The Hannover Center for Optical Technologies (HOT), Cluster of Excellence PhoenixD, and Faculty of Mechanical Engineering invite applicants for one position as a

**Research Assistant (Doctoral Candidate/PhD position, m/f/d) – Computational Electromagnetics and Photonics Design (Salary Scale 13 TV-L "FwN", 100 %)**

to be filled as soon as possible. The position is initially limited for 3 years (extension is possible) and provides the opportunity of further academic qualification, such as a doctoral degree.

**Responsibilities and duties**
The selected candidate will use computational electromagnetics techniques, such as the finite-difference time-domain (FDTD) method, in combination with high-performance computing and optimization techniques (deep learning, adjoint method), for the simulation and design of complex photonic systems, such as plasmonic/dielectric metasurfaces/metamaterials, integrated waveguides, photonic crystals, and optical phased arrays, as well as the modelling of advanced optical material properties. The candidate will also contribute to the interpretation of experimental results, and support experimental groups in the Cluster of Excellence PhoenixD for the fabrication of these devices.

**Hiring requirements**
Applicants to the position must have a relevant scientific university degree (Diploma or Master), for example in physics, optics and photonics, electrical engineering, computer science, or a related field. The ideal candidate must have a strong background in optics/photonics, computational electromagnetics, and programming (C, C++). Please, motivate how the "must have" requirements are met in your cover letter. Knowledge in optimization techniques, artificial intelligence, and solid-state physics, is also desirable. The candidate should have the ability and willingness to work together with experts from a broad background in science and technology. The successful candidate enjoys programming and solving physics problems via numerical techniques, including on parallel computers, supercomputers and GPUs. In addition, excellent communication skills in English, oral as well as written, are expected.

**Our offer**
As a member of our international team, you have the opportunity to sharpen your scientific profile in a dynamic and excellent research environment and advance in your professional career. We offer a scientifically and intellectually inspiring atmosphere at a leading technical university with a long tradition of research in optics and photonics.
The Leibniz Universität Hannover is home to several specialised institutes and organisations in this fast-evolving research field, e.g. the Cluster of Excellence PhoenixD (Photonics, Optics, and Engineering, Innovation Across Disciplines), the HOT - Hannover Centre for Optical Technologies and the newly founded Leibniz School of Optics & Photonics. PhoenixD alone comprises of more than 100 scientists from the fields of physics, mechanical engineering, chemistry, electrical engineering, computer science and mathematics. Concerning teaching, students benefit from the existing Master’s degree programme Optical Technologies and a planned Bachelor’s programme in Optics & Photonics. Leibniz University has a long track record of successful spin-offs in the field of optical technologies. Quite a few specialised companies reside in the Hannover region, and many of them have close ties with the university. An internationally well-known non-profit research institute for photonics and laser technology is the Laser Zentrum Hannover e.V. (LZH).

The university aims to promote equality between women and men. For this purpose, the university strives to reduce under-representation in areas where a certain gender is under-represented. Women are under-represented in the salary scale of the advertised position. Therefore, qualified women are encouraged to apply. Moreover, we welcome applications from qualified men. Preference will be given to equally-qualified applicants with disabilities.

For further information, please contact Ms. Carmen Klingebek in the office of Prof. Antonio Calà Lesina.

Please submit your application by email together with your Curriculum vitae, transcripts (degree certificates and grades), and the names of two references by September 15th, 2021. A detailed cover letter focusing on how you meet the "must-have" hiring requirements (optics/photonics, computational electromagnetics, and programming) is also needed.

Email: office-c alasina@hot.uni-hannover.de

or alternatively by mail to:
Gottfried Wilhelm Leibniz University of Hanover
HOT - Hanover Centre for Optical Technologies
Nienburger Str. 17
D-30167 Hannover
http://www.uni-hannover.de/jobs

Information according to Article 13 GDPR for the collection of personal data can be found at https://www.uni-hannover.de/de/datenschutzhinweis-bewerbungen/.