

## Analog front-end electronics for ABB's next generation millmate thickness gauge (80-100%)

### **Basic Info**

Location Baden-Dättwil, Aargau, Switzerland

Job type Full-Time

Contract Internship

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

ABB Corporate Research, in close collaboration with varied ABB business areas, is developing the foundations for the next generation of ABB products. We would like to give a highly-motivated student the opportunity to complete a six-month internship with our company in the area of analog circuit design. You will be part of the Sensing and Analytics group, joining a team of electronic engineers and data scientists.

ABB's millmate thickness gauging system is based on pulsed eddy current technology, which uses magnetic fields for measuring metal sheet thickness in industrial environments. The interaction between an applied magnetic field and the electrically conductive strip indicates the thickness - without influence from material composition or conditions at the measuring interface.

During your internship, you will be working on the analog front-end for the next generation millmate thickness gauge. More precisely, you will be looking at ways to increase the speed and lower the noise of the present electronics in order to enable the new product to measure thinner strips with high accuracy.

## Your responsibilities

- Get familiar with the operating principle of ABB's millmate thickness gauge as well as the present analog front-end electronics
- Propose, design, develop, and test the new front-end electronics. The main requirements are larger bandwidth and lower noise compared to the present design
- Test the newly developed electronics in conjunction with the primary sensor

## Your background

- Master student in Electrical Engineering or related field; official enrollment essential
- Solid understanding of analog electronics and physics
- Ability to perform SPICE simulations, set up experiments, and carry out measurements
- Fluent command of English, both written and spoken
- Availability for six months (start/end dates can be discussed)
- Application Details:
- Non-EU/EFTA citizens, please note that a certificate from your university, showing that an internship is a mandatory part of studies, is required for the visa application

### 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.

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

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