R&D Intern in Power Semiconductor Module Technologies (80 - 100%)

Join ABB and work in a team that is dedicated to creating a future where innovative digital technologies allow greater access to cleaner energy.

The ABB Power Grids Research organization is developing the foundations for the next generation of ABB PGR Power Grids products. The ABB Power Grids Research Center in Switzerland is located in Baden-Dättwil close to Zurich.

Within our Semiconductor Packaging and Applied Material research group, we investigate materials and develop technologies to be integrated into the next generation of power semiconductor modules for medium to high voltage applications. Our highly multidisciplinary team bridges the gap between the semiconductor physics and power grid applications by leveraging the full potential of the semiconductor device thus enabling a better, smarter and greener grid.

Working in our state of the art power semiconductor processing and testing laboratories, you will support in the development, processing and testing of ABB Power Grids’ next generation power semiconductor modules. Your main focuses will be to develop novel semiconductor interconnect and environmental protection technologies, design new and improve existing semiconductor and module test setups.

Your responsibilities

- Support the technology development and research activities of semiconductor modules: process development of the semiconductor bonding and interconnection technologies, thermal, electrical and mechanical design and simulation of a proposed concept
- Play an active role in short loop manufacturing runs from technology demonstrators to product prototypes, chip and module scale testing as well as investigating reliability issues and failure mechanisms through root cause analysis

Your background
Currently pursuing a degree in electrical engineering, mechanical engineering, physics, or a related subject (advanced B.Sc. or M.Sc. degree). Official enrollment essential

Experience in experimental laboratory work

Programming skills (preferably Labview / Matlab) advantageous

Know-how in data analysis tools and statistics advantageous

Experience with FE-Modeling advantageous

Strong interest in interdisciplinary work and pleasure doing experimental work in an international environment

Duration: 6 to 12 month, starting date: upon agreement

Due to Swiss law, for foreign non EU students, the internship has to be a mandatory part of the study programm

More about us

Bring your very own sense of pride and purpose as you help us drive forward the Fourth Industrial Revolution – creating a sustainable future for our planet, and your career. Join ABB and harness the power of our diverse global network, as you collaborate with and learn from our world-class teams. Above all, challenge yourself every day. Let's write the future, together.

It is an exciting time to join ABB Power Grids. ABB and Hitachi have signed an agreement to create a joint venture (JV). By combining ABB Power Grids’ with Hitachi’s complementary strengths, we plan to form a new and stronger global leader in the power sector. ABB Power Grids and Hitachi will have more than 230 years of combined heritage and experience. Together, we will be well-positioned to shape the future of energy, with pioneering technologies, as the partner of choice for enabling a stronger, smarter and greener grid. The transaction is expected to be completed by the first half of 2020, subject to regulatory approvals. Join us on this exciting journey.

Interested in joining our team? If so, we look forward to receiving your full application (motivation letter, CV, references) only via our online careers tool. A better world begins with you at www.abb.com/careers

ABB Power Grids Switzerland Ltd.
Mathias Piller
Talent Acquisition

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