

## Patric Salomon

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**Von:** DfMM News from Patric Salomon [dfmm-news@4m2c.com]  
**Gesendet:** Montag, 24. Juli 2006 16:22  
**An:** patric.salomon@4m2c.com  
**Betreff:** Design for Micro & Nano Manufacture (DfMM) Newsletter #14, 24 July 2006

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: <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. We welcome your comments and contributions. Happy reading!

Patric Salomon  
*NoE Patent-DfMM News Editor*

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<b><a href="http://www.patent-dfmm.org">www.patent-dfmm.org</a></b>

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## **News from the NoE Patent-DfMM**

### **Towards “Design for Manufacture” Service Clusters**

The PATENT-DfMM project has further developed its concept of offering services to industry. Specific “Service Clusters” will be established in discrete areas of “Design for Micro & Nano Manufacture”, where a clear need can be identified, especially from small companies. PATENT-DfMM will bring added value to the Industrial community through synergies and distributed critical mass in focused areas formed by these collaborative clusters. These teams can define an offer to the industrial community that may be in the form of training, access to equipment & operating support, design, test, packaging or reliability services, consultancy or prototyping.

It is planned to collaborate closely with other projects and existing industrial service providers. Service clusters may –depending on market needs and business opportunities- develop into commercial service organisations (launch a company that is providing services) or keep the format of a collaborative network that works on a project basis. The distinct “service offers” of the clusters are in the definition process currently and will still have to be validated through a market test process which is ongoing throughout 2006. A sub-project on “Business Development” was launched in March 2006 with a draft business plan to be set up by October 2006. PATENT-DfMM partners that are closely working with industry are involved in this activity.

Contact: Patric Salomon, E-mail: [Patric.salomon@4m2c.com](mailto:Patric.salomon@4m2c.com)

### **PATENT/AMICOM Joint Workshop on MEMS Reliability at ESREF Conference, 2 Oct 06, Wuppertal, Germany**

#### **Abstract Deadline: 31 July 2006**

This event will enable the members from two European Networks of Excellence, PATENT and AMICOM, and the participants of the ESREF Conference to share know-how on MEMS Reliability issues. The workshop studies all aspects of MEMS Reliability. Topics include but are not limited to: characterization methods, failure mechanisms, failure analysis, testing techniques and test structures, reliability techniques and methodology, design rules. Contributors should submit a short abstract (1 or 2 pages) including title and authors’ affiliation, address and email. The abstract should reflect the significance of the contribution. The exact duration of the talks will depend on the final program.

Please submit your papers to Ingrid De Wolf, IMEC, Belgium, E-mail: [ingrid.dewolf@imec.be](mailto:ingrid.dewolf@imec.be)

### **NEXUS Association Re-launched in Switzerland with key participation from PATENT-DfMM**

The NEXUS office has been re-located to Neuchatel, Switzerland starting activities as of 1 July 2006. During an extraordinary membership meeting of the – still small – membership of the new NEXUS Association (Switzerland) that took place in Lausanne on 7 Jul 06, the following people were elected unanimously to the following posts until the next Annual Membership Meeting (AGM):

President: Thomas Hinderling (CSEM)

Chairman: Sean Neylon (Colibrys)

Vice-Chairman: Patric Salomon (4M2C)

Treasurer: David Holden (CEA-LETI)

The following members were also elected unanimously to the Steering Committee:

Andrew Richardson (Lancaster), Jean Pierre Dan (CSEM), Henning Wicht (WTC), Carmen Moldovan (IMT), Roberto Della Marina (Olivetti), Ayman El-Fatraty (BAE Systems)

Thereon, with the office relocated to Switzerland and with a strong administrative support housed within the CSEM, we hope to re-energise the Nexus activities and provide an efficient and useful core networking services to the European MNT community. The next NEXUS Association Annual Membership Meeting (AGM) is planned to be held in Milan on 29 November 2006 in conjunction with a NEXUS/PATENT-DfMM MWG Workshop on Reliability and Test (27 – 28 Nov) and a NEXUSplus Workshop (30 Nov) to prepare for the first Call of the 7th Framework Programme (FP7) of the European Commission. Regular updates and latest information will be given through the NEXUS Email newsletter (E-zine) and on the website [www.nexus-mems.com](http://www.nexus-mems.com)

### **MST News December issue "Remote Training and Engineering in MST", Deadline for Abstracts: 15 Aug 06**

Strategies against skills shortage in MST with national or international focus are subject of this issue. Examples should describe training concepts in micro-, nano- or bio- technologies using online modules or distance learning modules.

Furthermore, examples of virtual or distributed design and modelling solutions and their use in simulation tools for engineering or educational purposes are of high interest. This issue is specifically supported by PATENT-DfMM. In case you are not sure if "your article" would fit to these topics, please contact:

*Patric Salomon (contributing editor of MST News), E-mail: [Patric.salomon@4m2c.com](mailto:Patric.salomon@4m2c.com)*

### **PATENT-DfMM at the IEEE Testing Workshop, Edinburgh, UK, 21-23 June 2006**

The IEEE International Mixed-Signals Testing Workshop (IMSTW) was a forum for discussing all aspects of testing, design-for-test and reliable design of integrated mixed-signals/mixed-technology functions and systems. The event attracted both industrial and academic delegates from fields of Micro & Nano Technology, Electronic System Design, Integrated Microsystems and System on Chip Engineering. It provided an ideal environment for sharing best practice, initiating collaboration and gaining awareness of the new methods, crucial to the manufacturability of future highly integrated electronic, optical, bio-chemical and MEMS based systems featuring micro & nano technologies. The objective was to mix the two communities of "mixed signal" and "design for micro & nano manufacture" and highlight the importance of MEMS to the systems' markets. PATENT-DfMM had a booth and organised a session on MEMS Testing with the following presentations:

- Fault simulation of heterogeneous integrated biological systems
- Built-in test of electrode degradation of multi-electrode array biosensors
- Pseudorandom functional BIST for MEMS - a case study
- Towards a health monitor for system in package with MEMS functionality

Participants agreed that MEMS was the future and something they needed to learn more about as they could see the mixed signal area moving into MEMS once reliability and test issues had been addressed. More information is available from the PATENT-DfMM website.

*Contact: Andrew Richardson, E-mail: [A.Richardson@Lancaster.ac.uk](mailto:A.Richardson@Lancaster.ac.uk)*

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## **Event Announcements**

### **COMS2006, Florida, 27-31 Aug 2006**

The 11th International Conference on the Commercialization of Micro and Nano Systems (COMS 2006) will be held in St Petersburg, Florida, USA, 27-31 Aug 2006. COMS fosters the commercialization of micro and nanotechnologies and addresses commercialization issues unique to these emerging and disruptive technologies. COMS 2006 will bring together key personnel from all over the world and from every sector of the supply chain, including government representatives, top researchers in the field, educators, relevant publication sources, equipment suppliers, end users, and financial experts. The small tech community gathers at COMS conferences to learn from others, share their own knowledge, discuss and argue points of view - all of which contribute to the advancement of this emerging field. COMS 2006 addresses the issues related to building successful MNT firms, regions and educational programs. An exhibition of equipment suppliers, service providers, product suppliers and consultants will be held in conjunction with COMS 2006.

The PATENT-DfMM project will have a joint booth with enablingMNT and MST News.

*More information: [www.mancef-coms2006.org](http://www.mancef-coms2006.org) or from Patric Salomon, E-mail: [patric.salomon@4m2c.com](mailto:patric.salomon@4m2c.com)*

### **CANEUS 2006 Conference on Aerospace Applications, 27 Aug - 1 Sep 06, Toulouse, France**

Micro- and nanotechnologies will deeply impact the aerospace industry worldwide in the next decades. CANEUS 2006 is a unique opportunity to meet top level international representatives of science and industry to stimulate and accelerate the penetration of MNT into this key industrial sector. CANEUS announces the participation of the following invited keynote speakers:

- Gilles Bloch (Agence Nationale pour la Recherche), (tbc)
- Dr Arthur Carty (National Science Advisor of Privy Council Office of Prime Minister of Canada),
- Michel Courtois (Director of ESTEC, ESA), (tbc)
- Jean-Charles Guibert (Directeur de la Valorisation du CEA), (tbc)
- Alain Garcia (Vice President Airbus), (tbc)
- David McCormick (Under Secretary of Commerce for Export Administration, U.S. Department of Commerce),
- Dr Mihail Rocco (NSF Senior Advisor, Chair, Nanoscale Science, Engineering and Technology subcommittee, USA)

A limited number of exhibition booths are available. Placed in the heart of the congress center, the exhibition hall offers an excellent forum for exposing industrial and technological know-how. The PATENT-DfMM project is co-organising a session on MNT reliability with NEXUS and will also have a joint booth with NEXUS.

*More information: [www.caneus.org](http://www.caneus.org)*

### **METRIC 2006, 11-13 Sep 06, Pittsburgh, PA, USA**

This year's featured topic will be: MEMS Integration and its impact on commercialization such as system level considerations, on-chip integration, designing for manufacturability, packaging/assembly and testing, and application-specific considerations. MEMS Industry Group has been working for several months with a volunteer steering committee to determine critical factors and challenges to MEMS integration and how they affect MEMS commercialization. METRIC is for MEMS Industry Group members only. NEXUS/PATENT-DfMM will be represented by Andrew Richardson and Patric Salomon. METRIC participants are asked to participate in a few monthly pre-METRIC teleconferences with the working group co-moderators. This pre-conference participation will ensure that METRIC will result in realistic and proactive recommendations for the industry.

*More information: [www.memsindustrygroup.org/METRIC2006/](http://www.memsindustrygroup.org/METRIC2006/)*

### **EUROSENSORS, 17-19 Sep 06, Göteborg, Sweden**

Since its establishment in 1987, the Eurosensors series of conferences are the only European forum to cover the entire field of Sensors, Actuators and Microsystems. The Eurosensors conference provides an excellent opportunity to bring together European scientists and engineers from academy, national research institutes and companies to present and discuss the latest results in the general field of solid-state sensors, actuators, microsystems and nanosystems. One of the invited speakers will be Patric Salomon, 4M2C PATRIC SALOMON GmbH, to speak about World-wide MNT markets and "Design for Manufacture in MNT".

*More information: [www.eurosensors2006.com](http://www.eurosensors2006.com)*

### **PATENT-DfMM and NEXUS MWG Reliability and Test Workshop, 27-28 Nov 2006, Milan/Italy**

This "NEXUS Methodology Working Group (MWG) in Reliability and Test" was launched in December 2005 in close collaboration with the PATENT-DfMM project and MEMS Industry Group (MIG) in the US. A joint public workshop is planned with the following topics:

27 Nov afternoon: Tutorials in MNT Reliability and Test

28 Nov all day: MWG Reliability and Test Workshop: Industry Needs, Ongoing Research, Services offered

29-30 Nov all day: NEXUS annual general meeting (AGM) and workshop

Contact: Andrew Richardson, E-mail: [A.Richardson@Lancaster.ac.uk](mailto:A.Richardson@Lancaster.ac.uk) and Pascal Nouet, E-mail: [nouet@lirimm.fr](mailto:nouet@lirimm.fr)

## **List of Events**

27 August - 1 September 2006

### **CANEUS 2006**

Toulouse, France

[www.caneus.org/caneus06](http://www.caneus.org/caneus06)

27 - 31 August 2006

### **COMS 2006**

St. Petersburg, FL, USA

[www.mancef-coms2006.org](http://www.mancef-coms2006.org)

27 August - 1 September 2006

### **3rd AMICOM Summer School**

London, UK

<http://cas.ee.ic.ac.uk/amicom/>

3 - 5 September 2006

### **MME06 MicroMechanics Europe**

Southampton, UK

[www.mme2006.ecs.soton.ac.uk](http://www.mme2006.ecs.soton.ac.uk)

4 - 8 September 2006

### **EMRS - European Material Research Society Conference - 2006 Fall Meeting**

Warsaw, Poland

[www.e-mrs.org/meetings/fall2006](http://www.e-mrs.org/meetings/fall2006)

10 - 15 September 2006  
**EUMW 2006 European Microwave Week**  
Manchester, UK  
[www.eumw2006.com](http://www.eumw2006.com)

11 - 13 September 2006  
**METRIC 2006**  
Pittsburgh, PA, USA  
[www.memsindustrygroup.org/METRIC2006](http://www.memsindustrygroup.org/METRIC2006)

14 - 15 September 2006  
**EDS 2006 International Conference on Electronic Devices and Systems**  
Brno, Czech Republic  
[www.imaps.cz/eds2006](http://www.imaps.cz/eds2006)

17 - 20 September 2006  
**Euroensors XX Conference**  
Göteborg, Sweden  
[www.euroensors2006.com](http://www.euroensors2006.com)

17 - 20 September 2006  
**IMAPS Nordic 2006 Conference**  
Gothenburg, Sweden  
[www.imapsnordic.org](http://www.imapsnordic.org)

17 - 20 September 2006  
**MNE 2006 International Conference on Micro- and Nano Engineering**  
Barcelona, Spain  
[www.mne06.org](http://www.mne06.org)

20 - 22 September 2006  
**4M 2006 Int. Conference on Multi Material Micro Manufacture**  
Grenoble, France  
[www.4m-net.org](http://www.4m-net.org)

27 - 29 September 2006  
**CAS 2006 International Semiconductor Conference**  
Sinaia, Romania  
[www.imt.ro/cas](http://www.imt.ro/cas)

27 - 29 September 2006  
**THERMINIC 2006 - International Workshop on Thermal Investigations of ICs and Systems**  
Nice, Cote d' Azur, France  
<http://tima.imag.fr/conferences/therminic/>

## Abstract deadlines for conferences

**PATENT/AMICOM Joint Workshop on MEMS Reliability at ESREF Conference**  
2 October 2006  
Wuppertal, Germany  
**Abstract Deadline: 31 Jul 06**  
[www.patent-dfmm.org](http://www.patent-dfmm.org)

**1. GMM/GI/ITG-Fachtagung "Zuverlässigkeit und Entwurf"**  
27 - 28 March 2007  
München, Germany  
**Abstract Deadline: 27 Oct 06**  
[www.vde.com/zud](http://www.vde.com/zud)

**DTIP 2007 - SYMPOSIUM on Design, Test, Integration and Packaging of MEMS/MOEMS**

25 - 27 April 2007  
Stresa, Lago Maggiore, Italy  
**Abstract Deadline: 10 Nov 06**  
<http://tima.imag.fr/conferences/dtip/>

**The 6th International Congress in Materials Science and Engineering**  
24 - 27 May 2007  
Iasi, Romania  
**Abstract Deadline: 1 Nov 06**  
[www.sim.tuiasi.ro](http://www.sim.tuiasi.ro)

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## Other News

### **Job vacancy: MEMS Engineer at ISLI, Livingston, UK**

The engineer will work as part of a flagship collaborative national project and will lead the technical development and delivery of a prototyping design service to the UK MEMS community. Focusing on applications which integrate Si MEMS and electronics the potential will work with our foundry partner to develop and capture the process offering.

The role requires an ability to coordinate and work closely with the customer, foundry supplier and academic research organisations to realise, characterise and qualify a range of MEMS processes and devices. Experience in a commercial MEMS arena will enable the candidate to drive this design oriented startup process.

The successful candidate will have a high level of technical qualification in silicon based MEMS technology & will be familiar with silicon MEMS and its applications, having experience of the design process, techniques and tools. An understanding of the fabrication process and a proven ability to work closely with both design and process functions is crucial. Experience of product focused commercial development will be an advantage.

Contact: Carol Slater, ISLI, Livingston, UK, E-mail: [carol.slater@isli-institute.ac.uk](mailto:carol.slater@isli-institute.ac.uk)

### **Call for Nominations - EDAA Lifetime Achievement Award 2007**

In 2007, the European Design and Automation Association (EDAA) will grant the fifth EDAA Lifetime Achievement Award. The lifetime achievement award shall be given to individuals who made outstanding contributions to the state of the art in electronic design, electronic design automation and testing of electronic systems in their life.

In order to be eligible, candidates must have made innovative contributions which had an impact on the way electronic systems are being designed. The goal of granting the award is to make the excellent work done by people working within the scope described above more widely known and to help to publicize the results. Past recipients have been Kurt ANTREICH (2003), Hugo DE MAN (2004), Jochen JESS (2005), Robert BRAYTON (2006).

Nominations should be sent to the Chair-elect of EDAA, Bernard COURTOIS, by October 3rd, 2006. Nominations should include a 2-3 page appraisal of the candidate's work. In order to identify the best candidate for the EDAA Lifetime Achievement Award, a committee will evaluate the proposals. This committee consists of individuals representing the scope of the call. If necessary, external experts can be asked to provide a written evaluation of a certain candidate. The award will be handed over during the DATE opening ceremony on April 17, 2007, in Nice, France.

Contact: Bernard COURTOIS, Chair-elect, EDAA. E-mail: [Bernard.Courtois@imag.fr](mailto:Bernard.Courtois@imag.fr), More information: [www.edaa.com](http://www.edaa.com)

### **FINESSE Technology Matchmaking Event, 6-7 Sep 06, Itzehoe, Germany**

Within the EU project FINESSE, IZET Innovationszentrum Itzehoe organises a technology matchmaking event with participants from the Baltic Sea Region. The participants have the singular chance to socialise with technology companies from the Baltic Sea Region, to find potential partners, to exchange experiences and to get access to important networks.

The technology centre and incubator is the engine of the science park Hightech Itzehoe, a highly dynamic microtechnology cluster formed around the Fraunhofer Institute for Silicon Technology (ISIT). It strongly supports young entrepreneurs in all start-up and financing questions and give open access of our networks to connect start-ups with banks, financial institutions, venture capitalists and business angels.

Contact: Christina Müller, IZET, Itzehoe, Germany, E-mail: [mueller@izet.de](mailto:mueller@izet.de), [www.finesse-baltic.net](http://www.finesse-baltic.net)

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Next issue: **6 September 2006** (deadline for contributions: **1 September 06** )

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

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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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Published on behalf of 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.

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