

Job offer

Doctoral Researcher

Institute of Applied Mechanics
Graz University of Technology

The Institute of Applied Mechanics offers 3 full-time fully funded PhD positions within the CRC project Computational Electric Machine Laboratory for 4 years, 40 hours/week, starting as soon as possible.

We are looking for motivated and dedicated candidates interested in modeling and/or numerical simulation of challenging engineering problems. We are a motivated team with the ambition to conduct innovative interdisciplinary research. These particular projects of the CRC focus on the development of an advanced isogeometric framework for the analysis of electric drives and space-time boundary element formulations for the noise and vibration of electric drives.

YOUR TASK

The doctoral candidate will be part of the Collaborative Research Centre (CRC) Computational Electric Machine Laboratory. This first German-Austrian Transregio CRC, research groups from TU Darmstadt, JKU Linz, and TU Graz, want to achieve a paradigm shift in the design and development of electrical machines. The candidate's contribution shall lead to a doctorate and focus on the following topics:

Project 05 Noise and Vibration of Electric Drives: Space-Time Boundary Element Formulations

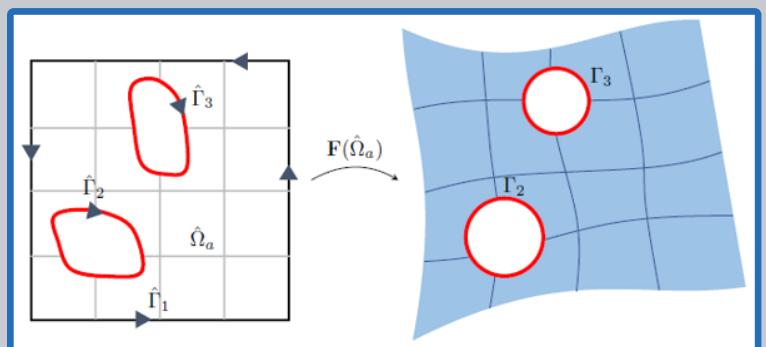
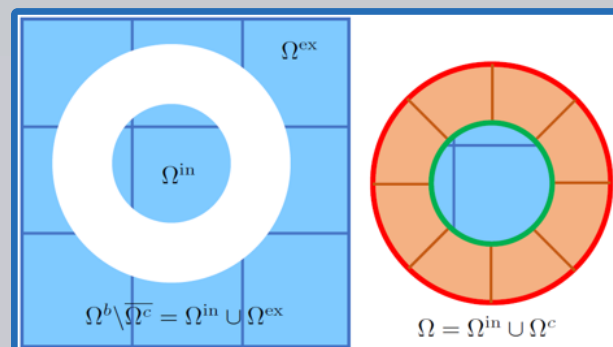
- Simulation of noise and vibration with time-domain boundary element method (BEM)
- Fast and data-sparse methods for vibration of electrical machines

MORE INFO: <https://www.tugraz.at/go/crc-schanz>

Project 03 Advanced Isogeometric Framework for the Analysis of Electric Drives

- Addressing generic obstacles of the integration of design and simulation
- Discretisation for simulation and optimisation with accurate and CAD-compatible spline models
- Developing a flexible geometry handling including topological changes

MORE INFO: <https://www.tugraz.at/go/crc-marussig>



APPLICATION

Please send your application documents, CV and a motivation letter (half a page) via email to: Institute of Applied Mechanics, Graz University of Technology, Technikerstraße 4/II, 8010 Graz, Austria

Project 03: Ass.Prof. Dr. Benjamin Marussig - marussig@tugraz.at

Project 05: Univ.-Prof. Dr.-Ing. Martin Schanz - m.schanz@tugraz.at

Screening begins at June 1st, 2022