



MAX-PLANCK-INSTITUT
FÜR MIKROSTRUKTURPHYSIK

Ph.D. Positions

The **Max Planck Institute for Microstructure Physics, Halle, Germany**, NINT Department, Director Prof. Joyce Poon, is recruiting Ph.D. students. The new NINT Department is initiating research programs on devices and microsystems for the future of computing. We are launching research projects in the following areas:

- Nanotechnology-enabled brain implants, especially those that combine multiple sensing/stimulation modalities in a single package, to advance neuroscience and brain-computer interfaces
- Photonic integrated circuits in the visible spectrum for applications beyond telecommunications, such as imaging, displays, sensing, and computing
- Integration of phase-change materials onto silicon photonic circuits for sensitive photodetection and highly tunable optical thin-film surfaces

Ph.D. positions are being offered in conjunction with the University of Toronto and the Technical University of Berlin. The default area of degree specialization is Electrical and Computer Engineering (ECE) in University of Toronto, or Electrical Engineering and Computer Science (EECS) in TU-Berlin, but the specialization may vary depending on thesis co-supervisors.

As a Ph.D. student, you will have the opportunity to work at the forefront of technology with an incredible team of highly motivated and smart people, as well as with our network of collaborators from around the world. Some of our past research is described here: www.photon.utoronto.ca

PhD requirements

- Excellent academic standing with research or internship experience in electrical and computer engineering, computer science, engineering or applied physics, biomedical engineering, neuroscience, and related disciplines
- Candidates typically already hold a Master's degree
- Outstanding candidates with a Bachelor's degree and demonstrated research achievements may be considered for direct PhD entry at the University of Toronto or TU-Berlin. Please see the following requirements:
 - University of Toronto [[link1](#), [link2](#)]
 - TU-Berlin [[link1](#), [link2](#)]

Your profile

- You are motivated by grand challenges and innovation
- You are a fast learner, committed engineer/scientist, and a creative problem-solver
- You are an effective team player that excels in a fast-paced, highly dynamic, interdisciplinary and international environment
- English is the working language at the Institute

Employment terms

- Fixed-term 3-year contract
- Expected start date: After September 2019

Your application

- Please send your application package as a single pdf file to office.poon@mpi-halle.mpg.de, with reference **MPI-Halle PhD NINT**.
- The application package consists of:
 - Curriculum vitae
 - Academic transcripts and certificates
 - Statement of research (1 to 2 pages)
 - Contact information of two references
- A candidate seeking the University of Toronto Ph.D. degree must also submit the application following the procedure in the Department of Electrical and Computer Engineering and gain admission to the University of Toronto. Please note deadlines and any additional requirements (i.e., language proficiency, coursework, qualifying exam). [\[link\]](#)
- A candidate seeking the TU-Berlin Ph.D. degree should follow the procedure described [here](#) under "Individual Program". Additional information and forms relevant to Electrical Engineering and Computer Science (Faculty IV) are available [here](#).

The Max Planck Society aims to employ more persons with disabilities. Applications from persons with disabilities are encouraged. The Max Planck Society seeks to increase the number of women in areas where they are underrepresented and therefore encourages women to apply.