



For the **RF and SatCom Systems** department in **Erlangen**, the Fraunhofer Institute for Integrated Circuits IIS is currently seeking

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## Interns (m/f)

### For the topic multi-user MIMO in satellite communications systems

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The RF and Satellite Communication Systems department has a strong background in design, implementation, and test of RF and microwave systems such as RF front-ends, tunable RF filters, antennas and antenna arrays. Moreover, we also focus on high speed signal processing platforms for RF communications.

MIMO communication techniques are widely known and applied in terrestrial communication. However, there are also scenarios in satellite communication, where these techniques are applicable. Since they dramatically enhance communication link reliability and capacity compared to conventional schemes, it is an actual cutting-edge topic.

At Fraunhofer IIS, we focus on multi-user MIMO techniques also called precoding. All steps of dimensioning/analyses, simulation, SW-implementation as well as lab tests and over-the-air tests (via satellite) are of relevance to us. In this context, we offer several internship positions to interested master students to support our research team.

#### Your responsibilities

- Literature studies on multi-user MIMO approaches
- Implementation and simulation of multi-user MIMO algorithms
- Participate to the deployment of the trials environment
- Testing, measurements, and evaluation of results
- Documentation/presentation of results and comparisons "simulation versus measurements"

#### Your profile

- Master student studying computer science or a related field
- Knowledge in MIMO communication and algorithms
- Experience in (statistical) signal processing
- Programming knowledge in Matlab (mandatory) and Python (advantageous)
- Familiarity with MS Office
- Willingness to work in a team

#### What you can expect from us

- An open and cooperative working environment
- Collaboration in interesting and innovative projects
- Many opportunities to gain practical experience

#### Interested?

Join our team and work with us on the technology of tomorrow!

**Send your resume in PDF format** to [personalmarketing@iis.fraunhofer.de](mailto:personalmarketing@iis.fraunhofer.de) and reference 368223 and let us know how you learned about this opportunity.

For more information about the institute and its products and services, please visit: [www.iis.fraunhofer.de](http://www.iis.fraunhofer.de)