

# smartsystems integration



International Conference and Exhibition  
on Integration Issues of Miniaturized Systems

Zurich, Switzerland, 21–22 March 2012  
[smartsystemsintegration.com](http://smartsystemsintegration.com)

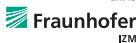
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## Conference program

Knowledge exchange  
Trends & innovations  
Networking

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# Welcome to Smart Systems Integration 2012

Smart Systems Integration 2012 is the International Conference and Exhibition on integration of materials, devices and systems. It started 2007 as European Conference and Exhibition and has now become a leading event at international level. It serves as a communication platform for academia, research and industry to exchange know-how on smart systems integration.

Smart Systems combine data processing with sensing, actuating and communication. They are able to analyse complex situations and to take autonomous decisions. They take advantage of miniaturisation, and are often invisible to the consumer. Smart devices will frequently act unnoticeably in the background and intervene visibly only when human capabilities to act and to react are reduced or cease to exist. Examples for such smart systems and related integration challenges include object recognition devices for automated production systems, devices for monitoring the physical and mental condition of vehicle drivers, or integrated polymeric RFID systems for logistics.

The power of worldwide Smart Systems research is represented by a number of strong big players such as Bosch, Siemens, Thales, EADS, Honeywell or Sony forming a powerful technological backbone. High class public research structures, medium sized private and public research entities as well as thousands of high-tech SMEs are forming a powerful backbone of excellence and creativity.

Information technology companies such as IBM, Cisco and Hewlett-Packard have identified up-coming »Smart Systems« as the next »big thing«<sup>1</sup>, and as fundamental to their »Smarter Planet« campaign which is aiming at providing smart technologies for intelligent resource-saving energy, sustainable transport and traffic, energy efficient buildings and intelligently managed municipalities. Major electrical engineering companies such as Siemens and General Electric are building upon Smart Systems for solutions in the healthcare and advanced manufacturing sector.

The 6th Smart Systems Integration conference SSI 2012 addresses application as well as basic aspects and will show a snapshot of the international work on this field. For the first time there will be a session related to manufacturing technologies. Special emphasis is given to best practice examples in the EPoSS session on the first day.

To push forward the international activities and to promote co-operations worldwide special sessions focusing on international markets have been integrated in the conference program. After the successful session in 2011 the focus in 2012 will be on the US market. Karen Lightman from MEMS Industry Group and Roger Grace from Grace Associates will chair and organize special US sessions for Smart Systems Integration 2012.

1 »It's a smart world«, The Economist, 11/04/2010



Prof. Dr. Thomas Gessner  
Fraunhofer Institute for Electronic Nano Systems, Germany  
Conference chair, Smart Systems Integration 2012

# Knowledge exchange – Trends & innovations – Networking

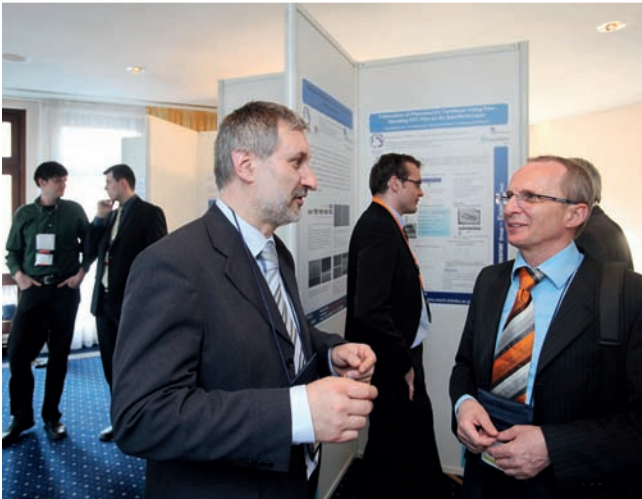
## Why to attend?

The event features application-oriented as well as scientific sessions and addresses the complete value-added chain of smart systems. Moreover an overview of special European programs focusing on smart systems integration is given.

The event 2011 in Dresden was attended by 303 experts from 21 countries.

## Who should attend?

The event targets researchers, developers and users in equal measure. It is the platform for smart systems integration experts and managers from the automation, automotive, aerospace, telecommunications, medical technology, logistics, RFID and life sciences industry sectors.



# Highlights of the conference

## Keynotes will be held by

- EPoSS
- European Commission
- Honeywell
- Empa
- Phonak Communications

## Special sessions by

- EPoSS
- MEMS Industry Group, US
- Roger Grace Associates, US

## Co-location with MEMS Executive Congress Europe

The first European edition of MEMS Executive Congress held at the neighbouring Novotel in Zurich on 20 March will be co-located with Smart Systems Integration.

## Pre-conference field trip

The pre-conference field trip taking place on 20 March 2012 will go to the IBM Research Centre. Participants will gain an insight into the latest innovations of European research.

## Conference dinner

The traditional conference dinner will be held on 21 March 2012 at the »Zoo Zurich«. Besides an exclusive dinner the participants will have the chance to attend a guided tour in the Zurich zoo. During the conference dinner the Best Paper and Best Poster Award of SSI 2011 will be awarded.

**For the pre-conference field trip and the dinner registration is required due to limited space!**

REGISTER NOW AT  
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# Conference program

Wednesday, 21 March 2012

World Trade Hall

→ 8:30 am

## Welcome

Thomas Gessner, Fraunhofer ENAS, DE

Mario El-Khoury, CSEM, CH

World Trade Hall

→ 8:50 am

## Keynote I

**From SoC to Smart Systems by heterogeneous Integration: an innovative approach to address new markets**

Carmelo Papa, EPoSS, STMicroelectronics, IT

World Trade Hall

→ 9:15 am

## Keynote II

**Smarter Safety – Using Technology To Protect Lives**

Cleo Cabuz, Honeywell, US

→ 10:20 am – 10:45 am Coffee break & exhibition

The special session by EPoSS, the poster presentations and the exhibition are free of charge for all participants, exhibitors and registered visitors.

Wien

## System integration & packaging I

→ 10:45 am

**A new 2-axis light incident and intensity sensor realized as an integrated smart system**

Andreas Nebeling, ELMOS Semiconductor, DE

→ 11:10 am

**Chemically resistant encapsulation for MEMS release**

Serguei Stoukatch, University of Liege, BE

→ 11:35 am

**Particle Detection Microoptical System Based on Hybrid Integration and Silicon Micromachining**

Ivan Bernat, University of Barcelona, ES

→ 12:00 pm

**High density sensor integration in mobile measurement products**

Knut Siercks, Hexagon Technology Center, CH



Lima

## Design of components and systems

→ 10:45 am

**Assembling mechanical sensors into engineering structures**

Jürgen Wilde, University of Freiburg – IMTEK, DE

→ 11:10 am

**Bond Wire Antennas for Compact RF Microsystems**

Ivan Ndip, Fraunhofer IZM, DE

→ 11:35 am

**Piezoelectric vibration damping using autonomous switching shunt**

Tomasso Delpero, ETH Zurich, CH

→ 12:00 pm

**Design of smart sensing system for vapor trace detection of explosives**

Drago Strle, University of Ljubljana, SI

→ 12:25 pm – 1:30 pm Lunch break & exhibition

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World Trade Hall

→ 9:45 am

### Keynote III

Smart Systems start with innovations in materials

Gian-Luca Bona, Empa, CH




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World Trade Hall

### EPoSS session I:

### New approaches in Smart Systems research

→ 10:45 am – 12:25 pm

In addition to results from basic and applied research in key areas of Smart Systems Integration, such as health and medical, micro-nano-bio integration, energy efficiency, or manufacturing, the session aims at establishing a link between Smart Systems research and research activities until now unrelated to SSI, such as services or new materials research.

Invited speakers will highlight their capabilities and achievements, and will also draw attention to new bases for future Smart Systems developments.

The session will go beyond the borders of traditional Smart Systems R&D and present approaches, findings, and prospects of radically new lines of research or until now SSI unaware research strands – thereby showcasing the performance of European research.



# Conference program

Wednesday, 21 March 2012

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Wien

## System integration & packaging II

→ 1:30 pm

**Miniature atomic clocks**

Rony Jose James, CSEM, CH

→ 1:55 pm

**Platinum TSVs for High Temperature Processing and Operation of Microsystems**

Rokhaya Gueye, EPFL, CH

→ 2:20 pm

**3D integration – technology and test strategy**

Stephan Dobritz, Fraunhofer IZM, DE

→ 2:45 pm

**Thinning Process Optimization for an Ultra-thin 3D Magnetic Field Sensor**

Srecko Cvetkovic, Leibniz University Hannover, DE

→ 3:10 pm – 4:30 pm Coffee break & exhibition

## POSTER SESSION

The poster presenters will be available at their posters for questions and discussions.

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Wien

## Test and reliability of components and systems

→ 4:30 pm

**The use of COTS in harsher environment – conditions and assessment of the risk on reliability**

Bruno Foucher, EADS France – Innovation Works, FR

→ 4:55 pm

**Advanced Reliability Testing of Smart Systems under Complex Loading**

Bernd Michel, Fraunhofer ENAS, DE

→ 5:20 pm

**Aging analysis for MEMS devices using X-ray techniques**

Alex Dommann, CSEM, CH

→ 5:45 pm

**Reliability characterization of SiP in LGA/QFN packages in harsh environment with focus on design and assembly process**

Michel Brizoux, Thales Global Services, FR

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Lima

## Emerging micro and nano devices and technologies

→ 1:30 pm

**Hands-on-access facility for MEMS and semi-conductor prototyping at Tohoku University**

Kentaro Totsu, Tohoku University, JP

→ 1:55 pm

**Out of Plane Capacitive Transducer in Air Gap Insulation Microstructures Technology for High Precision Monolithic 3-Axis Sensors**

Danny Reuter, Chemnitz University of Technology, DE

→ 2:20 pm

**Integration of the magnetic-based metallic glass micro-mirror with the tunable frequency actuation system**

Yao-Chuan Tsai, Tohoku University, JP

→ 2:45 pm

**The Development Path of Electrostatic Resonant to Electrostatic Quasistatic Driven Micro Scanning Mirrors**

Jan Grahmann, Fraunhofer IPMS, DE

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Lima

## New materials, nano structures and devices

→ 4:30 pm

**Patterning of SU-8 Pillars with Submicron Widths by Electron Beam Lithography at 20 and 30 kV**

Valentin Döring, ETH Zurich, CH

→ 4:55 pm

**Fabrication of nc-Si Electron Emitter Array Integrated with Active-Matrix Driving LSI for Massively Parallel EB Lithography**

Naokatsu Ikegami, Tokyo University of Agriculture and Technology, JP

→ 5:20 pm

**Thermal and UV nanoimprint lithography for applications from the micro to the nano scale**

Jan Besser, Fraunhofer ENAS, DE

→ 5:45 pm

**Super-compliant metallic electrodes for Electroactive Polymer Actuators**

Florian Habrard, Empa, CH



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World Trade Hall

## EPoSS session II:

### Policy perspectives for Smart Systems Integration

→ 1:30 pm – 3:00 pm

Based on knowledge and experience in Smart Systems research and innovation and using the core statements of Session I as starting point, EPoSS key representatives will present the EPoSS position in the current discussion on future research and innovation programmes in terms of thematic priority setting.

The session will highlight successful research and good practice, but will also point at white spots in the landscape of EU research and at red flag areas on Europe's path towards the Innovation Union.

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World Trade Hall

## US session I:

### US MEMS Session

by Karen Lightman, MEMS Industry Group, US

→ 3:15 pm – 3:30 pm

**MEMS in the Mainstream: Introduction to MEMS Industry Group and US MEMS Industry**  
Karen Lightman, MEMS Industry Group, US

→ 3:30 pm – 3:55 pm

**Sensor Integration and Sensor Fusion in Mobile Product Designs**  
Ed Brachocki, Kionix, US

→ 3:55 pm – 4:20 pm

**Overview of Smart and Intelligent Sensors**  
Stephane Gervais-Ducouret, Freescale, US

→ 4:20 pm – 4:45 pm

**Market Trends and Recent Advances in »Inertial Sensors Technology« for Industrial and Automotive Applications**  
Manfred Wittmeir, EPSON EUROPE ELECTRONICS, US

→ 4:45 pm – 5:10 pm

**A Practical Method for Predicting Fracture Risk of MEMS**  
Alissa Fitzgerald, A.M. Fitzgerald & Associates, US

→ 5:10 pm – 6:10 pm

### PANEL DISCUSSION

**»MEMS Sensor Fusion and Integration – Challenges and Opportunities«**

Sensor fusion strategies combining sensory data from disparate sources can provide more accurate, more complete, or more dependable information. What are the challenges to integrating MEMS into these complex systems and where are the opportunities. Come listen to this panel of MEMS business experts as they discuss this exciting topic.

#### Panelists:

Jim Knutti, Acuity Microsystems, US  
Mark Martin, Analog Devices, US  
Alissa Fitzgerald, A.M. Fitzgerald & Associates, US

→ 6:10 pm – 6:15 pm

**Conclusion and Final Thoughts**  
Karen Lightman, MEMS Industry Group, US

→ 6:30 pm – 11:30 pm

### Conference dinner

Busses to the conference dinner leave at 6:30 pm (for participants of guided zoo tour) and at 7:00 pm.

# Conference program

Thursday, 22 March 2012

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World Trade Hall

→ 9:00 am

## Keynote IV

**A European approach to Research and Innovation on Enabling Technologies: the case of Smart Systems and Smart Systems Integration**  
Dirk Beernaert, European Commission, BE

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World Trade Hall

→ 9:30 am

## Keynote V

**Technical Challenges of Extremely Miniaturized Hearing Systems**  
Evert Dijkstra, Phonak Communications, CH

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→ 10:00 am – 10:25 am Coffee break & exhibition

The poster presentations and the exhibition are free of charge for all participants, exhibitors and registered visitors.

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Wien

## Manufacturing technologies

→ 10:25 am

**3D-MID – Adding the 3rd Dimension in Smart Systems Integration**  
Albert Birkicht, HARTING, CH

→ 10:50 am

**Integration of CMOS and MEMS processes – Part of X-FAB's More than Moor-Modularity**  
Uwe Schwarz, X-FAB Semiconductor Foundries, DE

→ 11:15 am

**Direct deposition of surface acoustic wave sensors by aerosol jet printing technique**  
Denis Vandormael, Sirris, BE

→ 11:40 am

**Inkjet Printing of Functional Structures for Lab-on-Chip Systems**  
Oliver Pabst, Fraunhofer IOF, DE

→ 12:05 pm

**Laser Micromachining and micro hot embossing for highly integrated Lab-on-Chip Systems**  
Tom Enderlein, Chemnitz University of Technology, DE

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Lima

## Power management of smart systems/ energy efficiency, energy harvesting

→ 10:25 am

**On-chip micro fuel cells as power supply for smart microsystems**  
Dominik Zimmermann, Micronas, DE

→ 10:50 am

**Development of Silicon integrated micro batteries**  
Krystan Marquardt, Fraunhofer IZM, DE

→ 11:15 am

**Smart Energy Management and Energy Distribution in Decentralized Self-Powered Sensor Networks using Artificial Intelligence**  
Stefan Bosse, University of Bremen, DE

→ 11:40 am

**Monolithic integration of multiarrays of silicon nanowires into thermoelectric microgenerators**  
Diana Davilla, Instituto de Microelectrónica de Barcelona (IMB-CNM), ES

→ 12:05 pm

**Realizing Parsimonious Systems through Inexact/Approximate Computing: A Survey and Future Directions**  
Avinash Lingamneni, CSEM, CH

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→ 12:30 pm – 1:30 pm Lunch break & exhibition

World Trade Hall

## US session II:

### Smart systems integration in the US

by Roger H. Grace, Roger Grace Associates, US

→ 10:25 am – 10:30 am

#### Welcome and Introduction

Roger H. Grace, Roger Grace Associates, US

→ 10:30 am – 11:05 am

#### KEYNOTE

#### Wireless Integrated Microsystems:

#### Historical Retrospective and Future Directions

Kensal (Ken) Wise, University of Michigan –

Wireless Integrated Microsystems and Sensors Center, US

→ 11:05 am – 11:30 am

#### Smart Systems Integration in the US: Review and Overview of Technologies and Applications

Roger H. Grace, Roger Grace Associates, US

→ 11:30 am – 11:55 am

#### CeNSE: A Central Nervous System of the Earth

Matthew Hopcroft, H.P. Labs, US

→ 11:55 am – 12:20 pm

#### Intelligent Sensors and Smart Systems:

#### A Revolution in Handheld Spectroscopy

David Day, Thermo Fisher Scientific, US

→ 12:20 pm – 12:45 pm

#### PANEL DISCUSSION

#### »Smart Systems: Emerging Application Opportunities and Barriers to their Commercialization«

Moderator: Roger H. Grace



# Conference program

Thursday, 22 March 2012

→ 1:30 pm – 2:30 pm Coffee break & exhibition

## POSTER SESSION

The poster presenters will be available at their posters for questions and discussions.

### Wien

#### Assembling and interconnect technologies

→ 2:30 pm

**Si Interposer Technologies for three dimensional AMR Sensor Systems**

Carola Gebhardt, Sensitec, DE

→ 2:55 pm

**A Packaging Technology for High Temperature Environments**

Klas Brinkfeldt, Swerea, SE

→ 3:20 pm

**A novel wafer-level microwave circuit Integration method using high-resistive Si as double side substrate with TSV for inter-side interconnections**

Le Luo, Shanghai Institute of Microsystem and Information Technology, CN

→ 3:45 pm

**3D Integration for MEMS devices using photosensitive glass**

Dirk Wuensch, Chemnitz University of Technology, DE

### Lima

#### Smart systems for communication and medtech

→ 2:30 pm

**An integrated microsystem for DNA extraction, amplification and purification from human blood**

Ben Jones, IMEC, BE

→ 2:55 pm

**Photonic sensing of food allergens: integration and miniaturization**

Jörg Pierer, CSEM, CH

→ 3:20 pm

**Flow rate influence on the adsorption capabilities on a preconcentrator device for a NDIR ethylene gas sensor**

Steffen Janßen, University of Bremen, DE

→ 3:45 pm

**Modular smart RFID system with integrated CO sensors and energy harvester**

Carolin Peter, Fraunhofer IPM, DE

→ 4:10 pm End of the conference



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### World Trade Hall

## Smart systems for automotive, green cars and aeronautics

→ 2:30 pm

**Tri-axial MEMS gyroscope for Automotive applications**

Marco Ferraresi, STMicroelectronics, IT

→ 2:55 pm

**Novel Architecture for Battery Management Systems in Fully Electrical Cars**

Sven Rzepka, Fraunhofer ENAS, DE

→ 3:20 pm

**Wireless sensor network for Structural Health Monitoring with Guided Ultrasonic Wave propagation**

Christian Dürager, Empa, CH

→ 3:45 pm

**Aeronautics structural health monitoring with a Smart integrated System the size of a credit card**

Vincent Rouet, EADS France – Innovation Works, FR

Full descriptions of the presentations as well as biographies of the speakers are available at [www.smartsystemsintegration.com/program](http://www.smartsystemsintegration.com/program).



# Poster session

This session takes place on both conference days and is free of charge for all participants, exhibitors and registered visitors!

→ 21 March 2012, 3:10 pm – 4:30 pm

→ 22 March 2012, 1:30 pm – 2:30 pm

**Development of Electrostatic Carriers (T-ESC®) for thin 300 mm wafer handling using seal glass bonding technology**

Ira Balaj, ProTec Carrier Systems, DE

**Noise Canceling Chopper Stabilized Front-End for Electrochemical Biosensors**

Viswanathan Balasubramanian, EPFL, CH

**Design of a Mechanical Gripper with an Integrated Smart Sensor Network for Multi-Axial Force Sensing and Perception of Environment**

Stefan Bosse, University of Bremen, DE

**Novel nano-scale energetic systems for low-temperature and stress-free joining of dissimilar materials**

Jörg Bräuer, Fraunhofer ENAS, DE

**Smart Microoptical In-Ear-Sensor For Life Sciences**

Olaf Brodersen, CiS Forschungsinstitut für Mikrosensorik, DE

**Design and characterization of a microfluidic device for bioprocess control in microtiter plates**

Andreas Buchenauer, RWTH Aachen University, DE

**Sensor Network Based on Fibre Optics and Smart Electronic Sensor Nodes for Intelligent Sensorial Materials**

Christoph Budelmann, DFKI, DE

**Solder joining of a miniaturized laser on a multi-material smart platform**

Thomas Burkhardt, Fraunhofer IOF, DE

**Competence Center for Power Electronics, Development of an advanced, modular frequency converter for traction control**

Ralf Dudde, Fraunhofer ISIT, DE

**Foil Based Application Employing Customized Printed Batteries**

Michael Espig, Chemnitz University of Technology, DE

**Micro fuel cell powered platform for autonomous microfluidics applications**

Juan Pablo Esquivel, Instituto de Microelectrónica de Barcelona (IMB-CNM), ES

**Design, modeling and simulation of an implantable microprobe for neural recording**

Bogdan Firtat, National Institute for Research and Development in Microtechnologies (IMT), RO

**Novel Biologically Active Protein-Metal Hybrids: Biomedical applications**

Amihy Freeman, Tel Aviv University, IL

**Design and Manufacturing of Micro Synthetic Jet Actuators**

Christian Gebauer, Chemnitz University of Technology, DE

**Intelligent Sensor Hub Benefits for Sensor Networks**

Stephane Gervais-Ducouret, Freescale, FR

**Towards miniature carbon-nanotube based X-ray sources**

Sandra Giudice, CSEM, CH

**DHC ISEE – DH Compliant Intelligence, Semantics and Energy Efficiency**

Ignacio Gonzalez Alonso, University of Oviedo, ES

**MOLANAE: Modelling Language for Nano-materials Engineering.**

Ignacio Gonzalez Alonso, University of Oviedo, ES

**A Low Power MEMS based 2.4 GHz Radio Front End with Channel Filtering at RF**

Aravind Heragu, CSEM / EPFL, CH

**Electronic Device Integration on Foils Using Semiconductor Nanoparticles**

Ulrich Hilleringmann, University of Paderborn, DE

**On the Wafer-Level Assembly of Multi-Component MOEMS Devices**

Chenping Jia, Chemnitz University of Technology, DE

**Control and Analysis of Stiction on Cantilever Beams**

Maya Kato, Japan Aerospace Exploration Agency, JP

**Spatio-angular controlled light exposure microscopy**

Martin Kielhorn, King's College London, DE



**3D lithography for x-ray compound refractive lenses**

Olga Kurapova, ETH Zurich, CH

**Analysis of High-Speed PCB Connectors using Electromagnetic Field Simulations**

Uwe Maaß, Fraunhofer IZM, DE

**Chip-based optical sensor to determine the arterial oxygen concentration**

Martin Möbius, Chemnitz University of Technology, DE

**Multichannel bidirectional microprobe for neuronal cells recording and stimulation and the integrated platform for measurements**

Carmen Moldovan, National Institute for Research and Development in Microtechnologies (IMT), RO

**Towards integration of silica membrane based DNA extraction on chip**

Andreas Morschhauser, Fraunhofer ENAS, DE

**Modeling, Measurement and Optimization of Bond Wires for High-Speed Signal Transmission**

Ivan Ndip, Fraunhofer IZM, DE

**Highly Sensitive Radiation Detectors for Medical Applications**

Lars Nebrich, Fraunhofer EMFT, DE

**Development of a new measurement module for in-situ detection of micro test pieces**

Chi Hsiang Pan, National Chin-Yi University of Technology, TW

**Development of a portable gas sensing system based on nanodevices**

Albert Romano-Rodriguez, University of Barcelona, ES

**Broadband via Satellite deployment made fast & easy with smart systems**

Pedro Ruiz, Integrasys, ES

**The integration of smart systems: from R&D to products**

Pedro Ruiz, Integrasys, ES

**Charging SiO<sub>2</sub> and cytop electret film by Air Purifier, multiple ionizer for MEMS based energy harvesting systems**

Awad Saad Abou Elkheir, University of Applied Sciences Furtwangen, DE

**Comparison of lumped and finite element modeling for thermoelectric devices**

Petra Streit, Chemnitz University of Technology, DE

**Smartness in Manufacturing:**

**A symbiosis between Smart Systems as products and the Smart Processes employed in their manufacture**

David Topham, Arts & Science, UK

**Smart Systems for monitoring photovoltaic plants**

Tolgay Ungan, University of Freiburg – IMTEK, DE

**Analyses of the main areas of the MEMS market in Russia**

Denis Urmanov, Russian MEMS Association, RU

**Autonomous sensor network for power line monitoring**

Sven Voigt, Chemnitz University of Technology, DE

**Temperature controlled transparent micro chambers**

Henning Völlm, Saarland University, DE

**FIB/SEM Analysis for Smart Systems Integration**

Thomas Wächtler, Fraunhofer ENAS, DE

**Power Management Circuits Design for Low Intensity Indoor Light Powered Wireless Sensor Nodes**

Wensi Wang, Tyndall National Institute, IE

**Development of a magnetic field sensor working under high temperature**

Anja Wienecke, Leibniz University Hannover, DE

**Advanced Interposer for Heterogeneous Device Integration**

M. Jürgen Wolf, Fraunhofer IZM, DE

**Miniaturization of LED Dimming Ballast using Piezo-Transformer and Universal Control IC**

Yuja Yang, Fraunhofer IZM, DE

**Fabrication of Integrated Microdispenser with Electrical Impedance Detection for Single-cell Printing**

Azmi Yusof, University of Freiburg – IMTEK, DE

**Wafer Level Fabrication of Integrated Microdispenser with Electrical Impedance Detection for Single-cell Printing**

Azmi Yusof, University of Freiburg – IMTEK, DE

**Infusion Micro-Pump Development Using MEMS Technology**

Luca Zanotti, STMicroelectronics, IT

# Committee list

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**K. Lightman**, MEMS Industry Group, US  
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**A. Ripart**, Sorin Group, FR

# Registration

## Registration fees

	Until 17 February 2012	From 18 February 2012
Full conference	985 EUR	1,055 EUR
Full conference university staff and research institutes*	610 EUR	735 EUR
Full conference students	310 EUR	310 EUR
One conference day	575 EUR	635 EUR
Conference dinner	50 EUR	50 EUR
Pre-conference field trip	50 EUR	50 EUR

\* University staff, research institute staff and students may only register for the full conference at special rates and must enclose a copy of their university/research institute ID-card.

For registration on-site a last-minute-fee of 30 EUR becomes due.  
All fees plus legal VAT.

## Registration terms

Registration for Smart Systems Integration (21–22 March 2012) is binding and only accepted online at [www.smartsystemsintegration.com/registration](http://www.smartsystemsintegration.com/registration).

Participation fees are due upon registration with payment by credit card (VISA, Master/Eurocard and Amex) via the Saferepay gateway. An invoice for the fees will be issued by mail. Once the registration process is complete, you will receive an email booking confirmation including an entry voucher to the conference, please make sure to bring this along. Your conference documents will be issued on-site at the conference counter.

Cancellations will be accepted in writing only. If Mesago receives your cancellations until 21 February 2012 a processing fee of 85 EUR will be charged. After this date or if the participant does not attend, the full fee will be due. If a participant is unable to attend, a substitute can be nominated. Mesago reserves the right to cancel the conference due to poor bookings or other reasons beyond our control. No further claims beyond the reimbursement of already paid participation fees will be accepted. The program or speakers are subject to change and do not entitle to any claims.

The conference language is English.

## Conference package

The conference fee includes participation in the conference parts booked, proceedings (USB-stick), lunch on the days registered, coffee breaks and free admission to the exhibition, the poster sessions and the special session by EPoSS.

## Opening hours registration counter

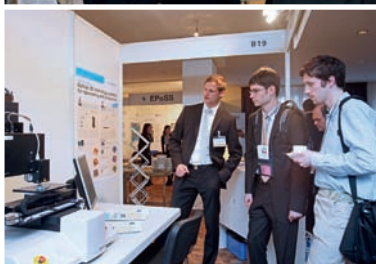
The conference counter will open 1 hour before the beginning of the conference. Early check-in on Tuesday 20 March 2012 1:30 pm – 3:00 pm.

## Venue

World Trade Centre Zurich  
Leutschenbachstrasse 95  
8050 Zurich, Switzerland  
[www.wtc-zurich.com](http://www.wtc-zurich.com)

## Accommodation and travel

The World Trade Centre Zurich is very well connected to the airport and the central station. Detailed information as well as a list of hotels with special rates is available at [www.smartsystemsintegration.com/conferencetravel](http://www.smartsystemsintegration.com/conferencetravel).



The conference is accompanied by an exhibition.  
Pre-registered visitors gain free entry to the exhibition.  
Register now at [www.smartsystemsintegration.com/tickets](http://www.smartsystemsintegration.com/tickets).

Visitors also have free access to the special session by EPoSS and the poster sessions!



Delegates of MEMS Executive Congress Europe receive 20% discount on the regular conference rate of Smart Systems Integration 2012 and vice versa.

### Exhibitors

AEMtec | Coventor | COWIN | CSEM | EMFT | EPoSS European Technology Platform on Smart Systems Integration | Fraunhofer ENAS | Fraunhofer IPMS | Fraunhofer IZM | FRT, Fries Research & Technology | ISIS Sensorial Materials Scientific Centre | Micronac | Polytec | Spitzencluster MicroTEC Südwest

as of 16 December 2011

### Sponsors

MEMS Executive Group  
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For the latest exhibitor list go to  
[www.smartsystemsintegration.com/exhibitorlist](http://www.smartsystemsintegration.com/exhibitorlist)

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