# Vacancy

Reg.-No. 317/2018
Deadline: November 30th 2018

FRIEDRICH-SCHILLER-
UNIVERSITÄT
JENA

At the Institute of Applied Physics of the Physics and Astronomy Faculty at the Friedrich Schiller University Jena the following position concerning
**Average Power Scaling of Fiber Laser Systems**
is to be filled as soon as possible:

## Research Assistant, PhD (male/female) (TV-L E13, 75%)

High-power fiber lasers have always been considered an average-power scalable laser concept. This impression is sustained by the exponential evolution of the output power of these systems over the last two decades. However, this evolution is threatened by a thermally-induced non-linear effect, called transverse mode instabilities (TMI), discovered in 2009. This effect is characterized by the sudden break-up and temporal fluctuations of the beam emitted by a fiber laser system once that a certain average power threshold has been reached. Thus, in order to allow for a further scaling of the average output power of fiber laser systems, it is mandatory to develop strategies to mitigate or even exploit the effect of TMI. It is in this frame where the Ph.D. thesis is set.
Prerequisite is a successfully completed study (Master/Diploma) in physics or a comparable degree program. The applicant should also have basic knowledge of laser physics as well as experimental experience ideally in the planning and implementation of laser-optical test setups.

We offer:
This Ph.D. topic offers you the opportunity to explore a fascinating multi-physics phenomenon in the scope of high-power fiber lasers together with a group of scientists that are at the forefront of the research of TMI worldwide. The techniques that will be developed to mitigate TMI will have a wide-reaching impact in the fiber laser community. Furthermore, we can offer the following:

- an exciting field of activity with creative leeway
- attractive fringe benefits, e.g. Capital Assets, Job Ticket (benefits for public transport), occupational pensions (VBL)
- the pay scale follows the wage agreements for public employees of federal German states (TV-L E13, 75%)
- university health promotion and a family-friendly working environment with flexible working hours

The position is initially limited to 3 years. The university aims to increase the proportion of women. Qualified women are therefore explicitly invited to apply. Severely disabled applicants with equal qualification and aptitude are given preferential consideration. Please send your application with the usual documents (CV, transcripts, letter of motivation, references, list of publication, etc.) by mentioning the registration number **317/2018** until latest November 30th 2018 to:

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In the case of an application by letter we ask you to submit your documents only as copies, as those are properly destroyed after the application process. Please also note our application hints at: www.uni-jena.de/stellenmarkt_hinweis.html Please also note the information about the collection of personal data: www.uni-jena.de/Universität/Stellenmarkt/Datenschutzhinweis.html