

9th Photonic Integrated Circuit (PIC) Training

Overview:

This training aims to give a jump-start on PIC technology from a fabless manufacturing perspective by introducing PIC technology - through seminars by experts, and PIC design flow - through hands-on training on Photonics Design Automation (PDA) tools by Luceda Photonics, CST and Mentor Graphics.

Details:

The use of CMOS fabrication technology has enabled large scale integration of photonic components at chip level – called **Photonic Integrated Circuits** (PICs). The concepts of fabless manufacturing and multi-project-wafer (MPW) services are now widely available for PICs, for various base materials. Low-cost access to generic fabrication processes for rapid prototyping and low volume production has shifted the emphasis to design innovation.

This course intends to introduce basics of PIC technology and provide introductory hands-on training on PIC designing. The training is structured in two parts:

- The first part is seminar-based and focuses on the basics of **PIC technology** through seminars delivered by experts from the PIC industry and academia.
- The second part, running over two days, focuses on **PIC design** through hands-on training provided by **Luceda Photonics** on various PDA tools for PIC physical and circuit simulations (mode solving, multi-physics, S-matrix extraction, optimization, yield-analysis etc.) and PIC designing (layout, routing, GDSII import/export, verification etc.)

The training is divided into two parts: seminars (1 day) and hands-on sessions (2 days). Participants, depending on their requirements, can attend either part 1 (Technology Overview), part 2 (Design Overview), or both.

Course schedule:

Day 1 - PIC Technology Overview (seminars) on 4th April, 2018

- PIC Tutorial
- Europractice & Photonics MPW
- Presentations by the leading European PIC foundries on of the state-of-the-art of their PIC platforms (Silicon photonics, Silicon Nitride photonics, packaging etc.).
- Presentations on PIC design flows and challenges by design experts.

Day 2 & 3 - PIC Design Overview (hands-on) on 5th & 6th April, 2018

- Hands-on training by **Luceda Photonics** on:
 - **IPKISS.eda & IPKISS.flow** (Luceda Photonics)
 - **CST Studio Suite** (CST)
 - **Tanner L-Edit** (Mentor Graphics)
- Imec's 300mm cleanroom tour (**imec**)

Prerequisites:

This training is suitable for academic and industrial participants alike. A background in photonics is useful but not necessary.

Side Bar

9th Photonic Integrated Circuit (PIC) Training

with hands-on sessions using tools from Luceda Photonics, CST and Mentor Graphics.

4th April 2018 to 6th April 2018

9:00 to 17:00 with 16:00 finish on the final day (Local times)

To be held at

imec

Kapeldreef 75

3001 Leuven

Belgium

Presented by imec staff and invited speakers

Attendees are required to bring their own Laptop PC to use in the practical hands-on sessions.

(minimum requirement: MS Windows 7 or newer - 64 bit OS, 2 GB RAM, 1 free USB port for the license dongle).

This training course will accept bookings from Professors, Lecturers, Academic Staff and postgraduate students from established academic sites who are either Academic or Research Laboratory Members of EURO PRACTICE.

Booking can be done independently for the first part (Technology Overview - seminars) or the second part (Design Overview – hands-on), or both (full training).

Only pre-booked and confirmed delegates may attend. Attendance is also subject to payment of course fees.