Topics on Microelectronics

ToM2025 – XIX Year

Italian National Ph. D Program in Micro- and Nano-Electronics

IEEE-SSCS- Italian Chapter

SSCS

2020 - Best SSCS Chapter Award

Chips-it FONDAZIONE

ToM2025 Courses

Abstract:

The main aim of the XIX IEEE Topics on Microelectronics Course is improving the knowledge of the participants in the field of the Microelectronics design, facing different topics and from different perspectives as the microelectronics world is. This Course is then addressed to students (Master and PhD), researchers, designers. In 2025 the two Courses will have different structure. The first one will have as Special Guest STMicroelectronics which provides for a full week an overview of the full development of an IC product. The second one will have the typical ToM course structure with five long lectures (with a sufficient time to give both overview and advanced details about the topic) given by academic professors or qualified experts coming from companies or research centers. In ToM2025 Courses, the academic and industrial approaches for research and state-of-the art progress are then presented. Different topics are addressed in the Course. This is intentional to give a wide-spectrum for the audience about the present and future challenges in the microelectronics world.

ToM2025/1 - Course Program – May, 19-22, 2025
University of Pavia (Italy)
All speakers are from STMicroelectronics

Monday, May, 19th, 2025

09:00 – 09:15	P. Malcovati, M. Marchesi, "Introduction to the Course"
09:15 – 10:15	V. Riva, I. Di Sante, "ST Company overview and its Technical Staff Community"
10:15 – 11:30	A.Cremonesi, "Welcome to the Future, Welcome to ST"
11:45 – 12:15	F. Svelto, "Welcome by the Rector of University of Pavia"
12:15 – 13:00	A.Molfese, "ST Technology Research and Development"
14:00 - 16:00	G. Ricotti, "IC Design: from Idea to Product"

Tuesday, May, 20th, 2025

09:00 – 10:45	P. Pesenti, "Micro Electro-Mechanical System (MEMS) for Motion"
11:00 – 13:00	A. Sciutti, "MEMS Technology
14:30 – 16:30	S. D. Mariani, "Silicon Process Technology"

Wednesday, May, 21th, 2025

09:00 – 10:45	S. Rossi, "GaN IC Design"
11:00 – 13:00	D. Genova, "Analog & Mixed Signal Design Implementation Flows"
14:30 – 16:30	P. L. Rolandi, "Design Research and Development"

Thursday, May, 22th, 2025

09:00 – 10:45	G. Graziosi, "Package Platform and Co-Design Challenges"
11:00 – 13:00	M. Cioni, "p-GaN Power: Trend and Technology Development at ST"
14:30 – 16:30	A. Mancaleoni, "Reliability"

Friday, May, 23th, 2025

09:00 – 10:15	A. Redaelli, "An Introduction to ePCM"
10:15 – 11:15	A. Nicolosi, "STM32 Open Development Environment"
11:30 – 13:00	A. Garnier, "Failure Analysis"
14:30 – 16:30	I. Bertoncini, "ST's Sustainable Excellence"
16:30 - 16:45	M. Marchesi, "Conclusions"

ToM2025/2 - Course Program – October, 14-16, 2025
University of Milan-Bicocca (Italy)

Tuesday, October, 14th, 2025

14:00 – 17:00	Abu Sebastian, (IBM, Switzerland), "In-Memory Computing for Deep Learning Inference"

Wednesday, October, 15th, 2025

9:00 – 12:30	Flavio Maggioni, (Technoprobe, Italy), "Silicon Testing Perspectives from Probe World"
14:00 – 17:30	Salvatore Levantino (Polithecnic of Milan, Italy), "Phase-Locked Loops"

Thursday, October, 16th, 2024

9:00 – 12:30	Pierluigi Albertini (Siemens, Italy), "EDA for Analog Design"
14:00 – 17:30	Tobia Zekorn, Alberto Gola (Power Integrations, Switzerland), "Analysis and Design of Advanced Switched Mode Power Supplies and Gate Drivers for Industrial and Automotive Applications"