Vacancy Notice 295/2019

The Otto von Guericke University Magdeburg (OVGU) is an internationally oriented and regionally networked university with a strong research profile.

The Faculty for Electrical Engineering, Insitute for Automation Engineering, Department for Systems Theory and Automation Control (Prof. Findeisen) seeks to fill the following vacancy:

Doctoral student (m/f/d)

Salary:	Data commencing:	Fixed term until:	Contract status:
13 TV–L	01.01.2020	31.12.2022	75 %

3-year PhD position in the area of optimization-based control of biological systems (brain-machine-interfaces, computational neuroscience) in the department of Systems Theory and Automatic Control at the OvGU Magdeburg.

You will be working in a dynamic interdisciplinary research team of the Findeisen group, which is one of the worldwide leading groups in the field of model predictive control, optimization and analysis with a wide range of applications.

The project is carried out in a collaborative research group in the frame of the centre for behavioural brain sciences (CBBS) in collaboration with the Neurology Department and the Leibnitz Institut for Neurobiology. It focuses on novel non-invasive brain stimulation towards brain-machine interfaces with potential application in motor disorders such as Parkinson.

Your role:

- Modelling and simulation of individualized brain models which are built on MRI data (finite elements)
- Programming an in-silico simulation routine for the therapeutic stimulation set up
- Design of model-based methods for the optimization of stimulation parameters for targeting certain brain areas
- Validating the developed methods on the basis of experimental data sets
- International presentation and publication of results

Your profile:

- Excellent Master or diploma degree in engineering or applied mathematics, such as engineering cybernetics, computational engineering, neurosciences, bioinformatics, with a strong orientation towards systems, control, simulation and computations
- Profound knowledge of theoretical oriented courses, such as control engineering, simulation, modelling, systems analysis
- Strong interest in and motivation for interdisciplinary research
- Strong background on mathematical methods for simulation, modelling, optimization and control
- Profound programming skills in python, C/C++, MATLAB
- Work independent and as part of a team
- Fluent in English in word and writing

For further information about the position, please contact Frau Dr.-Ing. Lisa Carius (+49 391/ 67 57160, lisa.carius@ovgu.de), or Herrn Prof. Dr.-Ing. Rolf Findeisen (+49 391-67-58708, rolf.findeisen@ovgu.de).

Applications from disabled persons will be given priority in the case of equal suitability, ability and professional expertise. The Otto von Guericke University aims to increase the proportion of women researchers within the university and specifically encourages women to apply.

Please note the information for storage of personal data: https://www.unimagdeburg.de/Datenschutz_Bewerber.html

Please send your application including CV, relevant certificates and a cover letter stating your motivation for your application using quoting reference number **295/2019** by **November 16st, 2019** (date of receipt of application) to the address below: