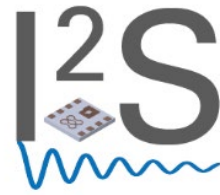


University of Stuttgart
Institute of Smart Sensors



Bachelor thesis or study project (Forschungsarbeit)
Design of a miniaturized single-chip NMR magnetometer with an optical link

Nuclear magnetic resonance (NMR) is the method of choice for high accuracy and high-resolution measurements of magnetic fields. At the IIS, we utilize CMOS single-chip transceiver in combination with external coils to realize ultra-small, state-of-the-art NMR magnetometers.

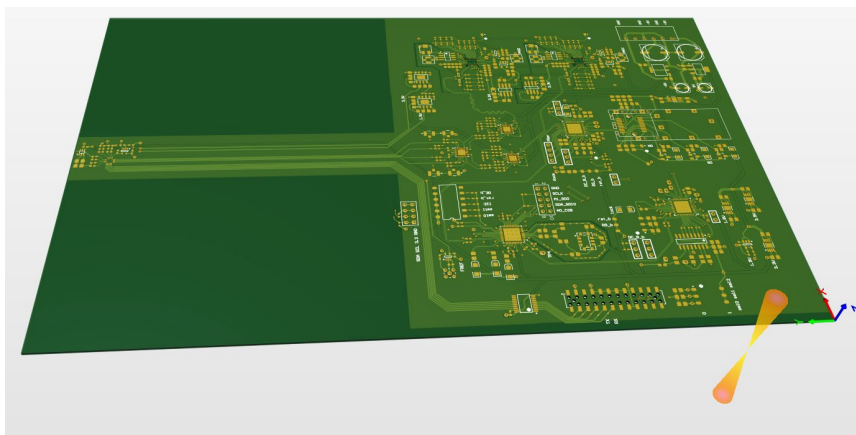
You will work with Altium Designer, gaining practical experience with an industry-standard EDA tool for printed circuit board (PCB) design. You will perform the system-level design of the magnetometer, select appropriate components, design your PCB, build up your experimental setup, and validate your design with measurements in our lab.

Requirements:

- ✓ Basic knowledge in analog/digital circuit design
- ✓ Basic knowledge in PCB design

Duration: 3 months (or upon agreement)

Contact person: Jianyu Zhao, jianyu.zhao@iis.uni-stuttgart.de



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