Student Assistant (HiWi) Position

Feasibility Study for a Semi-automatic Test System

The Microsystems Materials Laboratory at the Department of Microsystems Engineering (IMTEK) has an opening for a Student Assistant (HiWi) starting as soon as possible.

The project involves the development of a semi-automatic test system to characterize large numbers of neural probes. We aim to expand our current capacity from a maximum of 16 channels per probe to higher numbers.

The main tasks include:

- **System concept**: Defining a multiplexer / microcontroller-based system compatible with the inputs and outputs of our current measurement system.
- **Circuit Design**: Initial concept and design of the PCB.
- **Channel Expansion**: Exploring methods to expand the current capacity beyond 16 channels keeping the impedance as low as feasible.
- **Automation Features**: Investigating the incorporation of automation to streamline the measurement process.
- **Prototyping and Testing**: Building and testing preliminary prototypes to assess functionality and reliability.

We foresee that the feasibility study can serve as a starting point for a Bachelor thesis project. This HiWi position offers a unique opportunity to contribute to significant advancements in the field of neural engineering. If you are interested in a challenging role that combines electronics, automation, and neural engineering, please contact Claudio Ray (claudio-ray@imtek.uni-freiburg.de, Tel 7202) or Marc Keller (marc.keller@imtek.de, 7193).

Date: 01-07-24

Microsystems Materials Laboratory
Prof. Dr. Oliver Paul