



**Title:**

**ePIXfab training course on the state of the art in Silicon Photonics**

**Course aim:**

To provide an insight into the field of silicon photonics by looking into the recent progress made in this field and challenges associated with it. The course will also provide an understanding on how to enter the field and start prototyping a silicon photonics IC.

**Target audience:**

Industrial/academic engineers or researchers, with at least a basic background of photonic integration, who wish to acquire knowledge about the current state of the art in silicon photonics.

**Course Description:**

Future developments in the field of datacom/telecom and sensing will require a high level of photonic integration. Silicon Photonics is widely seen as a key enabling technology as it leverages from established CMOS technology allowing low cost manufacturing even for moderate volumes. While the field was predominantly a research field up to a few years ago, we now see the emergence of industrial silicon photonics products ranging from short-reach datacom transceivers to high capacity coherent transceivers and from optical coherence tomography systems to lab-on-a-chip devices.

The science and technology of Silicon Photonics has made tremendous progress since its inception. But has it answered all the challenges associated with it? The main theme of this course is to answer this question by looking into recent progress and breakthroughs associated with Silicon Photonics and open challenges. Specifically the course will address:

- Recent progress made on component level development in Silicon Photonics.
- Recent application specific progress made by Silicon Photonics, both in the field of high speed transceivers as well as in the field of sensing.
- Recent evolutions in the prototyping and manufacturing platforms for Silicon Photonics as well as the complementing services and tools (design, MPW-service, packaging...).

**Program:**

9:00-9:40 Recent developments in Silicon Photonics components and building blocks

9:40-10:20 State of the art in Silicon Photonics transceivers

10:20-10:30 Short break

10:30-11:00 State of the art in sensing based on Silicon Photonics

11:00-11:30 Evolutions in Silicon Photonics technology platforms, services and tools

**Lecturers (provisional):**

Prof. Dries Van Thourhout (Ghent University – imec)

Dr. Lars Zimmermann (IHP)

Prof. Roel Baets (Ghent University – imec)

Dr. Abdul Rahim (Ghent University)

**Practical Details:**

The training course is organized by the European Silicon Photonics Alliance ePIXfab ([www.epixfab.eu](http://www.epixfab.eu)).

Participation is free of charge for the ECOC participants, but registration is mandatory. The course will take place at the venue of ECOC2016 on Sunday September 18 from 9am-11:30am. The number of seats is limited. For registration an email should be sent to [info@epixfab.eu](mailto:info@epixfab.eu).

Requests for further details about the training course can also be addressed to the course coordinator dr. Abdul Rahim ([abdul.rahim@intec.ugent.be](mailto:abdul.rahim@intec.ugent.be), phone: +32-9-331 48 43)