



**The photonics group at INT is looking for candidates in optical fiber communications using space division multiplexing**

**Topic:**

- Expansion of an optical transmission testbed
- Digital signal processing
- MIMO equalizer design
- Transmission experiments in an SDM testbed

**Your profile:**

- Strong background in optical transmission systems
- Motivated to tackle challenges of advanced optical communications systems
- Fluent in English, both spoken and written
- Background in space division multiplexing and digital signal processing is a plus

**We offer:**

- An inspiring and friendly research environment
- A well-organized research team at the institute
- The freedom to contribute and implement your own ideas
- The opportunity to write a doctoral thesis and get a Ph.D. degree
- A fully paid position

**We expect you to:**

- Work hands-on in our growing optical SDM transmission testbed
- Implement and test new digital signal processing and MIMO equalization algorithms
- Integrate well into our team and contribute your talents to the whole institute
- Publish your results at leading conferences and in journals
- Be curious about SDM applications in optical fiber communications systems

**Objective:**

Within the BMBF-funded projects AZUR, OPTIMUX and HIRO, we are looking for multiple researchers to perform cutting-edge numerical and experimental investigations of advanced optical transmission systems using space-division multiplexing. Topics range from randomly coupled multicore-fiber transmission over few-mode MCF systems to heterogeneous few-mode – MCF transmission networks.

**More infos:**

<https://www.int.uni-stuttgart.de/en/research/photonics/>

Prof. Dr.-Ing. Georg Rademacher, [application@int.uni-stuttgart.de](mailto:application@int.uni-stuttgart.de)

**Applications:**

Direct application emails to: [application@int.uni-stuttgart.de](mailto:application@int.uni-stuttgart.de)

Application documents: short motivation letter including contact information of one reference (e.g. Bachelor / Master thesis supervisor), CV, transcript of records of Bachelor's and Master's degree, optional: an abstract of the master thesis.

**Ph.D. Position  
TVL-E13/100%**

**Photonics  
Engineer for  
advanced SDM  
systems**