

## **Bachelor Thesis Task in the NanoEngineering Program**

Topic: Design of coplanar waveguides for the use in broadband spectroscopy of nano magnets

### **Task:**

The goal of the Bachelor thesis is to design a series of coplanar waveguides that can be used in the frequency range of 1 to 70 GHz for microwave spectroscopy and magnetic resonance measurements of magnetic nanomaterials. The work includes the numerical simulation of the transmission properties of coplanar waveguides, which are suitable for test samples of varying sizes—from macroscopic ( $5 \times 5 \text{ mm}^2$ , thin films and bulk samples) down to micrometer-sized flakes.