Karlsruhe Institute of Technology (KIT) combines the mission of a University with that of a National Research Center of the Helmholtz Association. Counting more than 9000 employees, KIT is one of the leading research centers and education institutions in Europe.

The Institute of Photonics and Quantum Electronics (IPQ) at Karlsruhe Institute of Technology (KIT) calls for applications for an open

Postdoc Position

in the area of

Teratronic Devices and Signal Processing

The field of teratronics comprises methods and technologies that are needed to generate, process, and characterize terabit/s data streams and electromagnetic waveforms with THz bandwidths. Teratronics is a multi-disciplinary research field embracing key aspects of optics and photonics, high-frequency electronics, and high-throughput digital signal processing. Teratronic systems are characterized by an intimate and inseparable co-integration of these elements. Applications of teratronics comprise terabit/s data communications, processing of waveforms with THz bandwidth, and exploitation of such waveforms in metrology and sensing.

We are currently in the process of establishing teratonics as a new research area at KIT. In this context, we have an open position for an ambitious post-doctoral researcher with outstanding scientific records and strong theoretical and experimental background in at least one of the following areas:

- Ultrafast optical signal processing and nonlinear optics
- Terahertz technologies
- Design, fabrication and characterization of nanophotonic and plasmonic devices
- Millimeter and micrometer-wave photonics

The candidate holding this position will have the opportunity to lead a small group, which will initially consist of 2 - 3 PhD and some master students. We expect candidates to develop and pursue their own ideas and to execute existing and initiate new collaborative research projects with international partners. The activities are closely linked to research in the areas of silicon photonics and high-speed optical communications within our institute. This opens, e.g., the unique opportunity to explore novel device concepts in first-time data transmission demonstrations. An ambitious post-doctoral researcher will find an excellent opportunity to combine high-level scientific research with leadership responsibilities, thereby gaining experience in building up an own research environment.

Applicants should have completed a PhD in Electrical Engineering, Photonics, Physics, or Related fields. We expect excellent writing and oral communication skills along with the ability to work independently and to help instructing PhD students. Applicants are encouraged to submit their application documents (CV, certificates, references) electronically as one single pdf file to Prof. C. Koos.

Prof. Dr. Christian Koos
Karlsruhe Institute of Technology (KIT)
Institute of Photonics and Quantum Electronics (IPQ)
Engesserstrasse 5, Building 30.10
D-76131 Karlsruhe
Germany

Tel. +49-721-608-42491
Email: christian.koos@kit.edu
Web: www.ipq.kit.edu