

Applications are invited for the position of a

University Professor for Sustainable Propulsion Systems and Applied Thermodynamics (successor to Prof. Dr. H. Eichlseder)

at the Institute of Thermodynamics and Sustainable Propulsion Systems of Graz University of Technology (TU Graz), Faculty of Mechanical Engineering and Economic Sciences. This position (m/f/d) will be filled pursuant to Sec. 98 of the Austrian University Act 2002, as from October 1, 2023. The position will be based on a permanent employment contract, as defined under the terms of Austrian civil law, with Graz University of Technology.

Applicants should be excellently proven in the fields of sustainable propulsion systems and applied thermodynamics through professional practice and scientific activity, and represent the subject internationally in research and teaching.

The focus of this professorship is on research and development in new propulsion systems based on renewably produced chemical energy – in particular e-fuels and hydrogen in internal combustion engines and fuel cells –, their design, simulation and experimental investigation. Influences on the environment (emissions and air quality) are particularly important.

Research and development at the institute presently covers applied thermodynamics, such as internal combustion engines, fuel cells, thermal management of mobile systems and hydrogen-based energy systems. Thermal and aerodynamic problems in tunnel systems and refrigerant compressor technology are special fields adding to this portfolio.

This professorship will be established as a key-position for research and development in renewable energies for mobility. In large-scale cooperative projects, the position will act across departments at TU Graz and within the TU Austria University Initiative. Together with other involved institutes of TU Graz, the professorship will provide scientific support for the European vehicle industries and their suppliers. An important role relates to the cooperation with the research centres LEC and HyCentA.

For teaching, the applicant is expected to have a strong command in thermodynamics and propulsion systems on the bachelor's, master's and doctoral levels.

We expect the willingness to close cooperation across borders of institutes and faculties, and internationally. Active cooperation in the academic self-administration, and a strong commitment for the development of the interdisciplinary fields of research of TU Graz, called the *Fields of Expertise*, are also expected, as well as coordination and development of the scientific groups successfully established at the institute.

Required candidate profile:

- PhD-level university education, in a discipline relevant for the position,
- excellent scientific qualification in research and teaching (habilitation or equivalent scientific record),
- international basic and applied research network,
- leadership, with the qualification to guide and develop a University institute.

Good command of English is required for an excellent representation of the field on an international level. Teaching in English and German is required, where the language on the Bachelor's level is German. For teaching and for management at the institute, in the faculty and in commissions of the University, command of German on the C1 level according to the

Common European Framework of Reference for Languages is required, which must be present or acquired within the first year.

The transfer of residence to the area of Graz is required.

Further requirements:

- Excellent experience and network with industries,
- experience in the acquisition of third-party funding and the application for and coordination of funded research projects,
- teaching in German and English,
- excellent didactic skills,
- ability to work in a team and cooperativity,
- competence in leadership, gender and diversity.

Graz University of Technology aims to increase the proportion of women, in particular in management and academic staff, and therefore qualified female applicants are explicitly encouraged to apply. Preference will be given to women if applicants are equally qualified.

Graz University of Technology actively promotes diversity and equal opportunities. Applicants are not to be discriminated in personnel selection procedures on the grounds of gender, ethnicity, religion or ideology, age, sexual orientation (Anti-discrimination). People with disabilities and who have the relevant qualifications are expressly invited to apply.

Candidates should submit their detailed application

- using the application form sheet of TU Graz at <https://www.tugraz.at/go/professorships-vacancies>,
- presenting their CV and scientific record in teaching and research or in industries (copies of certificates and documents attached),
- displaying their planned activities in research and teaching and for the development of the institute,
- presenting the full texts of their five most important publications (pdf or link)

in a digital form at the latest by

November 27, 2022

(date and time of email timestamp) to the Dean of the Faculty of Mechanical Engineering and Economic Sciences.

Address:

Graz University of Technology

Dean of the Faculty of Mechanical Engineering and Economic Sciences

Inffeldgasse 23/I

8010 Graz

Austria

E-Mail: dekanat.mbww@tugraz.at.

Hearings are planned for week 7 in 2023. Candidates invited after review of the applications are requested to save that week for a visit to Graz, should the Covid-19 pandemic allow this.

Questions should be directed to the Dean of the faculty of Mechanical Engineering and Economic Sciences.

The Dean: Univ.-Prof. DI Dr. Franz Haas

www.tugraz.at