NEXUS Methodology Working Group "Design Modelling Simulation"
Workshop, 25 January 2007, Berlin, Germany

The objective of this workshop was to identify needs of the Microsystems/MEMS industry (fabless design houses, manufacturers, etc.) in terms of design methodology, services and software tools.
33 MEMS designers from industry and research labs, as well as MEMS software tool providers from several European countries participated in this workshop. A copy of the resulting "roadmap documentation" will be distributed to all active participants and to those who contribute to the work remotely. The workshop was jointly organised by the NEXUS MWG Design Modelling Simulation (DMS) and the **NoE on "Design for Micro & Nano Manufacture (PATENT-DfMM)**.

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Programme updates will be available at www.patent-dfmm.org

The workshop was structured into short presentations, work groups and plenary discussion sessions. This format provided the best opportunities for participants to hear about latest developments, network, to discuss needs and ideas in small groups and to generate outcomes that will focus future research in DfMM on the real needs of the industry.

Agenda

- **Welcome and Scope of this workshop**
  Patric Salomon, 4M2C PATRIC SALOMON GmbH
- **Introduction and PATENT results in the fields of Design for Test, Design for Reliability, Package Engineering and on Modelling and Simulation methods in general**
  Andrew Richardson, Lancaster University, UK
- **Design and Virtual Manufacture in INTEGRAMplus**
  Gerold Schröpfer, Coventor, France
- **Towards an Integrated Design approach for Si+NonSi MEMS Methodology**
  Markus Dickerhof, FZ Karlsruhe, Germany
- Parallel **Workgroup sessions**, followed by final presentation and discussions of the achieved results:
  - How to integrate process scattering into the design flow?
  - Modelling and simulation challenges on the way from micro- to nanosystems
- **Reliability assessment of brittle MEMS structures based on FE-simulation, size effect theory and probabilistic sampling**
  Matthias Ebert, Fraunhofer IWMH, Germany
- **Design for Test**
  Frank Poehl, Infineon Technologies AG, Germany
- Parallel **Workgroup sessions**, followed by final presentation and discussions of the achieved results:
  - Needs for modelling and simulation of multi physical systems
  - How to integrate testability into a design flow?
- **Concept for the commercialisation of Design Services in the framework of the TechNet Alliance**
  Wolfgang Brose, CADFEM
- **Europractice Service Clusters – Opportunities for new Projects in FP7**
  Patric Salomon, 4M2C PATRIC SALOMON GmbH, Germany
- **Final discussion**