



Open Positions: Post-doctoral Fellows, PhD students

Spatial-division multiplexing & phase-sensitive amplifiers

Chalmers University of Technology, Gothenburg, Sweden

The Photonics laboratory is currently involved with research on optical communication systems, optical amplifiers, and transmitters. We have a state-of-the-experimental facility for optical communication and have excellent funding available for the next several years.

We conduct application-oriented research in optoelectronics, optical transmission, as well as more fundamental research on new photonic materials and nano-photonic device elements. In the area of communication, we implement new modulation formats to achieve higher spectral efficiency in optical communication channels, thereby increasing the overall data rate. Recently, we initiated research on ***spatial-division multiplexing in few-core and few-mode fiber*** optical transmission as an approach to reach even higher data throughput. ***Ultralow noise phase-sensitive optical amplifiers*** are developed as they allow a significant transmission reach extension. While these amplifiers have great promise for use in optical transmission, there exist many other very exciting applications ranging from spectroscopy, sensing to free-space communication. The work is coordinated in the Fiber Optical Communications Research Centre (FORCE), <http://www.chalmers.se/en/centres/force/Pages/default.aspx>. Our research is both experimental and numerical and we have extensive international collaboration.

Job description

The persons filling these positions will participate in research on phase-sensitive parametric amplifiers and/or spatial division multiplexing and involves both experimental and numerical/theoretical work. The majority of your working time is devoted to your own research.

The positions as a **Post-doctoral fellow** are full-time temporary employment, limited to a maximum of two years. Applicant should have a Ph.D. degree preferably in Engineering Physics, Electrical Engineering or similar. Strong experimental experience in any of the following areas is highly advantageous; optical fiber communication, optoelectronics, digital communications and signal processing.

The positions as a **PhD student** are full-time employment, limited to a maximum of four years, plus teaching and other departmental duties. A monthly salary is paid. There are no tuition fees for PhD studies at Chalmers. Applicant should have a Master's degree (or equivalent) in Electrical Engineering, Engineering Physics, with a strong background in optical communications.

For more information contact:

Professor Peter Andrekson

E-mail: peter.andrekson@chalmers.se, Phone: +46 – 70 3088 606

