

Seasonal School in Circuits and Systems for the Power Management for Internet of Everything in Lausanne, Switzerland.

The Seasonal School in “Circuits and Systems for the Power Management for Internet of Everything in Lausanne” presents a joint academia-industry program in the field of power management in IoT. The Seasonal School - <https://memento.epfl.ch/event/power-management-for-internet-of-everything> was organized by the IEEE Student Branch at the Faculty of Sciences and Technology at the Swiss Federal Institute of Technology of Lausanne (EPFL), on November 27-28, 2017. The Seasonal School was sponsored by the Circuits and Systems (SSCAS) initiative of IEEE Circuits and Systems Society (CASS) in cooperation with IEEE Switzerland Student Branch of EPFL and the support of chapter and section committee for promoting the event.

The world is getting connected information get exchanged fast. IoT can be envisaged as a dynamic network of interconnected physical and virtual entities (“things”), with their own identities and attributes, seamlessly integrated in order to e.g. actively participate in economic or societal processes, interact with services, and react autonomously to events while sensing the environment. Fields of research touch each other and overlap. Interdisciplinary teamwork is the key to succeed with IoT. Power Management is a major domain of investigation.

Power Management for Internet of Everything, was able to prepare a multidisciplinary program, covering of course power management circuit, but also giving a broad idea on IoT starting with the sensors and some remote powering in an academic context with biomedical applications, counterbalanced with some typical industrial case and technology. It also called the VLSI community and a bit of computer science in order to close the loop of seeing the fog computing and the cloud computing. A good balance between academia and industry, combined with a judicious selection of worldwide distinguished Lecturers. A group of 22 post-graduated students and design engineers coming from 10 different country, some non registered Ph.D and master student managed to attend a few talks.

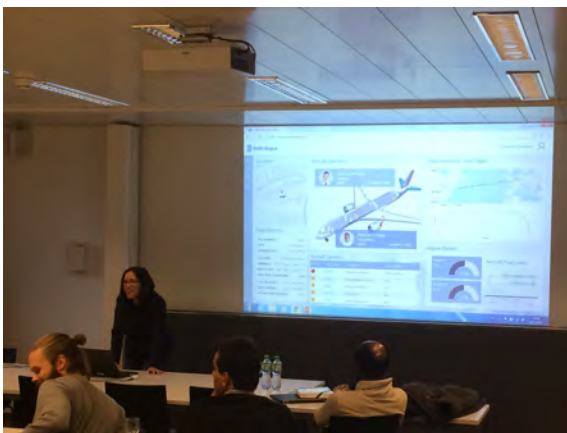


Figure 1: Group photo of Seasonal School in Circuits and Systems for the Power Management for Internet of Everything in Lausanne on the 28th of November.

The technical program of the 2 days CAS4IoT included 11 outstanding Lecturers given by world-recognized lecturers combined within the two days, in which some demo, video were adding some entertainment.

The 11 Lecturers of this course were:

- 1- ‘Application in biosensing of power delivery’– Prof. Sandro Carrara, Swiss Federal Institute of Technology, lausanne.
- 2- ‘Optimization of the transfer of power and of the data communication in the case of remotely powered sensor networks.’ – Prof. Catherine Dehollain, Swiss Federal Institute of Technology, lausanne.
- 3- ‘A System on Chip for Energy Harvesting and Wireless Power Transfer’ – Roberto La Rosa, Design Manager ST Microelectronics Catania.
- 4- ‘Measuring and Analyzing Dynamic Current Profiles in Low Power Applications’ – Dr. Christoph Zysset, Application Manager, Computer Controls Zurich.
- 5- ‘Digital Low Power VLSI’ – Prof. Andreas Burg, Swiss Federal Institute of Technology, Lausanne.
- 6- ‘Low power Hall effect sensor. From design optimization to CMOS integration’ – Dr. Maria-Alexandra Paun, , Swiss Federal Institute of Technology, Lausanne.
- 7- LP SoC in FDSOI’ – Pascal Urard Technical Fellow ST Microelectronics Grenoble.
- 8- ‘It’s all about time’ – Mathieu Coustans Ph.D. Student , Swiss Federal Institute of Technology, Lausanne.
- 9- ‘Low power wireless Embeded sytems’, – Prof. Marcel Meli, Head of the Wireless System Group at the Institute of Embedded Systems, ZHAW, Winterthur.
- 10- ‘Microsoft’s approach to IoT - Real-life examples of IoT as a platform service’ – Dr. Sherryl Manalo, Cloud Solution Architect Microsoft Switzerland
- 11- ‘Vertical co-design and integration in Energy Harvesting: from device, circuit and system levels to IoT applications’, – Prof. Eduard Alarcon, Polytechnic University of Catalonia BarcelonaTech, Barcelona



On the left hand side: Photo with the Coordinator of the Seasonal School, group picture of the remaining participant on the second day, picture of the talk of Dr. Sherryl Manalo and Pascal Urard.

Catherine Dehollain, EPFL Professor, Seasonal School Coordinator
Mathieu Coustans, Past Chair IEEE Student Branch at EPFL , Seasonal School Coordinator