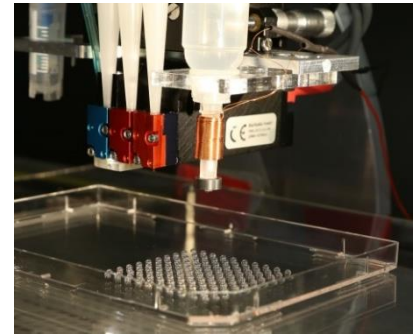


The Department of Microsystems Engineering (IMTEK) is one of the world's largest and leading academic research centers in the field of microsystems technology. The Laboratory for MEMS Applications (Prof. Dr.-Ing. Zengerle) develops tools for diagnostics, microfluidics and life-science research. For a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

## **Bachelor/ Master student (m/f/d)**

**in the area of Microfluidics/Laboratory Automation**

### **Development and investigation of microfluidic structures for high throughput micro tumor trapping and deposition**



The scientific and technical goal of the present project is to provide an automated platform for *in vitro* experiments with three-dimensional micro tumors, which can initially be used in the clinical environment for the purpose of personalized therapy. The individual placement of intact and vital tumoroids in wells of plates allows the targeted recording of growth kinetics and drug responses. The main goal of the thesis is to develop a microfluidic chip suitable for highly parallel trapping and placement of micro tumors.

#### Your tasks:

- Investigation and design of different microfluidic structures suitable for micro tumor trapping and delivery into micro wells
- Development and fabrication of a microfluidic chip for high throughput deposition.
- Characterization and optimization of the chip performance for different samples
- Development of a workflow for high throughput micro tumor deposition for in vitro drug screening protocols

#### Your profile:

- You are a student of microsystems technology, biotechnology or similar
- Knowledge in the field of microfluidics
- Basic knowledge of programming, CAD, standard cell culture methods and numerical simulations are considered a plus
- Good team spirit, creativity and solid communication skills in English

#### We offer:

- Young, dynamic, interdisciplinary team and environment
- Attractive workplace in modern, excellently equipped laboratories with the opportunity to gain insights into many exciting work areas (e.g. microfluidics, cell culture, automation, software development, ...)
- Opportunity to prepare a Bachelor/ Master thesis based on the project results

If you are interested, please contact us for further information:

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