

FAU Erlangen-Nürnberg | Henkestr. 91, 91052 Erlangen

Student Assistant (B.Sc.)



Department Artificial Intelligence in
Biomedical Engineering

Junioprofessur für Neuromuscular
Physiology and Neural Interfacing

Prof. Dr. Alessandro Del Vecchio

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<https://www.nsquared.tf.fau.de>
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Topic: Assisting in the design, construction, and validation of a wearable sensor system for recording Electromyography signals

Goal

For studies in the field of neuromuscular physiology and neural interfacing, you will assist in designing, building, and testing a wearable sensor system that measures the surface Electromyography (EMG) signals from the forearm. You will take existing wearable EMG bracelet systems used in research and in our lab as inspiration and will be assisting in the following tasks:

- Designing the electrical circuit & PCB for interfacing the electrodes with the microcontroller system
- Implementing the communication (e.g. Wi-Fi, Bluetooth) protocol between the signal amplifier and the microcontroller unit
- System validation at all stages of development

Requirements

- Engineering background (electrical, mechatronics, medical engineering or similar)
- Experience in electrical circuit and PCB design
- Basic soldering skills
- Experience with microcontrollers and C++ programming would be beneficial
- Ability to work independently and good time management skills
- Fluent in English and/or German

Supervisor

Vlad Cnejevici, M.Sc. & Dominik Braun, M.Sc.

Application

Please provide a short CV, transcript of records and a brief description of one of your last projects to nsquared@fau.de.