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

Photonic Multi-Chip Integration

Our group has recently introduced the concept of photonic wire bonding\(^1\) as a novel and particularly effective approach to connect nanophotonic circuits across chip boundaries. The technique is based on in-situ fabrication of three-dimensional freeform waveguides by two-photon polymerization. We are now aiming at advancing the concept of photonic wire bonding to a universal platform for heterogeneous photonic multi-chip integration.

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:

- Design, fabrication, and characterization of photonic integrated circuits
- Packaging of silicon photonic systems
- Direct-write two-photon lithography
- Design and setup of high-resolution optical imaging systems such as confocal microscopes or direct-write lithography systems

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 the

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unique opportunity to explore novel integration concepts for multi-chip systems 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**
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