



FRIEDRICH-ALEXANDER  
UNIVERSITÄT  
ERLANGEN-NÜRNBERG  
TECHNISCHE FAKULTÄT



MACHINE LEARNING  
& DATA ANALYTICS

## PhD position in Computer Science / Biomedical Engineering

The Machine Learning and Data Analytics Lab at the Friedrich-Alexander University Erlangen-Nuremberg (FAU) invites applications for a PhD position in Computer Science / Biomedical Engineering. We are about to start a three-year project on

### Chemocommunication: Exploring Chemical Signatures of the Human Body

#### Background:

Chemical signals play a major role in physiological processes and are potent modulators of behavior. The possible implication of chemosensory information in human social interaction, however, has long been neglected. Only recently, it has been demonstrated that body odours convey information about the sender and influence the recipient's behavior in a significant manner. Thereby, evidence is accumulating that an individual's chemical signature bears not only information about genetically determined traits, but also about transient states such as the individual's emotional or health status. The emerging field of human chemocommunication hence offers the intriguing possibility to make use of body odour signatures as an unobtrusive measure of internal states. The goal of this PhD is to develop machine learning and data analytics tools for a new chemocommunication platform that is about to be established in a collaborative Emerging Fields project at the Friedrich-Alexander-Universität (FAU). The successful applicant will thus work with chemistry and medical experts in a joint research project. The successful candidate is thus expected to be an avid team worker.

FAU is one of the largest universities in Germany. With its five faculties, FAU offers a scope of subjects ranging from the Humanities to Law and Economics as well as Sciences, Medicine and Engineering. The FAU's mission statement "Knowledge in Motion" reflects the close collaboration between the single disciplines.

The Machine Learning and Data Analytics Lab at the FAU develops machine learning algorithms and ubiquitous computing systems. The aim of the MaD Lab is to contribute ML and AI research that is applicable to real-world interaction settings. Detailed information on ongoing projects is available on our website, via our publications and upon request.

#### Requirements:

Candidates for this position should have a master or comparable degree in Computer Science or a related discipline (Medical Engineering, Software Engineering, ...). The ideal candidate shows strong enthusiasm about working self-dependently in interdisciplinary environments. The candidate should also blend expertise in machine learning and data analytics with a keen interest in chemistry and medicine as an application area.

#### Program details and contact for application/questions:

The project start date is February 1, 2019. Funding is available for 36 months, an extension is possible. Prospective applicants should apply with a cover letter and academic CV. Applications will be accepted until the position is filled.

Contact: Prof. B. Eskofier, Ph.D. ([bjoern.eskofier \(a t\) fau.de](mailto:bjoern.eskofier@fau.de))

Website: <https://www.mad.tf.fau.de>



EMERGING  
FIELDS  
INITIATIVE