

Working Student (HiWi) for PLC Programming and Electrical Engineering

Further Development of a Robot-Based 3D Printer

Additive manufacturing processes are currently used primarily in the field of rapid prototyping. With the use of robot-assisted 3D printers, this technology is also becoming increasingly important for manufacturing, as it theoretically enables unlimited component sizes.

The Chair of Carbon Composites has established a robot-assisted test system with two printheads. We now aim to integrate a third printhead on the KUKA robot, which requires reworking the electrical wiring and the programmable logic controller (PLC). Since conventional software packages cannot be used for system programming, a new programming environment must be developed. We are seeking student assistants for the further development of the robot-based 3D printer.



Figure 1: KUKA robot and 3D printing printhead



Figure 2: Control cabinet of the PLC

Your Qualifications:

- Studying electrical engineering or mechatronics or fit the qualifications described below.
- Experience with programmable logic controller (PLC) programming (IEC 61131-3 standard).
- Experience with PCB design and layout software such as KiCad.
- Familiarity with communication protocols such as ProfiNet.
- You would be available at least 8-16 hours/week

How to Apply?

- A short email elaborating your background and motivation
- Curriculum vitae (CV) in English and current transcript of records
- Project portfolio of previous projects if available

Starting date: Now

For more details please contact:

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