



Scuola Superiore  
Sant'Anna  
di Studi Universitari e di Perfezionamento

## PhD Position Available

### “Silicon Photonics for Coherent Communications and Microwave Photonics”

There is an opening for a PhD project in the area of **Silicon photonics for coherent communications and microwave photonics** at Ghent University (Ghent, Belgium), which involves a significant cooperation with the Scuola Superiore Sant'Anna (Pisa, Italy). The student will spend time at each institution, working primarily on technology development and device characterization at Ghent University and advanced characterization and system-level demonstration at the Scuola Superiore Sant'Anna. The position is expected to become a joint PhD, where the student would be enrolled at each institution and be awarded a double degree.

#### About Ghent University – Photonics Research Group

The Photonics Research Group in the Department of Information Technology of Ghent University is active in the field of photonic integration - more specifically silicon photonics - and its applications in information and communication technology, in sensing and in life sciences. The group is closely associated with IMEC. The group puts its research focus on new concepts for photonic integrated devices and circuits and on the associated technologies and design methodologies. This includes passive and active waveguide-based photonic components, based on CMOS-compatible materials and processes as well as hybrid approaches combining silicon with other functional materials. The activities ‘center’ around the telecom wavelength of 1.55 micrometer but are expanding both to longer wavelengths (mid-IR) and shorter wavelengths (visible). The infrastructure of the group includes clean room facilities for in-house fabrication of components as well as a variety of CAD-tools and measurement labs. The group is associated with the micro-electronics research center IMEC in Leuven and uses the CMOS-oriented research facilities of IMEC for research on Silicon photonics. The group has a research staff of about 60 people with a mixture of electrical engineering and applied physics profiles.

#### About Scuola Superiore Sant'Anna – TeCIP Institute

The Institute of Communications, Information and Perception Technologies (TeCIP) at Scuola Superiore Sant'Anna conducts pioneering research in Optical Networks and Services, Optical Communications Systems, Optical Communication Theory and Techniques, Optical Amplification and Sensing, Ultrafast All-Optical Subsystems, Digital Photonics and Photonics Technologies. The Institute employees approximately 100 people working in these areas of photonics, hosts four specialized Master of Science programs, two international masters programs and a doctoral program in telecommunications. The group collaborates extensively with industry partners including Ericsson, ENEL, Rete Ferroviaria Italiana, Juniper Networks, Selex, Telecom Italia, Agilent Technologies and Teem Photonics. International academic collaborators include Ghent University, UCSB, USC, Osaka University, Stanford University, Waseda University, McGill University, TU Eindhoven, TU Berlin, UT Dallas and University of Cambridge.

#### How to Apply

1. Send CV, expression of interest and any questions to Gunther Roelkens ([gunther.roelkens@intec.ugent.be](mailto:gunther.roelkens@intec.ugent.be)) and Jonathan Klamkin ([j.klamkin@sssup.it](mailto:j.klamkin@sssup.it)).