INFORMATION FOR CANDIDATES

PROFESSOR IN »MATERIALS SCIENCE«

W2 TENURE TRACK ASSISTANT PROFESSOR (WITH TENURE TRACK TO W3) OR W3 ASSOCIATE/FULL PROFESSOR
Information for Candidates

PROFESSOR IN »MATERIALS SCIENCE«

Job Description
How to Apply
Appointment Process
Expected Teaching Activities
Expected Research Activities
Resources
Arriving in Munich
TUM. Technische Universität München
TUM Mechanical Engineering
Materials @ TUM Mechanical Engineering
Contact, Imprint
Technical University of Munich (TUM) invites applications for the position of

Professor in »Materials Science«

as a W2 Tenure Track Assistant Professor (with tenure track to W3) or W3 Associate/Full Professor; to begin in winter semester 2021/22.

Scientific environment

This professorship will be based within the TUM Department of Mechanical Engineering and will be allocated to the future School of Engineering and Design.

Responsibilities

The responsibilities of TUM professors include research, teaching and the promotion of early-career scientists. We seek to appoint an internationally-recognised research leader in Materials Science with a focus on metallic structural materials and alloys. Additional knowledge in one of the following highly important fields is also required: High Entropy Alloys, Lightweight Metals, Bulk Metallic Glasses, Functional Materials, Testing and Modelling methods for materials or Sustainability and Ecologic Aspects of materials. The responsibilities of this post shall include the collegiate management of the State Materials Testing Laboratory for Mechanical Engineering of TUM. Teaching duties include courses in the university's bachelor and master programs.

Qualifications

Candidates must hold a university degree and an outstanding doctoral degree or equivalent scientific qualification, and have demonstrated excellent achievements in research and teaching in an internationally recognized scientific environment, appropriate to the level of appointment. International scientific experience during the doctoral or postdoctoral phase is expected. The successful candidate will also demonstrate pedagogical aptitude, including the ability to teach in English.

Our Offer

Based on best international standards and transparent performance criteria, TUM offers a merit-based academic career option for tenure track faculty from Assistant Professor through a permanent position as Associate Professor, and on to Full Professor. TUM provides excellent working conditions in a lively scientific community, embedded in the vibrant research environment of the Greater Munich Area. Furthermore, TUM offers attractive and performance-based salary conditions as well as a sustainable pension scheme. The TUM Munich Dual Career Office (MDCO) provides tailored career consulting to the partners of newly appointed professors. MDCO gives assistance for relocation and integration of new professors, their partners and accompanying family members.

Your Application

TUM is an equal opportunity employer. As such, we explicitly encourage applications from women. Applications from disabled persons with essentially the same qualifications will be given preference. Application documents should be submitted in accordance with TUM's application guidelines for professors. These guidelines and detailed information about the TUM Faculty Recruitment and Career System are available on www.tum.de/faculty-recruiting. Here, you will also find TUM's information on collecting and processing personal data as part of the application process.

Please send your application no later than October 10, 2020 to the Dean of the Department of Mechanical Engineering, Prof. Dr.-Ing. Nikolaus A. Adams, Technical University of Munich, Boltzmannstraße 15, 85748 Garching b. München, Germany, Email: dekan@mw.tum.de
How to Apply

For your application, please submit the following documents:

• Résumé, certificates, credentials
• List of publications
• Three selected publications with a summary (max. 1,000 characters) of their impact on your research profile
• Presentation of research strategy
• List of courses taught
• Descriptive statement on teaching strategy and philosophy
• Details of third-party funding
• Names and addresses of three references

International experts will evaluate your application in English. Therefore, we kindly ask you to submit all application documents in English.

Appointment Process

Appointment processes for professorships in Germany differ from many other countries. In the case of the advertised post at TUM, a university appointment committee (“Berufungskommission”) will be established for the purpose of the appointment.

This committee will select the most promising applicants (typically approx. 8), who will then be invited for an interview and to give a test lecture. Candidates will also have the opportunity to learn more about the department and to meet faculty members, other staff and students on this occasion.

Based on the interview and test lecture, the committee will then request peer reviews from academics from other universities. The committee then draws up a shortlist (usually with 3 candidates) in order of preference, giving reasons for their choices.

The final decision will be made by the TUM Board of Management. Successful appointments are followed by negotiations on initial resources for the professorship and remuneration. The selected candidate will be offered services from our Dual Career Office.
Expected Teaching Activities

TUM Mechanical Engineering is dedicated to research oriented teaching. Consequently, the new faculty member is expected to focus on teaching in the field of materials science, which is a key course in the Bachelor program, including classes with several hundreds of students. In addition, contribution to the primarily in the specialisation phase of the Bachelor program (year 3) and in the Master programs.

Courses in the Bachelor program are currently being taught in German, courses in the Master program can be taught in German or English. Applicants should be able to teach in both languages (English and German) within a reasonable time span. If needed, there is individual support for acquiring necessary language skills. Teaching load is 9 hours per week.

Study programs (Master)

- Automotive Engineering
- Aerospace
- Energy and Process Technology
- Design, Production and Management in Mechanical Engineering
- Mechanical Engineering
- Mechatronics and Robotics
- Medical Engineering and Assistance Systems
- International MSc Materials Science
Expected Research Activities

The core of the expected qualification of the applicants should be in the field of metallic structural materials and alloys. Experience in the application of testing and analysis techniques is also a basic requirement. Research interest or expertise in other materials used in mechanical engineering is not essential, but experience with polymer- or ceramic-based materials would be advantageous. At least one focus of experience in the following areas would be desirable:

- High Entropy Alloys
- Functional materials
- Lightweight construction materials
- Metallic glasses
- Sustainability aspects of material use and material ecology

Within this framework, the Department of Mechanical Engineering is open to adapt the actual orientation of the chair to the research interests and expertise of the selected candidate.
Resources

TUM Mechanical Engineering distributes resources based on performance in research and teaching. The mid-term development perspective of the new professorship depends on the specific profile of the successful candidate and a development plan for the initial five years.

The start-up package, granted for five years includes staff positions, funds for tangible expenses and investments as well as laboratory and office space that are commensurate with the background of the successful candidate and with the expected performance in teaching and research.

This particular professorship can be part of the State Testing Lab for Materials in Mechanical Engineering.

Salary is based on the W2/W3 salary scale plus supplements and is negotiable according to background and experience of the successful candidate.

Faculty is entitled to additional contract work or secondary employment, subject to time and conflict-of-interest constraints.
Arriving in Munich

www.tum.de/en/about-tum/working-at-tum/services-for-employees/arriving-at-tum

**TUM-Kids, Family and Elder Care Center**
This Center provides all the information, advice and services you need to successfully combine your career at TUM with your home and family life. At each of three campuses, you will find support to help you find suitable childcare – from nurseries through afterschool care to last-minute babysitters. This center also runs a school holiday program (Bewegte TUM-Ferien) for your children and can even help you make arrangements for family members in need of care.

www.chancengleichheit.tum.de/en/family

**Munich Dual Career Office – Dual Career Service & Integration Service**
The MDCO supports Dual Career Partners to get or keep their careers on track by providing assistance during the whole job application procedure right up to a successful career entry in the Munich area.

The staff also supports TUM professors and their families in all matters related to relocation, as housing, administrative affairs, health insurance, German courses etc.

www.dualcareer.tum.de/en/mdco-home
TUM combines top-class facilities for cutting-edge research with unique learning opportunities for more than 40,000 students. TUM scientists are committed to finding solutions to the major challenges facing society as we move forward: Health & Nutrition • Energy & Natural Resources • Environment & Climate • Information & Communications • Mobility & Infrastructure. TUM thinks and acts with an entrepreneurial spirit. Its aim is ambitious: to create lasting value for society through excellence in education and research, the active promotion of next-generation talent and a strong entrepreneurial spirit. All of which combine to make TUM one of Europe’s leading universities.

TUM is committed to cutting-edge interdisciplinary research in the fields of science that address the biggest questions of our time. The university has 15 academic departments, its interdisciplinary Integrative Research Centers and a number of high-profile Corporate Research Centers.

TUM has more than 170 study programs to choose from, many of those can be studied in English. The range of subjects offered is unparalleled in Europe and encompasses disciplines such as medicine, engineering, the natural and life sciences, business studies and education.

TUM is the first university in Germany to reinforce its recruitment policy by a comprehensive tenure track system. Based on best international standards and transparent performance criteria, TUM FACULTY TENURE TRACK offers merit-based academic career options for high-potential early-career scientists, from the appointment as Assistant Professor through a permanent position as Associate Professor and on to Full Professor.

TUM at a glance

15 departments
6 Integrative Research Centers
7 Corporate Research Centers
10,800 staff members
600 professors
€1,500 mio budget

TUM in Rankings

QS Ranking: TUM is the top-ranked university in Germany for the fifth year in a row. Several subjects are ranked as top 25 worldwide.

Global University Employability Ranking 2019: TUM ranked 6 worldwide.

THE World University Ranking: TUM among the top 4 European technical universities

www.tum.de/en/about-tum


www.tum.de/en/about-tum/our-university/rankings
The Department at a glance

38 Professors
900 Staff
4100 Students
43 Mio. €
Third Party Funds

www.mw.tum.de/en/
the-department/
facts-and-figures

The Department in rankings

QS World University Ranking by Subject:
#2 in Germany,
#25 worldwide in 2020

THE World University Ranking (engineering):
#1 in Germany,
#25 worldwide in 2020

www.mw.tum.de/en/
the-department/ranking-results

TUM Mechanical Engineering

The Department of Mechanical Engineering of Technische Universität München (TUM) is standing for engineering excellence since 1868. It was founded amongst others by the pioneer of refrigeration Carl von Linde and the well-known mathematician and material scientist Johann Bauschinger. It has been the workplace of famous university teachers as Gustav Niemann, author of the most important authoritative work of mechanical engineering, the scientist of mechanical engineering August Föppl and the researcher of thermodynamics Wilhelm Nußelt. The lectures given by Carl von Linde inspired Rudolf Diesel to his groundbreaking (pioneering) inventions. Other important students of the faculty are the aircraft designers Claude Dornier and Willy Messerschmidt.

Today, the Department of Mechanical Engineering is one of the most successful engineering faculties of the world. Leading international surveys rank the TUM Department of Mechanical Engineering in the world’s top group. This success is primarily a result of published scientific excellence, based on a balanced mix of publicly funded projects and industrial cooperation. The department benefits from a highly innovative environment in a prestigious university and the Garching campus, one of the largest and most modern research centers in Europe, as well as from powerful partners in industry with their headquarters or research centers in and around Munich. Young talented people form the core of the Technical University of Munich. Integrated into an environment of experienced scientific personalities, they are supported to develop their performance and individual strengths.

www.mw.tum.de
Materials science and engineering is a growing research area at TUM Mechanical Engineering. In addition to the professorship offered here, four other research groups are active, all of them appointed in 2019:

- Materials Engineering of Additive Manufacturing – Prof. Peter Mayr
- Medical Materials and Implants – Prof. Petra Mela
- Multiscale Modeling of Fluid Materials – Prof. Julija Zavadlav
- Laser-based Additive Manufacturing – Prof. Katrin Wudy

In addition, several future colleagues touch materials aspects in their research, mainly in the context of production engineering.
Contact

For further information regarding the open rank Professorship „Materials Science“:

Dr. Till von Feliztsc
Department Administration
felitzsch@mw.tum.de
direct line: +49 89 289 15006

Perret Laver is commissioned to assist in identifying and approaching suitable candidates.

Imprint
This document intends to provide potential candidates for the open position with additional information regarding TUM and the Department of Mechanical Engineering as well as Fraunhofer-Gesellschaft and the Fraunhofer Research Institution for Casting, Composite and Processing Technology IGCV. It is not a legally binding document. The only binding document is the job description as published on: portal.mytum.de/jobs/professuren

09/2020-TF

responsible:
Prof. Nikolaus Adams, Dean of the Faculty of Mechanical Engineering