

At Helmut Schmidt University / University of the Federal Armed Forces Hamburg (HSU/UniBw H), Faculty of Electrical Engineering, Professorship for Laser Technology (Univ.-Prof. Dr. Pronin), a position is **available from the next possible date** for a

Research Assistant (m/f/d)

(salary group 13 TVöD [Collective agreement for the public service]; 26 hours per week)

for a limited period of 2 years.

The research activities of the professorship focus on basic civil laser research with a particular emphasis on applications in spectroscopy. Our topics range from the development of high-power disk laser oscillators and XUV frequency combs to the investigation of nonlinear effects in multipass cells and laser-matter interaction at pulse durations below 50 fs (1 fs = 10^{-15} s). The newly developed laser systems and spectroscopy methods offer a wide range of potential applications in precise XUV spectroscopy, spectroscopy with ultrashort laser pulses, and next-generation ultra-precise material processing.

The focus of the position offered is on investigating nonlinear conversion in multipass cells and utilising these processes for mode coupling of lasers and applications in material processing.

Responsibilities:

- Investigation of various nonlinear conversion processes for the main wavelength of 1030 nm with the aim of generating the most efficient second, third and fourth harmonics in combination with ultrashort pulse durations
- Research into nonlinear polarisation rotation technology and its implementation in combination with mode-coupled thin-film oscillators
- Development of new methods for pulse energy scaling of nonlinear spectral spreading and pulse compression based on free-beam multipass cells
- Application of the developed technologies in material processing
- Assistance in teaching to the extent of basically 2,0 trimester hours per week
- Possibility of further academic qualification (e.g. doctorate or habilitation)
- Carrying out general administrative work as well as academic activities in academic self-administration

Qualification requirements:

- A completed university degree (Diploma [univ.] or Master) in the field of physics or engineering

Furthermore desired:

- Knowledge of foreign language in English with a proficiency level that corresponds at least to the language level B2 of the Common European Framework of Reference for Languages
- High motivation, teamwork and creative problem-solving ability
- Ability to work independently, commitment and flexibility
- Strong interest in scientific work and the ability to teach

Features of this position:

- Capital-forming benefits
- Annual bonus payment
- Company pension scheme
- Flexible working hours
- DeutschlandJobTicket with employer subsidy if the necessary requirements are met
- Possibility of claiming a childcare place in a daycare centre close to the campus if the necessary preconditions are met
- You will benefit from targeted personnel development and an extensive range of further training and education opportunities.
- Budget-friendly meals in the campus canteen with three meals a day
- You have the opportunity to participate in workplace health promotion offers (for more information, see: www.hsu-hh.de/bgm/).
- Free parking on the campus grounds
- Possibility of using the Bundeswehr's own car-sharing service (for more information, go to: www.bwcarsharing.de).

For questions related to scientific or technical aspects, please contact Univ.-Prof. Dr. Pronin, Tel.: 040/6541-2756 or by e-mail: oleg.pronin@hsu.hamburg

The employment is based on the TVöD in conjunction with the Wissenschaftszeitvertragsgesetz [German Act on Fixed-Term Scientific Contracts]. In principle, the activities correspond to pay group 13 (E13). Classification up to pay group 13 of the TVöD shall be made in accordance with § 12 of the TVöD with regard to the activities to be performed on a more than temporary basis and the fulfilment of the personal or collective agreement requirements (job characteristics).

Part-time employment is possible.

The Federal Armed Forces promotes professional equality between women and men and therefore particularly welcomes applications from women.

In accordance with the Sozialgesetzbuch IX [Social Code Book IX] and the Disability Equality Act, we expressly welcome applications from severely disabled persons; the fulfilment of the requirements for the advertisement will be considered on an individual basis.

More information about the university and the professorship can be found at:

www.hsu-hh.de and www.hsu-hh.de/lts/de

Please send your application with the usual documents exclusively in electronic form (pdf file), quoting the reference number **ET-2925**, by **11.01.2026** to:

personalabteilung@hsu-hh.de.

Note:

Information on data protection in the application process can be found on the website www.hsu-hh.de under the heading "Universität - Karriere - Datenschutzinformationen".

Applications without reference number will not be considered and will be deleted immediately for data protection reasons.

