

# Tutorial on silicon-photonic IC design in IHPs SG25H5\_EPIC using an electronic-photonic design flow

An intensive course on electronic-photonic IC (EPIC) design methodology using the IHP design kit

The aim of this course is to enable designers of high performance integrated circuits to understand the design methodology for electronic-photonic ICs and gain insight into the design flow implemented for the IHP SG25H5\_EPIC technology.

The practical examples given are based on 0.25  $\mu\text{m}$  SiGe:C photonic BiCMOS technology, Cadence, IPKISS and Tanner EDA, design steps will be practised on workstations.

Course contents:

- Electronic-photonic design kit (overview & installation)
- Schematic & layout of a simple EPIC design
- Technology information and MPW tape-in procedure

The course schedule:

## Day 1 IHP Mixed signal flow

- Introduction to tutorial and IHP silicon photonic MPW service
- Electronic-photonic design kit
- EPIC design example from schematic to layout (hands-on)
- Luceda EDA Solution for photonic design
- Electronic-photonic IC design flow using Tanner EDA

## Day 2 IHP Mixed signal flow

- Parametric layout of an optical DBPSK receiver with IPKISS (hands-on)
- Design kit documentation and support
- Best practices for electronic-photonic IC design
- 25 Gbps TIA design example (on abstract level) in an EPIC design flow (hands-on)
- Q&A

Prerequisites: Course participants should be familiar with circuit design. Familiarity with Cadence or Tanner design tools would be helpful.



## EUROPRACTICE

Training Courses

### Tutorial on silicon-photonic IC design in IHPs SG25H5\_EPIC using an electronic-photonic design flow

26-Nov-2019 to 27-Nov-2019

Day 1: 9:00 to 17:00

Day 2: 8:30 to 16:00

(Local times)

To be held at  
IHP,  
Frankfurt (Oder)  
Germany

Presented by IHP staff,  
Fraunhofer staff

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 EUROPRACTICE.

Only **pre-booked and confirmed** delegates may attend. Attendance is also subject to payment of course fees and signature of appropriate technology non-disclosure agreements and tool license agreements.

For further details and booking information please visit:

[www.europactice.stfc.ac.uk](http://www.europactice.stfc.ac.uk)