is limited so potential attendees are encouraged to register and book their hotel now.

For more information and registration: www.memscongress.com

Workshop "Micro and Nanotechnologies and Multifunctional Materials for Life quality and Industry applications"
Sinaia, Romania, 30 Sep - 1 Oct 2005

The Workshop: "Micro and Nanotechnologies and Multifunctional Materials for Life quality and Industry applications" which will be held on 30th September – 1st October 2005 in Sinaia, Romania (http://www.imt.ro/4M_workshop/) is organized by IMT-Bucharest, under the frame and support of the Network of Excellence 4M - Multi Material Micro Manufacture: Technology and Applications (www.4m-net.org). It will be a satellite event at the CAS'2005 (International Semiconductor Conference) - 3-5 Oct 2005 (<http://www.imt.ro/cas/>).

Contact: Carmen Moldovan, E-mail: cmoldovan@imt.ro

European EcoDesign Campaign launched

In April, the Europe-wide "EcoDesign Awareness Raising Campaign" started with workshops in Sofia and Nuremberg. Its purpose is to inform especially small and medium sized companies of the electric and electronics sector regarding Eco-Design methods, European legislation and policies, and smart strategies for the realisation of business benefits through Eco-Design. The presentation of best practice examples and extensive discussions complement the programme. Financed by the European Commission, 26 additional workshops all over Europe are offered free-of-charge by the Fraunhofer Institute for Reliability and Microintegration IZM, Berlin, Germany, and its 17 regional partners until September 2005.

Enterprises and other stakeholders are cordially invited to join the upcoming workshops in Barcelona, Budapest, Bordeaux, Berlin, Cardiff, Lisbon, Riga, Poznan, Rome and many more cities throughout Europe. The findings of the workshop series and further information will be the basis for the development of SME specific multi-media teaching material. Companies also have the chance to promote their own eco-design activities via the project's website. For further information, workshop dates, venues, and programmes, registration and latest updates please visit <http://www.EcoDesignARC.info>.

Contact: Gregor Steffenhagen, Fraunhofer IZM Dept. EE, Berlin, Germany
E-mail: gregor.steffenhagen@izm.fraunhofer.de

Abstract deadlines for conferences

MOEMS-MEMS 2006 Micro & Nanofabrication

21 - 26 January 2006

San Jose, CA, USA

Abstract Deadline: **11 July 2005**

<http://spie.org/conferences/calls/06/pw/>

MEMS 2006

International Conference on Micro Electro Mechanical Systems

22 - 26 January 2006

Istanbul, Turkey

Abstract Deadline: **16 August 2005**

www.mems2006.org

iMEMS 2006

International MEMS Conference 2006

9 - 12 May 2006

Singapore

Abstract Deadline: **1 September 2006**

<http://temasek.nus.edu.sg/imems06>

List of Events

10 - 15 July 2005

INCOSE Symposium "International Council on Systems Engineering"

Rochester Riverside Convention Center, NY, USA

<http://www.roceng.org/INCOSE05/index.htm>

11 - 15 July 2005

IEEE-NANO 2005

Nagoya Congress Center, Nagoya, Japan

www.mein.nagoya-u.ac.jp/IEEE-NANO/

14 - 15 July 2005

ISSCS 2005 International Symposium on Signals, Circuits and Systems

Iasi, Romania

<http://scs.etc.tuiasi.ro/isscs2005/>

21 - 25 August 2005

COMS 2005 - Commercialization of Micro and Nano Systems Conference

Baden Baden, Germany

www.mancef-coms2005.org

5 - 7 September 2005

PATENT-DfMM Summer School

Montpellier, France

www.patent-dfmm.org

11 - 14 September 2005

EUROSENSORS XIX (Euroensors Conference)

Hotel Alimara, Barcelona, Spain

www.euroensorsxix.com

12 - 16 September 2005

ESSDERC-ESSCIRC 2005

Alpexpo, Grenoble, France

www.essderc2005.com

21- 22 September 2005

METRIC 2005

Pittsburgh, PA, USA

www.memsiindustrygroup.org/METRIC2005

EuroTraining Courses

EuroTraining offers a summary of available European Microelectronics and Microsystems courses given by professional course vendors. Please visit the EuroTraining Course Directory (www.eurotraining.net , <http://ecd.eurotraining.net/>) for detailed course descriptions and direct access to the course providers' web-sites.

Also, in the course directory you will find an extensive list of worldwide conferences and events regarding microelectronics, Microsystems and nanotechnologies.

Selected courses:

12 Jul 2005 Digital Signal Processing - Theory and Application Oxford, UK

14 Jul 2005 Practical Antenna Design Oxford, UK

15 Jul 2005 Digital Signal Processing Implementation - Algorithms to Optimisation Oxford, UK

22 Aug 2005 CMOS Advanced Analog IC Design Lausanne, Switzerland

22 Aug 2005 CMOS Advanced Digital IC Design Lausanne, Switzerland
29 Aug 2005 Power Management Lausanne, Switzerland
29 Aug 2005 Low-Noise Analog IC Design Lausanne, Switzerland
29 Aug 2005 Practical Aspects in Mixed-Mode ICs Lausanne, Switzerland

Contact: Helma Elens, EuroTraining-COREP, Italy, E-mail: eurotraining@polito.it
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Other DfMM-related News

MEMS Software Provider SoftMEMS announces MEMS Pro V5.1 Release

SoftMEMS is pleased to announce the release of a new version of its flagship product MEMS Pro. MEMS Pro is a flexible, powerful, easy-to-use CAD tool suite for the design and analysis of MEMS including their associated electronics and packaging. It offers an integrated solution for the design process that shortens development time while providing designer's reliable analysis before manufacture. Functionalities include mixed MEMS/IC schematic capture and simulation, full custom mask layout capabilities, MEMS specific layout productivity tools and design verification, 3D model generation and visualization, behavioral model creation and links to 3D analysis packages. Special features have been integrated into MEMS Pro 5.1 for better interoperability with finite element solvers offering more output formats for 3D geometries, better material properties handling and improved automatic meshing capabilities. The link between 2D layout and 3D modeling has also been improved by automatic translation of curvilinear shapes used in MEMS from polygonized GDSII masks. Finally, MEMS Pro v5.1 has enhanced libraries for system level models including expanded support for mixed electronic/optical devices and a methodology for Design for Manufacturing is illustrated.

For more information, please contact: Ridha Hamza, E-mail: ridha.hamza@softmems.com

Two Ph.D. Positions opened in Microfluidics and MEMS packaging in Scotland

The MicroSystems Engineering Centre at Heriot Watt University, Edinburgh, Scotland, is looking for suitable European candidates for two PhD vacancies position in the field of microfluidics and MEMS packaging. Because of the conditions of the funding, the candidates must be European. Collaboration with major companies is expected. One PhD student will be working on the design, manufacturing and test of continuous flow dielectrophoretic chips.

The other student will be using laser optics for MEMS packaging. MISEC is one of the major MEMS groups in the UK with 6 members of staff and over 20 PhDs and Research Associates.

The candidates will be expected to send their CV to:

MicroSystems Engineering Centre (MISEC),
Heriot Watt University, Earl Mountbatten Building,
Edinburgh EH14 4AS, Scotland, UK

Contact: Dr Resham Dhariwal (for microfluidic), Email : r.s.dhariwal@hw.ac.uk
Dr Changhai Wang (for MEMS packaging), Email: c.wang@hw.ac.uk

SUSS Introduces the Multi IZI Probe Testing with up to eight RF lines or mixed RF/DC on one probe

SUSS MicroTec AG has extended their wafer probe range to include the Multi IZI Probe, which is an RF wafer probe offering up to eight independent RF transmission lines with 50 Ohm impedance. As wireless communications play an increasing role in everyday life, data transfer rates, broadband communication channels, and carrier frequencies are increasing. At first, two RF signals per device were sufficient for these products, but now the number of signals per device is increasing. To meet

these demands, the industry requires highly accurate and durable probes to test the differential and multi-port designs of RF components. The SUSS Multi IZI Probe is capable of meeting these new demands. The probe can be individually configured with RF and DC contacts for mixed-mode testing of RF and DC components using one wafer probe. For full flexibility, other electrical components and even integrated circuits can also be placed directly on the probe.

More information: www.suss.com/news150605

Next issue: **05 September 2005** (deadline for contributions: **01 September 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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