



Opportunities  
for Talents

Lehrstuhl für Schaltungsentwurf  
Fakultät für Elektrotechnik und Informationstechnik  
Technische Universität München



## New Environmental Sensor System

### Master Thesis

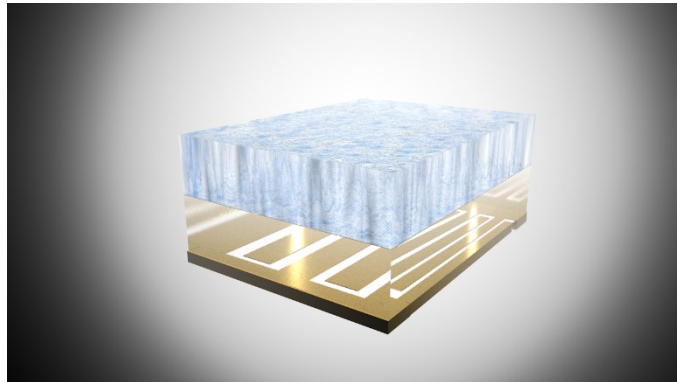
#### Some background:

Sensors are the bridge between the real and the digital world. A pressing challenge in life science and medicine are biohazards that are hard to control, e.g. in hospitals. In cooperation with our industrial partner Domatec GmbH, we develop a new sensor system to monitor biofilms in the fluids of coolers.

#### What does the work look like?

After understanding the impedimetric sensing concepts and the sensor read-out principles, optimized sensor system prototypes for bacterial films have to be characterized. Promising, new sensing materials will be evaluated. An existing test setup will be taken to the next development phase. Most of the practical work will be done at the new lab of Domatec GmbH, Mühldorf am Inn. The work will however be done in close cooperation with the chair of circuit design and Steinbeis Transferzentrum Zell-Chip-Technologien.

The goal of the work is to set-up a characterization and validation concept for the sensor systems. If successful, the set-up and its results will directly lead to the production of a sensor prototype.



#### What are good pre-requisites for starting this work?

- Interest in sensors, semiconductor -, and biotechnology
- Having some basic understanding of simulation software like ANSYS or COMSOL
- Hands-on attitude and interest in building up a measurement system
- Interest in people and learning
- First Lab Experience

Interested?

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