Research Associate in the Field of Polymer Gears for Innovative Powertrain Systems (m/f/d)

The Gear Research Center (FZG) at the Technical University of Munich (TUM) under direction of Prof. Dr.-Ing. K. Stahl is offering a full-time Research Associate (m/f/d) position on the topic of polymer gears for innovative powertrain systems.

Our Profile

The Gear Research Center (FZG) is the competence center for powertrain technology at the Technical University of Munich (TUM). The focus of our research is the development of methods and reliable predictions regarding the

service life, efficiency, and vibration behavior (NVH) of machine elements, such as gears. Our research projects range from theoretical basic work to very applicationoriented experimental work - often in cooperation with worldwide industrial partners. Our key research fields include:

- Electromechanical powertrain systems, e.g. for e-mobility
- Efficiency, dynamics and load-carrying capacity of gears and complete powertrain systems
- Alternative sustainable materials, lubricants, and manufacturing processes

Your Responsibilities

At the moment, there is a great need for research in the field of polymer gears. Due to their properties, like low-costs, lightweight, and low-friction, polymers as an alternative gear material are becoming increasingly important in industrial practice. Even in power-transmitting applications such as micro-mobility, like e-bikes or small electric vehicles,

polymer gears are gradually replacing conventional steel gears, due to their high potential in terms of efficiency and sustainability. However, compared to steel gears, research into polymer gears is still at the beginning. Therefore, FZG is currently preparing various research projects in the field of polymer gears with different focuses. These include theoretical and experimental research activities with innovative polymer materials and sustainable lubricants as well as the design of complete powertrain systems under consideration of polymer gears. One part of your job will be to work on these research projects in

collaboration with national and international partners. In addition, the work also includes the following aspects:

- Opportunity to participate in university teaching and acquire fundamental knowledge in the field of machine elements and powertrain technology
- Initial management experience by supervising student assistants and their research projects
- Publication in scientific journals
- Presentation of your results to a professional audience

Your Qualifications

- Above-average Master's degree in mechanical engineering, chemical engineering, materials science or comparable subjects
- Enjoy innovatively, powertrain technology topics
- Interest in independent project management
- Independent and determined way of working with strong communication and teamwork skills











Oppatinities for talents

- Good German language skills are required
- Knowledge of English or Mandarin beneficial

Your Benefits

- Full-time position as research associate (m/f/d) (salary according to the German TV-L scale for civil servants level E13)
- Opportunity for a PhD
- Large network of international industry partners and thus potential future employers
- Participation in international conferences
- Opportunity for further qualifications (also interdisciplinary, e. g. leadership, personal development, rhetoric)
- Flexible working and home office
- Highly motivated young team

We are looking for a highly motivated and qualified full-time Research Associate (m/f/d) for an initial duration of 3 years (with a possibility for extensions). The position is available right now.

How to Apply

Join our young, dynamic team and experience multifaceted and practical research in close cooperation with partners from worldwide. Qualified applicants are invited to send their application documents (CV, certificates and any other relevant papers) to:

Technische Universität München

Forschungsstelle für Zahnräder und Getriebesysteme (FZG) Prof. Dr.-Ing. Karsten Stahl Boltzmannstr. 15 85748 Garching b. München E-Mail address: sekretariat.fzg@ed.tum.de

If you have any further questions, please contact Mr. Stefan Reitschuster, M.Sc. (+49 89 289 15827, stefan.reitschuster@tum.de) at any time. For your written application, please only send us copies, as we will unfortunately not be able to return your application documents once the process has been completed.

Die Stelle ist für die Besetzung mit schwerbehinderten Menschen geeignet. Schwerbehinderte Bewerberinnen und Bewerber werden bei ansonsten im Wesentlichen gleicher Eignung, Befähigung und fachlicher Leistung bevorzugt eingestellt.

Im Rahmen Ihrer Bewerbung um eine Stelle an der Technischen Universität München (TUM) übermitteln Sie personenbezogene Daten. Beachten Sie bitte hierzu unsere Datenschutzhinweise gemäß Art. 13 Datenschutz-Grundverordnung (DSGVO) https://portal.mytum.de/kompass/datenschutz/Bewerbung/ zur Erhebung und Verarbeitung von personenbezogenen Daten im Rahmen Ihrer Bewerbung. Durch die Übermittlung Ihrer Bewerbung bestätigen Sie, dass Sie die Datenschutzhinweise der TUM zur Kenntnis genommen haben.