

# PhD position (m/f/d) in the field of Power Electronics: Non-Isolated Onboard Electrical Vehicle Charger

- 40 hours per week, beginning as soon as possible
- Limited to 3 years



Graz University of Technology is the longest-established university of technology in Austria. Here, successful teams of students, talented up-and-coming scientists, ambitious researchers and a lively start-up scene enjoy an inspirational environment as well as access to top-quality equipment. And all this in one of the most innovative and livable regions in Europe. TU Graz offers an inspiring working environment with outstanding infrastructure and service-oriented university management.

The newly established Power Electronic Systems research group located at the Electric Drives and Machines Institute, Graz University of Technology, Austria is conducting international leading research in the area of highly efficient and highly compact power electronic systems.

We are looking for outstanding, highly motivated people interested in pursuing Ph.D. research (full position, three years) in the multidisciplinary and important research area of non-isolated electrical vehicle onboard charger at the Power Electronic Systems research group of the Institute in close collaboration with Silicon Austria Labs (SAL).

Together with several leading EU industry partners and supported by scientific team at SAL research on ultra-compact non-isolated onboard chargers will be conducted in course of the research project "Tiny Power Box 2.0".









## DUTIES/RESPONSIBILITIES

- The work shall focus on development and optimization of novel converter architectures including corresponding control concepts based on latest power semiconductor technology (GaN, SiC) and verification of the concepts using modern circuit simulator as well as FEM simulations.
- Laboratory prototypes shall be constructed for selected concepts to verify the developed approaches.
- Scientific publication and dissemination of the findings at international conferences & journals allows you to interact with the power electronics community.

## REQUIRED SKILLS AND EXPERIENCE

- Completed master degree in electrical engineering or physics (or similar) with excellent grades
- Fundamental knowledge in power electronics and corresponding control methods
- Experience with experimental laboratory as well as theoretical work, using analytic and numerical techniques including circuit simulation programs.
- Experience with construction and start-up of power electronic hardware.
- Good communication skills
- High degree of self-initiative and an inherent curiosity for engineering and interdisciplinary questions
- Willingness to fully commit yourself as part of an international team
- Language: Fluency in English, both written and spoken; knowledge of German is an advantage

## WE OFFER

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|---|--|---|--|
|  | Challenging and scientifically highly exciting position in a dynamic, international team with the possibility to pursue a Ph.D |  | To work in close cooperation with several leading EU industry partners |
|  | State-of-the-art laboratory facilities   |  | University Sports Program  |
|  | We strongly support participation at international conferences and workshops.  |  | Workplace Health Management  |
|  | Possibility for Home-Office  |  | International training and teaching opportunities                      |

## Apply now >

Applications with relevant documents (cover letter, curriculum vitae, and further supporting documents) should be sent to [eamposition@tugraz.at](mailto:eamposition@tugraz.at)

We offer a minimum annual gross salary based on full-time of € 42,820.40, overpayment possible depending on qualification and experience. Graz University of Technology aims to increase the proportion of women and therefore qualified female applicants are explicitly encouraged to apply. Graz University of Technology actively promotes diversity and equal opportunities. People with disabilities and who have the relevant qualifications are expressly invited to apply.

Protecting the health of our students and employees is of high importance to our university. For this reason, equally qualified candidates who are fully vaccinated against COVID-19 will be given preference.

### Contact

Graz University of Technology  
Electric Drives and Machines Institute  
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Further information visit

<https://eam.tugraz.at>

<https://silicon-austria-labs.com>

Information on the data processing of your application can be found at [www.tugraz.at/go/datenschutzinformation-pa](http://www.tugraz.at/go/datenschutzinformation-pa).