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Editorial

Introduction to Eurosensors 2017, Paris, 3–6 September 2017 [†]

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† Presented at the Eurosensors 2017 Conference, Paris, France, 3–6 September 2017.

‡ General chair of EUROSENSORS 2017

§ Program Chair of EUROSENSORS 2017

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EUROSENSORS 2017, the XXXI edition of the conference series, was held in PARIS at UIC-P Congress Center close to the Tour Eiffel, from September 3 to 6, 2017 for the third time in France, after Toulouse 1994 and Lyon 2007.

Since 1987 the EUROSENSORS Conference is a unique forum for scientists and engineers from academia, research institutes and industry to present their latest results in the field of Sensors, Actuators, Microsystems and Nanosystems.

EUROSENSORS 2017 was attended by 500 participants, 85% of them came from academia and 15% from industry and research facilities. 472 submissions were received from 39 countries for peer review, all being assigned to 4 reviewers. From the accepted ones, 146 lectures (including 4 plenary talks) were selected and presented in 12 topics listed hereafter, with focus on “Printed and flexible electronics” and “Sensors for Factory of the future”. 247 posters were presented and displayed during the entire duration of the conference.

Scientific sessions have covered the following topics:

1. Theory and modelling
2. Materials and micro- nano- technology, Microfabrication.
3. Physical sensors and Actuators
4. Chemical sensors
5. Biological sensors, Microfluidic
6. Optical microsystems
7. Wireless Sensor Networks, RF MEMS.
8. Energy harvesting, Micro Power Generation
9. Embedded systems, Interface and Signal processing
10. Packaging and Assembly Technology
11. Special session I on Printed and flexible electronics
12. Special session II on Sensors for Factory of the future

On Sunday 3 September, EUROSENSORS SCHOOL focused on “Printed and flexible electronics” was attended by 45 persons.

| | |
|---|---|
| Eurosenors School introduction | Dr. Giorgio Mattana ES2017 School chair <i>Paris Diderot University, France</i> |
| Introduction to sensors | Prof. Arnaldo D'Amico ¹ Prof. Lina Sarro ² ¹ <i>University of Rome Tor Vergata, Italy</i> ² <i>TU Delft, Netherlands</i> |
| Polymers and devices for printed electronics | Prof. Benoît Piro <i>Paris Diderot University, France</i> |
| Printed electronics: materials and techniques | Dr. Mario Caironi <i>CNST IIT, Italy</i> |
| Printed and flexible mechanical sensors | Dr. Stefano Lai <i>University of Cagliari, Italy</i> |
| Flexible sensors for the detection of neural signals | Prof. Roísín Owens <i>Mines Saint-Etienne, France</i> |

EUROSENSORS 2017 SCHOOL program

Then, EUROSENSORS 2017 was introduced by four plenary talks covering wide field of sensors: Magnus BERGGREN, Laboratory of Organic Electronics, Linköping University, SWEDEN

"Artificial Neural Systems Based on Organic Electronics"

Edward T. ZELLERS, Dpt of Environmental Health Sciences, University of Michigan, USA

"Microscale Gas Chromatography with Microsensor Array Detection: Challenges and Prospects"

Olivier VANCAUWENBERGHE, Sensor Technology & Applications division, SAFRAN Tech, FRANCE

"High Performance MEMS for Harsh Environments: From Concept to Product"

Eugenio MARTINELLI, Eurosenors 2016 fellow, Dept. Electronic Engineering, University of Rome Tor Vergata, ITALY

"Interplay between natural and artificial paradigms for sensor data processing"

During each Eurosenors conference, Eurosenors Fellow Committee rewards a young researcher for his/her recent work in the field of sensors. EUROSENSORS 2017 Fellow award was attributed to PRADES Joan Daniel from MIND-IN2UB, Dpt of Engineering-Electronics, University of Barcelona. His research interests are centered in the development of novel device concepts with better and new performances by means of integrating nanomaterials in conventional microelectronic systems. He will give a plenary talk during EUROSENSORS 2018.

Three Posters awards were also discerned during the closing ceremony:

1st: Y. Mermoud et al., T-BM-204-1082 (Empa, Swiss Federal Laboratories for Materials Science and Technology, Switzerland), "Design of a Gate Field-Effect Transistor Biosensor for Lab-on-a-Chip Applications".

2nd: A. Zátanyi et al., M-PF-304-1039 (MTA EK NAP B Research Group for Implantable Microsystems, Hungary), "Intrinsic Optical Signal Imaging and Simultaneous High-Resolution Cortical Electrophysiology Using a Flexible, Transparent Microelectrode Array.

3rd: G. Hamdana et al., M-PS-303-1297 (TU Braunschweig, Institute of Semiconductor Technology, Germany), "Nanomechanical Traceable Metrology of Vertically Aligned Silicon and Germanium Nanowires by Nanoindentation".

Finally the traditional EUROSENSORS trophy and the flag inaugurated in Budapest were handed over to Prof. Anton KÖCK, the general chair of 2018 conference to be held in Graz, Austria: EUROSENSORS 2018 (<https://www.eurosenors2018.eu/>).

We thank all persons who contributed to the organization of this conference, either for logistics or for scientific committees, CMC2 (French national association for chemical sensors) and obviously all attendees who contributed to the scientific success of this conference and EUROSENSORS 2017 Sponsors and Exhibitors.



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