

The Chair of High Power Electronic Systems of the Faculty of Electric Power Systems and Information Technology has a vacancy for a

Postdoc / Research Assistant (m/f/d) in the Area of Modular Multilevel Converters (MMC)

**for the research project DEFINE within the Center for Digitization and
Technology Research of the German Federal Armed Forces (dtec.bw)**

(Remuneration according to pay group 13 TVöD)

to be filled on a full-time basis for a limited period until **31.12.2026**.

The Universität der Bundeswehr München (University of the Federal Armed Forces Munich) is firmly anchored in the German and international research community. As a campus university with excellent facilities, it offers the best conditions for high-quality teaching and research.

The research project DEFINE is dedicated to the development of fault-tolerant systems for a secure and sustainable energy supply of the future. In an interdisciplinary team, comprising seven university institutes, the research fields of secure IT systems and control structures, power electronic hardware and building structures are being worked on.

In this context, components and systems of modular multilevel converters (MMC) are investigated, developed and tested in the Laboratory of High Power Electronic Systems for the pilot scenario of a digitally controllable, urban medium-voltage DC grid. A holistic solution approach is pursued and optimization from the system to the component level is aimed at.

Your tasks:

- investigation of novel power-converter systems and components thereof in analysis, simulation and experiment (with focus either on device/component or converter/system level)
- development of solutions for future medium-voltage DC networks and other high-power applications
- contribution to the restructuring and expansion of the laboratory for high-power semiconductors and multilevel converters (up to the medium-voltage range)
- presentation and discussion of research results among project partners and at international conferences
- participation in lectures and supervision of bachelor and master students

Your profile:

- a Ph.D. or excellent master's degree in electrical engineering or equivalent fields of study
- very good knowledge of power electronics and its applications
- practical laboratory experience with high voltage/power and/or measurements on power semiconductors desirable, but not mandatory
- knowledge in PFGA and μ Controller programming desirable, but not mandatory
- excellent written and verbal communication skills in English
- highly committed, excellent team-worker, and strong critical thinking skills
- responsible, careful and structured work in the laboratory

We offer cutting-edge research opportunities, a highly motivated, interdisciplinary team working in close cooperation with the industry, a full-time position (100% TVöD Bund E13), and a welcoming work environment with many other benefits.

Have we triggered your interest?

If you are an enthusiast with great work attitude and highest level of performance, we strongly invite you to submit your application to thomas.brueckner@unibw.de today. Your application should be in PDF format and include your personal letter of intent, your resume, references, a university transcript of records, and other certificates. A letter of recommendation is highly appreciated.

The Universität der Bundeswehr München aims to increase the proportion of female scientists and employees; applications from women are expressly welcomed. Persons with handicaps will be given special consideration if they are equally qualified. Employment can also be part-time if desired.

By submitting your application, you agree to your personal data being stored, processed and forwarded to the departments involved in the application process for the purposes of the application. You can access more detailed information on data protection at the following link: [Data Protection Declaration](#).

We look forward to your application!