

Topics on Microelectronics

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ToM 2007/1 - Final Report

In the last years, a Ph.D. course on Microelectronics is proposed at University of Pavia (Italy). In parallel an increasing number of microelectronics companies are establishing new design centers in the Pavia area (Acco, Austrian MicroSystems, International Rectifier, Marvell, Maxim, National Semiconductor, STMicroelectronics, etc...). In this scenario, an advanced educational activity is a key point for a good success of these contests. This initiative regards the organization of a series of events directly addressed to students (Master and PhD), researchers, and designers from companies who want to improve their knowledge in the microelectronics field. A series of courses called "Topics on Microelectronics" has been organized by the recently established Italian Chapter of IEEE Solid State Circuit Society in collaboration with the Department of Electronics of University of Pavia. Each course consists in five talks/lectures giving both overview and advanced details about the topic. These lectures will be held by academic professors or qualified experts coming from companies or research centers. In this way the academic and industrial approaches for research and state-of-the art progress will be presented. Different topics will be addressed in each course. This is intentionally done in order to give a wide-spectrum for the audience about the present challenges in the microelectronics world.

The first course (2007/1) has been held in Pavia on May, 2-4, 2007, with the following program.

- A. Di Giandomenico Infineon (Austria), "Continuous-time Sigma-Delta Modulators"
- M. Conta GloNav (USA), "Frequency synthesis for wireless radios"
- R. Castello University of Pavia (Italy), "CMOS Buffer Amplifiers"
- P. Malcovati University of Pavia (Italy), "Interface Circuits for Resistive Chemical Sensors"

A. Gola - Infineon (Italy), "Analysis and Design of Bandgap-Based Voltage References"

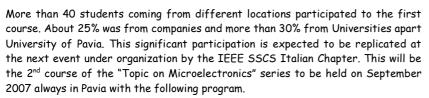
Some pictures of the lectures follow







R. Castello



- F. Svelto University of Pavia (Italy), "Design of CMOS down-conversion mixers'
- P.F. Manfredi Univ. of. Pisa (Italy), "Design of Analog Integrated Circuits under Low-Noise Constraints"
- G. Torelli University of Pavia (Italy), "CMOS Charge Pumps"
- F. Maloberti University of Pavia (Italy), "Sigma-Delta Data-Converters for Telecom"
- D. Stoppa ITC-irst (Italy), "CMOS interfaces for imagers"

Finally, next year the IEEE SSCS Italian Chapter will participate to the organization of the International Workshop on "Advances on Analog Circuit Design" (AACD2008) to be held in Pavia on April, 8-10, 2008 in the same Aula where Alessandro Volta gave his lectures more than 200 years ago. A visit to the museum with the exhibition of the instruments developed by Alessandro Volta will be possible.

The success of this initiative has also been possible thanks to the contribution of the volunteers Laura Gobbi, and Alessandro Cabrini, whose collaboration is here acknowledged.

For affiliation to the IEEE SSCS Italian Chapter, to have further information about the initiatives of the Chapter or to participate to them, contact Andrea Baschirotto (andrea.baschirotto@unile.it) or visit the website www.microelectronicsevents.com.





One instant during lecture



..... and the coffee break