



SENSO 2016

*«Advanced Sciences and
Technologies for IoT»*

November 16 > 17 > 18, 2016

Centre Microélectronique de Provence, Gardanne, Aix en Provence area (France)

PROGRAM

Program

Wednesday, November 16, 2016

1:15 pm: Registration

1:45 pm: Workshop opening (ARCSIS and CMP)

2:00 pm: «Security architecture of IoT devices: disruption ahead»
Pierre Girard, GEMALTO (France)

Session 1 - Sensing Devices (Chemical) - Part 1

2:30 pm: **Keynote Speaker** – **Eduard Llobet, University Rovira i Virgili, MINOS-EMaS (Spain)** – «Single crystalline metal oxide nanomaterials for ultra-sensitive, resistive gas sensors»

3:15 pm: «Breath Analysis with Smartphones, the Sniffphone project»
– *Jan Mitrovics, JLM Innovation GmbH (Germany)*

3:40 pm: «Extensive sense of touch for robotic shells» – *Jean-Pierre Nikolovski, CEATech / DPACA (France)*

4:05 pm: Break

Session 2 - Applications - Part 1

4:30 pm: «Wireless Sensors Network and Energy Harvesting in School»
– *Stéphane Meillère - IM2NP, Aix-Marseille University (France)*

4:55 pm: «Right sizing Mobile, wearable, IoT Security» – *Mikaël Dubreucq, Inside Secure (France)*

5:20 pm: «Formally Proven Software for Highly Exposed Hardware» – *Eric Vétillard, Prove&Run (France)*

5:45 pm: «Interactive glove with strength sensor and Visual feed-back» – *François Graziani, Physioglove (France)*

6:10 pm: end of the day

Thursday, November 17, 2016

8:30 am: Registration

Session 1 - Sensing Devices - Part 2

8:45 am: **Keynote Speaker** – **George Malliaras, EMSE-CMP (France)** – «Interfacing with the Brain using Organic Electronics»

9:30 am: «Integrated multi-sensors for ethanol measurement on the skin by perspiration» – *Bruno Lawson, IM2NP, Aix-Marseille University (France)*

9:55 am: «Electrochemical microbiosensors for medical monitoring» – *Nicole Jaffrezic Renault, Institute of Analytical Sciences (France)*

10:20 am: Break

Program

Session 3 - Energy management and Harvesting (Radio) - Part 1

10:45 am: Keynote Speaker – Brigitte Pecquenard, CNRS, University of Bordeaux, ICMCB (France) – «All-solid-state Li thin film batteries, miniaturized power sources dedicated to microelectronic systems»

11:30 am: «Energy harvesting for self-powered smart systems: a dream or a real future alternative? Analysis of potential sources and energy conversion effects» – Mickaël Lallart, University of Lyon, INSA-LYON, LGEF (France)

11:55 am: «Energy Harvesting for Aeronautics Sensor Networks: True Lies?» – Jean-Marie Dilhac, LAAS (France)

12:20 pm: «Batteryless IOT with piezo energy harvesting» – Jean-Frédéric Martin, ARVENI (France)

12:45 pm: Lunch

Session 4 - Sensor network (Communicating Objects)

2:10 pm: «Making things come alive» – Alex Bucknall, SIGFOX (France)

2:35 pm: «RFID and UHF wireless sensor transceivers» – Gilles Jacquemod, Polytech Nice (France)

3:00 pm: Break / Poster session

Session 3 - Energy management and Harvesting (Solar and Thermic) - Part 2

3:50 pm: «Multilayered solid-state li-ion microbatteries with enhanced power and energy density for autonomous or connected devices» – Fabien Gaben, I-Ten (France)

4:15 pm: «Supercapacitors for wireless sensor lifetime improvement» - Brendan Dunne, NawaTechnologies (France)

4:40 pm: «Frequency impact on time-reversal wireless power transmission for indoor applications» – Rony Ibrahim, Ecole Centrale de Lyon, Ampère Laboratory (France)

5:05 pm: «Electrochemical performance of Li-ion microbatteries using vertical arrays of titania nanotubes» – Thierry Djenizian, EMSE-CMP (France)

5:30 pm: end of the day

8:00pm: Conference dinner

Friday, November 18, 2016

8:45 am: Registration

Program

Session 1 - Sensing Devices - Part 3

9:00 am: **Keynote Speaker – Corrado di Natale, University of Rome (Italy) – «Porphyrins based gas sensor arrays and their applications»**

9:45 am: «Three-dimensional electrochemical structuring of silicon at the nano- and micro-scale for (nano)medicine and (bio)sensing applications» – *Giuseppe Barillaro, University of Pisa (Italy)*

10:10 am: «Haemostasis: A new frontier in sensors and point of care diagnostics» - *Tony Killard, University of the West of England (England)*

10:35 am: Break

Session 2 - Applications - Part 2

11:00 am: «Opportunities of collaborations and funding in the frame of the Horizon 2020 EU Research and Innovation programme» - *Céline Damon, EU Research Department, Aix-Marseille University (France)*

11:25 am: «Real Data for Logistics Excellence» - *Michel Fallah - Traxens (France)*

11:50 am: «Integrated Systems for continuous monitoring of complex physiological parameters to serve predictive medicine» - *David Coulon, @-Health (France)*

12:15 pm: Lunch

2:00 pm: end of the conference



«Electrical characterizations of Metal Oxide Semiconductor devices contaminated by Nickel»

Shiyu Qin^{1,2}, D. Goguenheim^{2,3} and Roberto Simola⁴,

¹Aix-Marseille Univ, IM2NP,

²CNRS, IM2NP,

³ISEN-Toulon,

⁴ST Microelectronics (France)

«Inkjet-printed force sensor for medical applications»

M.D. Dankoco, E. Bènevent, T. Fiorido and M. Bendahan, Aix Marseille University, Université de Toulon, CNRS, IM2NP (France)

«Study of the response of a reduced-size calorimetric sensor used to nuclear»

A. Volte¹, C. Reynard-Carette¹, J. Brun¹, C. De Vita¹, M. Carette¹ and A. Lyoussi²,

¹Aix Marseille Univ, Université de Toulon, CNRS, IM2NP,

²CEA, CEA, DEN, DER, Instrumentation Sensors and Dosimetry Laboratory (France)

«Simulation of an Innovative and Low Power Heater of a Gas Sensing Device»

V. Martini-Laithier, K. Aguir, M. Othman and M. Bendahan Aix Marseille Université, CNRS, IM2NP, Marseille, France

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