

## Design for Micro &amp; Nano Manufacture (DfMM) News

web page: <http://www.patent-dfmm.org>

*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.



### "Embedded Test Solutions" and "Package Engineering" Tutorials at DTIP 2008, 8 Apr 2008, Nice, Fr

PATENT-DfMM is organising 2 tutorials addressing "Embedded Test Solutions" and "Package Engineering" for Micro Nano Technology (MNT)-based systems to be held in conjunction with the DTIP symposium (9-11 Apr) <http://tima.imag.fr/conferences/dtip/>.

The Embedded Test Solutions tutorial will explore the need and potential solutions for manufacturing and on-line test of Micro Nano Technology (MNT)-based systems. Specific focus will be put into electrical only methods for implementing both Built-in-Test and Health Monitoring of MEMS based systems.

The Package Engineering tutorial will introduce the various levels of packaging used within the Micro & Nano Systems world with examples and explore reliability issues including typical defects, parametric, evolving and hard physical manufacturing faults and the impact of the packaging process on micro & nano scale MEMS components.

**Speakers:** Prof. **Andrew Richardson** (Lancaster Univ), Dr. **Srikanth Lavu** (Heriot-Watt Univ), Prof. **Alain Bosseboeuf** (University of Paris-Sud).

**The Venue:** Hotel Boscolo in Nice, Côte d'Azur, France.  
Registration fees: €150

**Please register through the DTIP registration** <http://cmp.imag.fr/conferences/dtip2008/registration.php>

**For additional information, please contact either:**

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### EUMIREL, the European Microsystems Reliability Service Cluster, secures its first Contract

The European Microsystems Reliability Service Cluster – **EUMIREL** has recently been developed out of the "DfMM-PATENT" network and is offering a wide range of reliability services to the European Microsystems industry:

**Reliability analysis:** • Application-depending accelerated reliability tests of MEMS, especially for harsh environment; • Quantitative Accelerated Life Testing of MEMS for calculating reliability indicators; • Functional testing in different environments: temperatures, pressure, gasses, humidity, vibration, etc.; • Electrical and environmental reliability testing including statistical data processing where possible; • Failure analysis including multi-physics modelling; • Design of dedicated test structures for reliability monitoring; • Research-based services on MEMS reliability;

**Consultancy:** • Advice on MEMS reliability including material, processing and packaging related issues; • Development of reliability test plans; • FMEA studies; • Advice on test instrumentation and set-up and reliability methodology;

**Information about reliability issues:** • Access to databases on material issues, test structures, test equipment availability and MEMS failure mechanisms,...and a wide range of Training Courses on all aspects of MEMS reliability.

**EUMIREL** has now secured its first contract on the modelling of charging effects for improved MEMS reliability. The project is aimed at improving the understanding of failure

mechanisms leading to improved reliability in products (design for reliability) and predicting device failure likelihood associated with charging. More information: **Patric Salomon**, E-Mail: [services@patent-dfmm.org](mailto:services@patent-dfmm.org).

### Hermeticity Testing of Microsystems, a Questionnaire from Heriot-Watt University

Due to problems associated with the standard helium leak test when applied to microsystems, novel hermeticity test methods are being researched and developed at MISEC, Heriot-Watt University. To ensure the techniques are relevant to industry, we have prepared a brief market survey which aims to help us understand how the hermeticity of devices is currently tested. All contributors will receive a summary of the survey. **Link to survey:**

<http://www.patent-dfmm.org/site/events/questionnaire.htm>

### iSLI and Cadence Design Systems join forces to help start-ups

The Institute for System Level Integration (iSLI) has announced an agreement with Cadence Design Systems Ltd. to help advance new businesses by giving them easy access to chip design software and methodology services. Providing access to software design tools and methodology services will enable new companies who may not have the finance or resources available, to accelerate their product development processes allowing them to become successful in the shortest possible time. The complete press release is available at [www.sliinstitute.ac.uk/pdf/news/iSLIandCadenceJoinForcesPR.pdf](http://www.sliinstitute.ac.uk/pdf/news/iSLIandCadenceJoinForcesPR.pdf)

### Call for papers: The 13th Commercialization of Micro and Nano Systems Conference (COMS), Puerto Vallarta, Mexico, 31 Aug - 4 Sep 2008

**Deadline for submissions: 30 Apr 2008**

Organized by MANCEF, COECYTJAL, FUMEC and CMM Microsistemas, COMS 2008 is an ideal location to network with leading representatives from the entire micro-nano community. It fosters the commercialization of micro and nano technologies and addresses commercialization issues unique to these emerging and disruptive technologies and it 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 debate points of view – all of which contribute to the advancement of this emerging field. COMS is the oldest and most widely attended international conference on the commercialization of these enabling technologies.

An exhibition of equipment suppliers, product & service providers and consultants will be held in conjunction with COMS 2008. COMS addresses the issues related to building successful MNT firms, regions and educational programs:

**Global Overview of Small Technologies**  
More information: [www.mancef-coms2008.org](http://www.mancef-coms2008.org)

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