Doctoral student in Materials Science

Tampere University of Technology (TUT) is an active scientific community of 1,700 employees and 8,300 students. The University operates in the form of a foundation and has a long-standing tradition of collaboration with other research institutions and business life. Many of the fields of research and study represented at the University play a key role in addressing global challenges. Internationality is an inherent part of all the University's activities. Welcome to join us at TUT!

The Faculty of Engineering Sciences is the only purely technology-oriented faculty at Tampere University of Technology. The Faculty offers high-quality education leading towards bachelor's, master's and postgraduate degrees. Laboratories in the Faculty include the Laboratory of Automation and Hydraulics, the Laboratory of Mechanical Engineering and Industrial Systems, and the Laboratory of Materials Science. In addition to the high-level basic research in the fields of the laboratories, the Faculty is famous of its strong collaboration with industry.

The Laboratory of Materials Science (LMS) conducts internationally high level research on engineering materials based on strong interdisciplinary basic research. LMS is the core unit in TUT in the field of Materials Science and it has strong connections to other laboratories in TUT. The laboratory and TUT offer a high-quality basic infrastructure for materials research and teaching and the infrastructure is continuously developed towards the future needs in the field of materials science. The cornerstone of our strategy is active collaboration with companies, which is realized as very high percentage of supplementary funding and large number of materials experts graduated from us working in industry. At the same time the active interdisciplinary basic research is realized as growing portion of academic funding and peer reviewed articles. The Laboratory of Materials Science is looking for a PhD student in the field of micromechanics of materials studied under extreme deformation conditions.

Job description

You will work on mechanical deformation behaviour of materials at small length scales with a special emphasis on extreme deformation conditions – high temperatures and high strain rates. You will perform advanced in-situ micromechanical testing in a scanning electron microscope (SEM). During the course of the PhD, you will be involved in sample preparation using FIB-SEM, performing micromechanical experiments in the SEM, development of novel experimental techniques for studying mechanical behaviour at small length scales and studying the effects of strain rate and temperature on material deformation behaviour. You will disseminate the outcome of your research in the form of scientific publications and present them at international scientific conferences.

Requirements

You must hold a master’s or an equivalent degree in Metallurgical Engineering, Materials Science or similar. The work requires high level of experimental skills and analytical mind set for interpreting the measured data. You are a team player able to work in multidisciplinary research teams. Your strengths include strong methodological background, excellent analytical skills, very good writing skills, high motivation for innovation and flexibility to work and deliver results. You are highly motivated for materials research and look forward to working in an international environment. Good command of English – both oral fluency and in written form – is mandatory. The work involves substantial scientific reporting and writing. Experience in mechanical testing techniques and electron microscopy will be an added advantage.

We offer

You will benefit from the excellent research infrastructure and broad interdisciplinary surroundings provided by TUT, with plenty of possibilities for personal and professional development. TUT offers a wide

range of staff benefits, such as occupational health care, flexible working hours, excellent campus sports facilities and several restaurants and cafés on campus with staff discounts. Since 2014 TUT holds the European Commission HR Excellence in Research. For more information, please visit Careers at TUT (http://www.tut.fi/en/about-tut/careers-at-tut/index.htm)

Tampere is the largest inland city in the Nordic countries and one of three most rapidly growing regions in Finland. It is counted among the major academic hubs in the Nordic countries and offers a dynamic living environment. Today, the city is best known for its high tech expertise and extensive know-how in various fields. The city is an industrial powerhouse that enjoys a rich cultural scene and a reputation as a centre of Finland's information society. Read more on Tampere region (https://visittampere.fi/en/)

Salary

The salary will be based on both the job demands and the employee's personal performance in accordance with the University Salary System (YPSJ). According to the criteria applied to teaching and research staff, the position of Doctoral Student is placed on the job demand levels 1-4. In addition, employees receive performance-based salary.

Trial period

Trial period of four (4) month applies.

Other

The position will be filled now for a fixed period of four (4) years. Appointment is expected to commence on 20 August or as mutually agreed. You are expected to complete the PhD degree requirements and defend your PhD thesis within this appointment duration.

Further information

For more information about the position, please contact Assistant Professor Gaurav Mohanty by email: gaurav.mohanty@tut.fi.

How to apply

Please email your applications by email to Dr. Gaurav Mohanty at gaurav.mohanty@tut.fi. The application should include the following documents:

1. A letter of motivation (max. 2 pages)
2. Curriculum Vitae (CV)
3. Scanned copies of transcripts – bachelor's and master's
4. Contact details of 2-3 possible referees

Applications and all accompanying documentation should be written in English. In case the transcripts are in another language, submit an English translation.

Optional documents: GRE/TOEFL/IELTS scores (if already available), description of research undertaken/research experience (max 2 pages), publication list (if applicable).

Application deadline

The closing date for applications is **1st July 2018**. Screening of applicants will begin immediately and continue until the position is filled.