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; there is the possibility of a doctorate

Faculty V - Institute of Machine Tools and Factory Management / Machine Tools and Manufacturing Technology
Reference number: V-681/24 (starting at 01/02/25 / limited for 24 months / closing date for applications 10/01/25)

Working field:

The complex field of medical technology applications requires constant technological innovation. Blasting-based production technologies offer the possibility of substituting existing processes and increasing efficiency. For example, the solidification blasting of permanent implants with liquid CO2 under high pressure offers the possibility of increasing the fatigue strength and at the same time the layer adhesion of applied hydroxyapatite layers.

- Research in the field of manufacturing technology using jet processing with liquid CO2
- Close cooperation with the Department of Materials Engineering at the Technical University of Berlin
- Development of a blasting process for the targeted improvement of the fatigue strength and layer adhesion of titanium components by introducing residual compressive stresses into deep component layers
- Process modelling based on experimental results for optimized blasting of dental implants
- Preparation, implementation and evaluation of target-oriented DoE using regression analyses
- Independent planning, implementation and evaluation of research content
- The fields of activity range from basic research to application-oriented research
- In addition to operational work, the role also includes coordinating other research tasks, communicating with project partners and presenting results at milestone and final meetings as well as at international conferences

Requirements:

- Successfully completed scientific university studies (diploma, master or equivalent) in mechanical engineering or related engineering sciences.
- Advanced knowledge of production engineering
- Good knowledge of programming languages such as Python or Matlab
- German language skills at least at level C1 of the Common European Framework of Reference for Languages or willingness to build up corresponding skills

Desirable:

- Knowledge in the field of production technology using blasting processes
- Experience in the field of statistical design of experiments, measurement and control technology as well as the operation of industrial robots
- Independent, systematic and structured way of working
- Very good written and spoken English skills

Please send your application, **stating the reference number exclusively by email - bundled in one PDF document - to Prof. Dr.-Ing. Uhlmann via bold@iwf.tu-berlin.de**. Please note that only applications with complete documents (letter of motivation, CV, educational qualifications, references) can be considered.

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

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

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