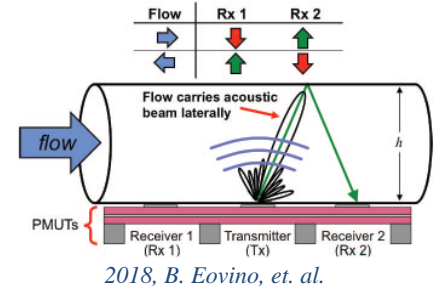


The Department of Microsystems Engineering (IMTEK) is one of the world's largest and leading academic research centers in the field of microsystems technology. The Laboratory for MEMS Applications (Prof. Dr.-Ing. Zengerle) develops research tools for diagnostics, microfluidics, etc. For a project in collaboration with a leading European sensor company, we are looking for a

Thesis/ internship student for 3-9 months (m/f/d)

Review and design of micro ultrasonic transducer device concepts for flow and composition sensing

The goal of this project is to investigate and develop novel microfabricated acoustic transducers to measure fluid flow and composition. Different principles, structures, fabrication workflows and specifications of the MEMS ultrasonic devices in the fields related to precision flow measurement should be reviewed. FEM Simulations, or cleanroom fabrications and tests could further be carried out to validate of the proposed concept.



Your tasks (Longer projects have opportunity for tasks marked with “*“):

- Detailed literature study on potential ultrasonic MEMS devices for fluidic sensing
- Summarize on findings in terms of material, fabrication process, transducer performance, etc.
- Validation of design(s) based on literature review and FEM simulations
- *Cleanroom fabrication of MEMS ultrasonic device**
- *Finishing and test for the MEMS ultrasonic transducer for fluidic flow application**

Your profile:

- You are a 2nd or 3rd year MSc/Bsc student in Microsystems/ Biomedical engineering, Physics or similar, interested in MEMS sensors and have excellent research abilities
- Knowledge in acoustics/ultrasound required, FEM skills preferred
- Knowledge in microfabrication required, hands-on experience preferred
- Previous experience or interest in CMUT/ PMUT/ IDT devices highly appreciated
- Solid communication skills in English or German language

We offer:

- Working in an internship or a thesis position
- Attractive workplace in a modern, excellently equipped laboratories
- Flexible working hours; 3-9 months adjustable project length based on personal interest

The earliest starting date will be in March 2019. If you are interested, please contact us:

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