

HiWi - Student Assistant

Resilient Communication Systems
Prof. Dr.-Ing. Vahid Jamali



TECHNISCHE
UNIVERSITÄT
DARMSTADT

February 6, 2024

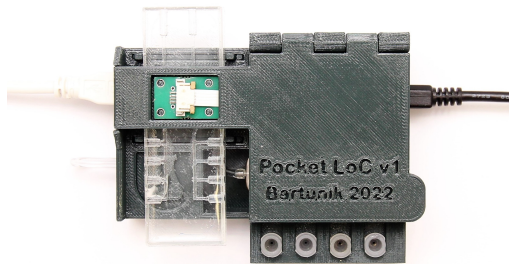
A Molecular Communication Testbed Developer

Job Description

We are hiring a Testbed Developer to contribute to a project exploring practical applications of molecular communication. This approach uses nano-particles to exchange information through fluidic channels (e.g., air, water, and blood vessels). Our goal is to create a testbed demonstrator with these concepts.

The HiWi's responsibilities will include:

- **Molecular Communication Testbed:** Creating and calibrating a testbed that employs colored droplets as information carriers, a transmitter controlled by a pump controller, and a receiver using an optical sensor.
- **Modulation and Demodulation:** Applying a simple modulation scheme to send the symbols, and then, decoding the received signal based on the optical sensor measurements.
- **Graphical User Interface:** Designing a user-friendly GUI to visualize both transmitted and received symbols.



For more information, please refer to this [link](#) or scan this QR code:



Qualifications

- Enrolled as a student at TU Darmstadt
- Experience with experimental setups and practical works, including the implementation of sensors and controllers on chip, and Arduino programming.
- Basic knowledge of communication systems.

If you are interested in this project, meet the qualifications, and want to contribute to the development of this testbed, we encourage you to apply for this exciting opportunity. Please submit a brief statement outlining your interest in the position to ladan.khaloopour@rcs.tu-darmstadt.de.

