Workshop satellite to ESSDERC/ESSCIRC 2013

In the quest for Zero-Power: technologies and applications

Keynote:
- **09:00-09:30**: The role of new materials in nanoelectronics – Robert Westervelt, Harvard University

Session 1: Smart Autonomous Systems
- **09:30-09:50**: Technology challenges for a smarter planet – Walter Riess, IBM Zürich
- **09:50-10:10**: Roadmaps for future nanoelectronics – Denis Rousset, Catrene, Paris

Session 2: Ultra low power computation & communication
- **10:10-10:30**: Computing with NEMS – Hervé Fanet, CEA-LETI, Grenoble

10:30-11:00: Coffee Break

Session 2 (continued)
- **11:00-11:20**: Graphene: an enabler of low power devices? Max Lemme, University of Siegen
- **11:20-11:40**: Tunnel FET versus MOSFET: a critical review – Giorgio Baccarani, University of Bologna
- **11:40-12:00**: TBD - Krishna V. Palem, Rice University

12:00-13:30: Lunch Break

Session 3: Heterogenous integration
- **13:30-13:50**: The e-BRAINS project - Peter Ramm, Fraunhofer Research Institution for Modular Solid State Technologies EMFT, Munich
- **13:50-14:10**: Heterogeneous integration for infrared sensors, Adriana Lapadatu, SENSONOR

Session 4: Low power sensors and energy scavenging for system integration
- **14:10-14:30**: Energy harvesting for self-powered sensor systems – Rob van Schaijk, IMEC-NL
- **14:30-14:50**: Carbon-based transducers for ultra-low power applications, Cosmin Roman, ETH Zürich
• **14:50-15:10**: Fluctuations energy harvesting: from macro to nano, Luca Gammaitoni, University of Perugia

**15:10-15:30**: Coffee Break

Session 4 (continued)

• **15:30-15:50**: *Chemical sensors: towards the 6th sense system* – Max Fleischer, Siemens

• **15:50-16:10**: *Mechanical energy harvesting* – Eric Yeatman, *Imperial College*

Session 5: Key Enabling Technologies in Horizon 2020

• **16:10-16:30**: *Key Enabling Technologies (KET): Reinforcing the competitiveness of Europe in Micro- and Nanoelectronics* – Dirk Beernaert, European Commission

**16:30**: End of the workshop