

CAN I COMBINE SCIENCE AND BUSINESS IN A SINGLE JOB?

**YES.**

We'll show you how at Fraunhofer.



STARTING NOW, THE FRAUNHOFER INSTITUTE FOR APPLIED OPTICS AND PRECISION ENGINEERING OFFERS YOU AN EXCITING JOB OPPORTUNITY AS A

## STUDENT ASSISTANT F/M IN THE FIELD OF "MULTICANAL PATTERN PROJECTION FOR 3D SENSORS WITH ADAPTIVE DEPTH MEASURING RANGE"

Fraunhofer is the largest organization for application-oriented research in Europe. Our fields of research are geared to the needs of people: health, security, communication, mobility, energy and environment.

The Fraunhofer Institute for Applied Optics and Precision Engineering IOF in Jena conducts application-oriented research in optical systems technology on behalf of industry and within the framework of publicly funded joint projects. The range of services offered by the Fraunhofer IOF includes system solutions, starting with new design concepts, through the development of technologies, manufacturing and measuring processes, to the construction of prototypes and pilot series for applications in the wavelength range from millimeters to nanometers.

To assist in the field of »Optical Systems« of the Fraunhofer IOF, we are looking for a student assistant (f/m) who will investigate and demonstrate a novel multi-channel pattern projection system using GOBO projection and its use in a 3D sensor with adaptive Depth measuring range deals. The new technology is to be used in particular in the human-machine interaction, the 6D robot control and the detection of persons. The activity is possible as part of a student assistant activity or a thesis.

### Your Tasks

- Opto-mechanical conception and comparison of basic possibilities of a multi-channel pattern projector with GOBO pattern wheel
- Design of the basic optical beam path
- Construction of the basic mechanical components
- Construction of a 3D sensor consisting of a multi-channel pattern projector and two cameras
- Characterization of the novel system with regard to measuring accuracy and speed
- Performing comparative application tests in human-machine interaction

### What we expect from you

- Field of study: photonics, physics, engineering or similar
- Basic knowledge of working in laboratories, scientific equipment and digital data processing
- You have basic knowledge in the field of optical systems, especially optical design
- You are committed, team oriented and able to communicate well
- Your strengths include an independent, structured, flexible and reliable way of working

### What you can expect from us

- Working in a collegial and open team
- Varying tasks in a dynamic work environment
- Flexible working hours

The remuneration is based on the collective agreement for the employment of auxiliary staff. In case of identical qualifications preference will be given to severely disabled candidates.

We would like to point out that the chosen job title also includes the third gender.  
The Fraunhofer-Gesellschaft emphasises gender-independent professional equality.

Fraunhofer is Europe's largest application-oriented research organization. Our research efforts are geared entirely to people's needs: health, security, communication, energy and the environment.

**We look forward to receiving your application! Please use our online application portal.**

**<http://www.iof.fraunhofer.com>**

Job Reference: **IOF-2019-51**