



Technische Universität Berlin



Technische Universität Berlin offers an open position:

Research assistant - salary grade E13 TV-L Berliner Hochschulen

part-time employment may be possible

Faculty V - Institute of Machine Tools and Factory Management / Machine Tools and Manufacturing Technology

Reference number: V-123/25 (starting at 01/04/25 / limited for 24 months / closing date for applications 18/04/25)

Working field:

With the growing trend of additive manufacturing, the demand for post processing methods to improve the surface quality of additively manufactured components is increasing. Although mass finishing processes are widely used for this application, there is still little scientific research on this method. In particular, the process leads to uneven material removal from the component, increasing the risk of unacceptable shape deviations. Against this background, a research project aims to investigate the fundamentals of mass finishing and develop a numerical simulation model for the post-processing of additively manufactured components.

The scope of activities includes the following aspects:

- research in the innovative field of post-processing of additively manufactured components
- planning, execution, and evaluation of experimental studies to gain insights into the functionality of robot-guided centrifugal disc finishing
- development of a simulation model for optimizing the machining process
- collaboration, coordination and organisation of research projects in close cooperation with industrial companies, research associations and scientific partners
- presentation of research results to industry representatives and scientists at national and international conferences

Requirements:

- successfully completed scientific university studies (Diplom, Master or equivalent) in the field of mechanical engineering or related engineering sciences
- in-depth knowledge in the field of production engineering
- in-depth experience in working with machine tools and industrial robots
- good command of German and/or English required; willingness to learn either English or German is expected

Desirable:

- strong willingness to do a doctorate
- knowledge in the field of machining technology and additive manufacturing,
- knowledge in the field of abrasive fine-finishing technology, in particular mass finishing
- prior experience in statistical experimental design and project management
- experience with programming languages for data processing and process modelling, e.g., Python or Matlab
- experience in the field of numerical simulation methods, e.g. FEM, CFD, DEM
- independent, systematic and structured way of working
- good written and spoken English and willingness to acquire the necessary language skills
- willingness to undertake business trips (national and international)

We offer:

- an inclusive and appreciative working atmosphere
- international networking and mentoring by experienced colleagues
- the opportunity to work partly from home

Please send your application, stating the **reference number**, together with the complete documents (certificates, diplomas, etc.) **exclusively by email** bundled in one PDF document to Prof. Dr.-Ing. Uhlmann via **bold@iwf.tu-berlin.de**.

By submitting your application via email you consent to having your data electronically processed and saved. Please note that we do not provide a guarantee for the protection of your personal data when submitted as unprotected file. Please find our data protection notice acc. DSGVO (General Data Protection Regulation) at the TU staff department homepage: https://www.abt2-t.tu-berlin.de/menue/themen_a_z/datenschutzerklaerung.

To ensure equal opportunities between women and men, applications by women with the required qualifications are explicitly desired. Qualified individuals with disabilities will be favored. The TU Berlin values the diversity of its members and is committed to the goals of equal opportunities. Applications from people of all nationalities and with a migration background are very welcome.

Technische Universität Berlin - Die Präsidentin - Fakultät V, Institut für Werkzeugmaschinen und Fabrikbetrieb, FG Werkzeugmaschinen und Fertigungstechnik, Prof. Dr.-Ing. Uhlmann, Sekr. PTZ 1, Pascalstraße 8-9, 10587 Berlin

The vacancy is also available on the internet at
<https://www.personalabteilung.tu-berlin.de/menue/jobs/>

