



Mixed-Signal IC Design

ON-LINE CLASS on Microsoft TEAMS

August 26 - September 6, 2024

| WEEK 1 | | AUGUST 26-30 | | |
|----------------------------------|-----------------------|---|-------------------------|---------------------|
| WEEK 2 | | SEPTEMBER 2-6 | | |
| DAILY | Central European Time | Eastern Standard Time | Pacific Standard Time | India Standard Time |
| | CET (Lausanne) | EST (New York) | PST (California) | IST (India) |
| Module 1 | 3:00-4:30 pm | 9:00-10:30 am | 6:00-7:30 am | 7:30-9:00 pm |
| Module 2 | 5:00-6:30 pm | 11:00 -12:30 pm | 8:00-9:30 am | 9:30-11:00pm |
| WEEK 1 | Module | | | |
| DAY 1, Monday, August 26 | 1 | The Analog-Digital Trade-off - The Impact of Technology Scaling | | Jan Rabaey |
| | 2 | ULP Mixed-Signal Design for IoT and Wearable Devices: Sensing and Data Acquisition | | Jan Rabaey |
| DAY 2, Tuesday, August 27 | 1 | ULP Mixed-Signal Design for IoT and Wearable Devices: Communication and Computation | | Jan Rabaey |
| | 2 | ULP Mixed-Signal Design for IoT and Wearable Devices: Energy Harvesting, Storage and Conversion | | Jan Rabaey |
| DAY 3, Wednesday, August 28 | 1 | Evolution in Digital CMOS Technology and its Impact on Design | | Jan Rabaey |
| | 2 | Design Methodolgy for Systems-on-a-Chip | | Jan Rabaey |
| DAY 4, Thursday, August 29 | 1 & 2 | Noise Coupling in Mixed-Mode ICs: Mechanisms, Simulation, Measurement | | Tim Schmerbeck |
| DAY 5, Friday, August 30 | 1 | Noise Coupling in Mixed-Mode ICs: Design Strategy/Hardware Example | | Tim Schmerbeck |
| | 2 | Design for (ESD) Robustness in Silicon ICs | | Tim Schmerbeck |
| WEEK 2 | Module | | | |
| DAY 6, Monday, September 2 | 1 | Offset and CMRR: Random and Systematic | | Michiel Steyaert |
| | 2 | Fully-Differential Amplifiers | | Michiel Steyaert |
| DAY 7, Tuesday, September 3 | 1 | Interference Effects and PSRR | | Michiel Steyaert |
| | 2 | Circuit Design for EMC | | Michiel Steyaert |
| DAY 8, Wednesday, September 4 | 1 & 2 | Time Varying Circuits in Mixed-Signal Design | | Shanthi Pavan |
| DAY 9, Thursday, September 5 | 1 & 2 | Modeling and Simulation, Design Methodology | | Pavan Hanumolu |
| Day 10, Friday, September 6 | 1 | Practical Techniques of Frequency Compensation | | Vadim Ivanov |
| | 2 | Power Management in Efficient Mixed-Signal Integrated Systems | | Vadim Ivanov |