Technische Universität Berlin

Technische Universität Berlin offers an open position:

Research Assistant (PhD candidate) - 0.75 working time - salary grade E13 TV-L Berliner Hochschulen

under the reserve that funds are granted

"InterDent" FOR2804 is a collaborative research effort between dentists and materials scientists, focused on "The materials science of teeth in function - principles of durable, dynamic dental interzones". A primary goal of the consortium is to elucidate the reasons for failure of dental restorations and to explore bioinspired solutions. Research assistants will work in four synchronized projects inspired by problems of relevance to dental treatment. For additional info see http://interdent.charite.de/

The collaborative research project is recruiting four positions in sub-projects:

- TP1a. "Sclerosing dentine" – studying the temporal and spatial structural ageing of normal tooth dentine exposed to dental restorations.
- TP1b. "Microchemistry of sclerotic dentine" – studying chemical fingerprints, gradients and correlations in structurally aged dentine exposed to dental restorations.
- TP2. “Cemento-dentine-junction (CDJ)" - studying the structure and properties with particular emphasis on the cyclic deformation behaviour and the damage resistance of the CDJ.
- TP4. "Simulation of root canal sealage" – validating a model for root canal treatment using polymerizing biomaterials and evaluation of interzone failure.

If you are interested in TP1a, TP1b or TP4, see the Charité and Helmholtz Center-Berlin job announcement pages (or relevant links on the InterDent website).

Faculty III - Institute of Materials Sciences and Technologies / Materials Engineering
Reference number: III-147/21 (starting at 01/05/21 / until 30/04/24 / closing date for applications 19/03/21)

Working field: In this job advertisement we are looking for highly motivated candidates for TP2 "Cemento-dentine-junction (CDJ)". Typical tasks include:

- development and design of advanced, non-standard testing techniques of sub-millimetre sized specimens from teeth of slaughtered animals
- fatigue testing in compression, bending and shear, including specimen preparation
- analysis and evaluation of the results using analytical, numerical and theoretical approaches
- high resolution 2D and 3D microstructural evaluation by advanced imaging techniques
- develop the theoretical and scientific fundamentals of the research work
- provide ongoing, current up-dates of the state-of-art
- contribute to manuscripts for publication of the results in highly ranked scientific journals
- prepare abstracts and presentations of the results in national and international conferences
- actively participate in InterDent research group team activities and fulfilling obligations as defined in routine project meetings, including preparation of presentations and reports
- support administrative, organisational and public relation tasks required for the success of FOR2804
- engage in the scientific output of the InterDent research group by exchange of specimens, techniques and knowhow

Requirements:

- successfully completed university degree with very good final grades (Master, Diplom or equivalent) in materials science, mechanical engineering, biomedical engineering or similar disciplines; a strong background in materials science is essential
- proven experience in performing scientific experiments; previous experience in development, design and performing of non-standard fatigue testing set-ups is an advantage; self-motivated interest in the characterisation of natural hard tissues by materials science and histological techniques
- structured working style, organisational skills and good time management
- interpersonal skillset to work in an interdisciplinary, intercultural team
- sense of responsibility and reliability
- written and oral fluency in English, excellent skills in writing scientific texts and in oral presentation of scientific results
- very good knowledge in German or basic knowledge and keen interest to improve German speaking skills to be able to communicate with German-speaking team members
- scientific work should be geared towards achieving a doctorate
- willingness for work-relevant (e.g. experiments) national and international working travel

Please send your application indicating the **reference number III-147/21** and including the usual documents (letter of intent, CV, high school, university, working and language certificates, all combined in a single pdf file, max. 5 MB) **by email to Prof. Dr. Claudia Fleck (office@fgwtberlin.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 guaranty 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/ or quick access 214041.

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.

Technische Universität Berlin - Der Präsident - Fakultät III, Institut für Werkstoffwissenschaften und –technologien, FG Werkstofftechnik, Prof. Dr. Claudia Fleck, Sekr. EB 13, Straße des 17. Juni 135, 10623 Berlin

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