



TECHNISCHE
UNIVERSITÄT
WIEN
Vienna | Austria



FAKULTÄT FÜR
ELEKTROTECHNIK UND
INFORMATIONSTECHNIK
Faculty of Electrical Engineering and Information Technology

The Faculty of Electrical Engineering and Information Technology of the Technische Universität Wien invites applications at the Institute for Microelectronics for a **tenure-track Associate Professor position** with qualification agreement in the area of

HIGH PERFORMANCE SIMULATIONS IN MICRO- AND NANOELECTRONICS

in form of an initially fixed-term (6 years) tenure track position **starting from Oct 1st, 2018** with the possibility of promotion to a permanent position as Associate Professor after a positive tenure evaluation. The successful candidate is expected to initiate independent, innovative research programs and to establish or to continue his/her own research group for the development and application of advanced concepts and methods for computer-aided Micro- and Nanoelectronics. The high performance computational methods to be developed should cover semiconductor process simulation and quantum transport simulation. Additionally, this position requires teaching duties for the bachelor's program *electrical engineering and information technology* as well as for the master's program *microelectronics and photonics*.

The requirements for applications to this position are as follows:

With the continued miniaturization of electronic devices, the requirements for high precision fabrication as well as for influences of quantum effects on current transport have increased. However, as thus both the fabrication processes as well as the electrical properties in the nanometer regime increase in complexity, accurate predictions via high performance computer simulations have become essential to guarantee a rapid research progress in microelectronics. This position opens up the opportunity to handle these growingly important areas accordingly.

The successful candidate is expected to be an internationally recognized scientist with a doctoral degree and with several years of accumulated competence in the area of computer-aided micro- and nanoelectronics. Comprehensive experience on all levels from process and quantum transport simulation in the nanometer regime to modern parallel high performance computing platforms and their efficient use is sought, enabling to devise solutions which are applicable to different areas of applications. The high performance computing methods to be developed for process and quantum transport simulation should accommodate the high requirements of modern microelectronics (e.g., efficient acceleration approaches for surface evolution computations for high aspect ratio structures, efficient method for calculating quantum effects for the current transport in the nanometer regime). Candidates should have perennial experience in supervising or co-supervising bachelor's, master's, and doctoral students. Additionally, established international collaborations with universities (optionally also with the private sector) are expected as well as research visits and reviewer activities for scientific conferences and/or journals. Already acquired, competitive funding and a related establishment of a research group are a plus as are experience in organizing scientific conferences and science communication events.

For more information please contact Prof. Ulrich Schmid per email:
ulrich.schmid+e366@tuwien.ac.at

The employment starts as University Assistant with a minimum salary of EUR 3.711,10 gross (14× per year) according to the collective bargaining agreement for a PostDoc. After signing the qualification agreement, the employment is as Assistant Professor with a minimum salary of EUR 4.388,70 (14× per year).

The letter of application should consist of the CV and should address the following points:

- research statement (description of previous and planned research)
- teaching statement (description of previous and planned teaching)
- acquired third-party fund projects
- concept for the future plans in research and teaching and contributions to scientific profile of the faculty respectively of the university

The TU Wien is committed to increase female employment in leading scientific positions. Female candidates are explicitly encouraged to apply. Preference will be given when equally qualified.

People with special needs are equally encouraged to apply. In case of any questions, please contact the confidant for disabled persons at the university, Mr. Gerhard Neustätter (gerhard.neustaetter@tuwien.ac.at).

Applications should be sent until **June 28, 2018** (date of postmark), to TU Wien, HR Administration for scientific staff, Karlsplatz 13, 1040 Vienna, Austria. The written application should contain a CD-ROM or USB stick with the complete application documents. Electronic applications should be sent as a single PDF file to Ms. Manuela Reinharter (manuela.reinharter@tuwien.ac.at).

Applicants have no entitlement to reimbursement of travel and subsistence expenses incurred by the application procedure.