

Visions to Products



Hahn-Schickard stands for industry related applied research, development and production in Microsystem Technologies. More than 270 employees develop at Freiburg, Stuttgart, Ulm and Villingen-Schwenningen solutions in Microsystem Technologies – from the first idea till to production. We are regionally based and also recognized as an international global partner.

At the **Freiburg** site, the focus is on analytical solutions, especially for point-of-care diagnostics. But we also research, develop and manufacture electrochemical energy systems and autonomous fluidic robots and 3D printing of electronics.

For our **Laboratory Automation** division we offer at **Freiburg im Breisgau** the following position (beginning from **June 2022 or later**)

## Research Student Assistant / Master Thesis (m/f/x) Robotic Automation for hybrid 3D Printing

### Your tasks

You will be part of a team working on multi-material 3D printing of hybrid polymer and metal devices for microfluidic applications and microelectronics.

- hardware and software development of robotic automation platform for multi-material 3D printing including controlling FDM polymer extruder, molten metal printer (StarJet), pick@place robot etc.

- development of web-based all-in-one control software for multi-material printing

- integration of in-line-process control such as stroboscopic camera, top view camera and corresponding control software

- development of a solution for creating 3D electronics design and machine codes (e.g. G-code)

- option to develop an intelligent (AI)-based inline control approach

- realization of application examples using multi-material printing in the field of microfluidics

### Your profile

- university degree (BSc) in engineering, in the field of embedded systems, computer science, electrical engineering, mechatronics, microelectronics, microsystems, technology or comparable with above-average success.

- knowledge of programming embedded systems / microcontrollers, languages C/C++, Python, HTML, JavaScript and CSS

- knowledge of microelectronics, PCB design and development (STM32, Altium and/or Autodesk Eagle)

- knowledge of 3D Printing, Marlin, G-code would be a plus

- Ideally, previous expertise of common fields of motion systems, microfluidics and CAD

- Good communication skills in English and/or German

### Our offer to you

- ☒ an attractive workplace for a student working at a modern, excellently equipped research institute that is close to industry
- ☒ excellent support for you working in a dynamic, flexible team

- ✓ flexible working hours
- ✓ partial refund of travel expenses when using public transport of the ÖPNV (public transport system)
- ✓ limited duration of contract is a maximum of 6 months

## Application process

If you are interested, please send us your **complete application documents** (motivation letter/resume+CV/certificates/transcript of records), stating the reference number **22/3610/38** in a **complete PDF document file** and name the job portal details you may need .

If needed - please use for any questions contact of Dr. Zhe Shu by phone +49 (0)761-203-54057.

The decision is made directly by the division.

Please have patience - your personal application process will take some time.

## Kontakt

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