

# PhD Student position in Photonics: *Silicon photonics*

Chalmers University of Technology, Gothenburg, Sweden



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**Application deadline: 2018-May-15**

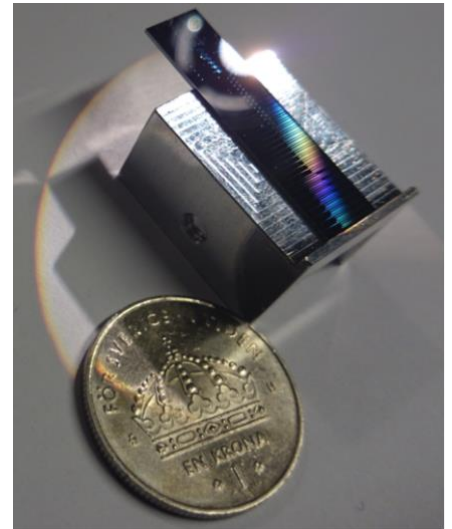
## The project

Today's fiber-optic communication systems are facing significant challenges with regards to energy consumption. To counteract this, lightwave communication systems will increasingly rely on photonic integrated circuits (PICs). PICs bring many beneficial features such as miniaturization, stability and the possibility for low-cost fabrication. They will be crucial in the future for establishing greener and faster communication links.

This project will investigate 3D photonic integrated circuits for coherent optical communications. The project will explore both, the existing erbium band as well as the emerging band in the 2 micrometer window enabled by thulium fiber amplifiers. The project has obtained financing by the prestigious European Research Council through a Consolidator grant.

## The laboratory

The Photonics laboratory at the Microtechnology and Nanoscience Department (MC2) is a dynamic and creative group with about 30 members working in an international and collaborative atmosphere. We perform both curiosity-driven and applied-research in the areas of optoelectronics, nanophotonics, and fiber optic systems. We enjoy a state-of-the-art laboratory for fiber-optic communications and have access to in-house cleanroom facilities to manufacture photonic devices. Please visit: [www.vtc-lab.com](http://www.vtc-lab.com)



## Job description

You will get training in advanced nanofabrication technology. The work involves numerical modeling, manufacturing and testing of PICs. You will have room to develop and contribute with your own ideas. Part of the PICs will be fabricated in world-class nanofabrication facilities at Chalmers. We will also collaborate with colleagues from the UK and Denmark, and you will have the possibility to spend short research stays with them but the work will be mostly carried out at Chalmers.

The PhD student position is a full-time employment position limited to 4 years. The majority of your working time is devoted to your own research project. In addition, the position will normally include 10% departmental work, mostly teaching duties.

## Qualifications

You should have a Master's degree (or equivalent) in Applied Physics, Engineering Physics, Electrical Engineering or similar. Experience with photonic integrated circuits (either simulation, fabrication or testing) is a merit. **Fluency in English is required.**

## Application material

For electronic submission, go to [www.chalmers.se](http://www.chalmers.se) and click on vacancies (at the bottom of the page).

## For more information, please contact

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