



## **Internship Research & Development - Power Converter Reliability and Physics of Failure 80-100% (f/m/d)**

**At Hitachi Energy our purpose is advancing a sustainable energy future for all. We bring power to our homes, schools, hospitals and factories. Join us and work with fantastic people, while learning and developing yourself on projects that have a real impact to our communities and society. Bring your passion, bring your energy, and be part of a global team that appreciates a simple truth: Diversity + Collaboration = Great Innovation**

The energy landscape is rapidly changing, and it requires power distribution systems of increasing complexity to be resilient and highly reliable. Emerging technologies required to withstand these systems involve increasing converter-interfaced and time-varying renewable energy sources to electrify new sectors, such as transport and industries that challenge transmission and distribution system operators.

The R&D team Semiconductor Packaging and Applied Materials at our Swiss Power Grids Research Center is looking for an intern student with expertise in physics, materials science, or electrical engineering to help investigate power converter reliability and understand their physics of failure. The intern will interact with a dynamic and multidisciplinary team that will supervise and guide the project.

If you have a strong technical background, motivation to develop innovative solutions, and you are goal-oriented, this is your opportunity to contribute in building a stronger and more sustainable energy future

Internship duration 6-12 months

### **Your responsibilities**

Build and upgrade test electronics and data acquisition software needed to run high-precision measurements for extended test time (up to 1 year of continuous measurement)

Propose innovative solutions for gathering more insights from the experimental tests (e.g. implement sensor array)

Perform materials and electronics characterization tests to understand components degradation mechanism and physics of failure.

Document and communicate the solutions developed, to disseminate the gained knowledge within the team and the company

### **Your background**

Currently pursuing a M.S. degree in physics, materials engineering, electrical engineering or a related discipline (official enrolment is essential)

Familiar with the design and construction of electronics systems, data acquisition and automation tools

Experience with LabView programming, and knowledge of programming languages (eg. Matlab, Python, C)

Fluency in written and spoken English is mandatory, any other language skills are a benefit

Good communication and technical writing skills

Motivated and eager to learn more and become part of a multidisciplinary research team focused on innovation

## More about us

Hitachi Energy is a global technology leader that is advancing a sustainable energy future for all. We serve customers in the utility, industry and infrastructure sectors with innovative solutions and services across the value chain. Together with customers and partners, we pioneer technologies and enable the digital transformation required to accelerate the energy transition towards a carbon-neutral future. We are advancing the world's energy system to become more sustainable, flexible and secure whilst balancing social, environmental and economic value. Hitachi Energy has a proven track record and unparalleled installed base in more than 140 countries. Headquartered in Switzerland, we employ around 40,000 people in 90 countries and generate business volumes of approximately \$10 billion USD. [www.hitachienergy.com](http://www.hitachienergy.com)

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