classIC PhD Course Package

Chalmers-Lund Advanced Semiconductor System Design Center

The classIC PhD course package provides a cross-disciplinary understanding of design challenges, from application level to digital and analog circuit design. The program bridges traditional domains and focuses on real-world design trade-offs.

Structure:

- **Module 0:** Introduction
  (Online Sessions April)
  Overview of key concepts in semiconductor system design, setting the foundation for subsequent modules.
- **Module 1:** Hardware/software design space exploration to meet performance, power and area objectives
  [3 hp] (May-June 2025, Lund University and online)
  Focus on system-level trade-offs between hardware and software implementations, including case studies.
- **Module 2:** Mixed-signal design considerations
  [3 hp] (Nov-Dec 2025, Lund University and online)
  Explore challenges in mixed-signal integration, covering noise, signal integrity, and power management.
- **Module 3:** Transmitter linearization, from circuit solutions to system performance
  [3 hp] (April-May 2026 Chalmers)
  In-depth study of linearization techniques for wireless communication systems to enhance efficiency.
- **Module 5:** EDA tools for digital and analog circuit design
  [1.5 hp each] (5a June 2025 Chalmers, 5b Summer 2026/Winter 2027 Lund University)
  Hands-on training with industry-standard design tools for digital design and verification and for analog/mixed/RF design.

Registration:

Deadline for registration 2 weeks before the module start. For module 5a, register by April 25, 2025. A certificate of participation is available.

Contact:

In case of questions, contact Victor Åberg, victor.aberg@eit.lth.se

Registration

More information