technische universität
dortmund

With more than 6,200 employees in research, teaching and administration and its unique profile, TU Dortmund University shapes prospects for the future: The cooperation between engineering and natural sciences as well as social and cultural studies promotes both technological innovations and progress in knowledge and methodology. And it is not only the more than 34,200 students who benefit from that.

The Faculty of Chemistry and Chemical Biology, TU Dortmund University, invites applications for

a PhD candidate position

to be filled at the earliest possible date and appointed for 3 years. Duration of the contract will be based on the targeted qualification (e.g. PhD). Salary will be paid, in agreement with the lawful regulations of tariffs, according to salary group E13 TV-L resp. according to the provisional regulations of the TVÜ-L, if applicable. The Position is a half-time appointment, which represents a typical employment for a PhD candidate in this research area. The possibility to pursue further scientific qualifications is offered.

Research Topic:

A current topic within cheminformatics/*in-silico* molecular design should be worked on within the scope of a doctoral thesis. The project is part of the DFG funded priority program "Algorithm for Big Data" and is in close collaboration with Prof. P. Mutzel, Department of Computer Science, TU Dortmund.

The project deals with development and application of deep learning methods in combination with graph-based approaches for the analysis of big bioactivity data. The applicant will gain a comprehensive insight into the process of computer-based rational drug design and will acquire a general knowledge of pharmaceutical drug research through interaction with local groups.

Requirements:

Applicants should hold an excellent scientific master's/diploma degree. The position requires a degree in bioinformatics, cheminformatics, life science informatics, or chemical biology, chemistry, pharmacy, or a similar qualification.

The candidates should have great interest in pharmaceutical research using computer-based methods. If the course of studies did not convey the necessary knowledge regarding computer science methods, the applicants should have first programming experience and knowledge about computers beyond simple usage. Experience with machine learning methods is a plus.

Working Environment:

The working group for computational molecular design/medicinal chemistry deals with the development and application of computer-based methods in rational drug design. This includes a whole range of ligand- and structure-based *in-silico* methods (cheminformatics, virtual screening and rational drug design, docking, homology modeling, and molecular dynamics simulations) that are generally applied in industrial pharmaceutical research. Close collaborations with groups at the TU Dortmund University (www.tu-dortmund.de) and the Max Planck Institute of Molecular Physiology (www.mpi-dortmund.mpg.de) allow a verification of *in-silico* results using laboratory experiments and perfectly complement the computer-based methods.

Further Information:

The TU Dortmund University is committed to increasing the number of women in the Faculty of Chemistry and Chemical Biology in scientific positions and particularly encourages female candidates to apply.

Applications from disabled persons are explicitly welcome.

Application:

Please send your application until 08.06.2017 with the reference number **w23-17** to:

Dr. Oliver Koch
Technische Universität Dortmund
Fakultät für Chemie und Chemische Biologie
Otto-Hahn-Straße 6, D-44221 Dortmund

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Dortmund, 12.05.2017