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## Smart Sensors, Actuators and MEMS (EMT101)

Part of the SPIE International Symposium on Microtechnologies  
18-20 April 2011 • Prague Congress Ctr. • Prague Czech Republic

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This biannual conference is the fifth in series following its successful launch in 2003. Due to the interdisciplinary spirit of the event a wide range of topics is covered related to the design, fabrication, packaging and system integration of MEMS and NEMS-based sensors and actuators applying smart approaches. Furthermore, basic as well as more application-oriented research topics are addressed, thus stimulating in a cooperative atmosphere the exchange between academia and industry. Topics include, but are not limited to:

- material research: polymers, piezoelectric materials, nitrides, shape memory alloys, thermoelectric materials, other functional thin film materials, optical thin films, metallic thin films
- processes and fabrication technologies for MEMS: deposition techniques, lithography, self alignment and masking techniques, etching and ablation techniques
- functional surfaces: hydrophobic/hydrophilic functionalisation, tribological functions, anti-adhesion, biomimetic surfaces, gecko effect
- modelling and simulation of Microsystems from packaged systems down to device level, CAD tools

- physical sensors, mechanical sensors, oscillators, tactile sensing
- optical MEMS (MOEMS), RF MEMS, millimeter/submillimeter-wave and infrared devices
- chemical and biosensors, microfluidic devices, lab-on-chip actuators, aeroMEMS, artificial muscles
- energy harvesting, low power architectures, power management, autonomous sensor nodes
- calibration, characterisation and testing techniques
- reliability, nanotribology, failure analysis, degradation mechanisms, life time prediction
- system integration, packaging and assembly, electronic integration, substrate technologies, metallization systems, 3D integration techniques, RFID, man-machine interface
- applications and markets.

**Abstract Due Date: 8 November 2010**

**Manuscript Due Date: 21 March 2011**

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