Master Thesis

Evaluation of Readout Concepts for a Lorenz-force Magnetometer

Today, magnetic sensors as illustrated in Fig. 1 are widely applied in consumer applications, e.g., in navigation systems where they assist acceleration and angular rate sensors.
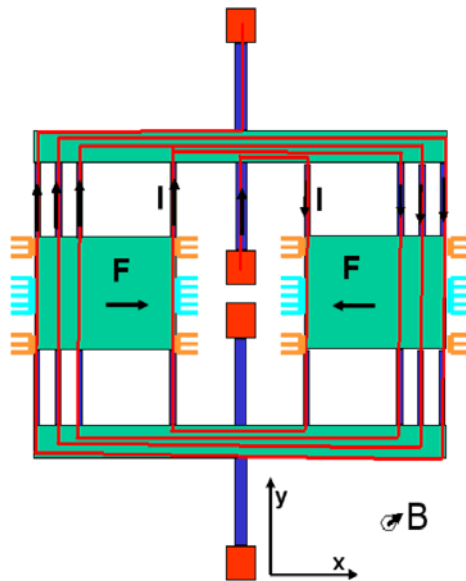

Figure 1: Exemplarily magnetic sensor

The Lorentz-force magnetometer is a relatively new class of magnetic sensors which offers the possibility of co-integration with accelerometers and gyroscopes to form a multi-dimensional inertial measurement unit. The focus of this thesis is on the identification and evaluation of different readout concepts for the Lorenz-force magnetometer. The most promising concept is to be elaborated in detail in order for its implementation to become feasible.

What we expect:
Interests in electronic circuits, willingness to familiarize with the topic and the needed simulation equipment, well documented work, and teamwork.

What we offer:
Intensive supervision of the thesis, nice work environment in a teamwork, latest simulation software tools, electronic design automation tools, excellent lab equipment, and free space for own ideas.

Starting Date: As soon as possible

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