MAX PLANCK INSTITUTE
FOR INTELLIGENT SYSTEMS

The Max Planck Institute for Intelligent Systems (MPI-IS) conducts research to understand the principles of perception, action, and learning in systems that successfully interact with complex environments.

The Research Group Embodied Social Interaction at MPI-IS **in Stuttgart** has an open position for

Master's thesis student (f/m/div) for Prosthetics in VR

Around 35-40 million people worldwide require prosthetic or orthotic services to support their everyday lives. Advances in myoelectric prostheses offer new possibilities for restoring lost motor functions, yet controlling these devices remains challenging. Unexpected movements or failed actions in social situation can trigger frustration. Understanding these emotional challenges is an important step toward developing more human-centered assistive technologies. In this Master's thesis, you will develop a virtual reality environment to investigate how people emotionally respond to difficulties in prosthesis control, how they cope with these experiences, and potentially how such coping strategies can be recognized.



Castañeda et al. (2024), Experimental evaluation of the impact of sEMG interfaces in enhancing embodiment of virtual myoelectric prostheses, J NeuroEngineering Rehabil 21(1), 57.

Roles & Responsibilities

- Reviewing relevant literature on prosthetics, rehabilitation, and human–robot interaction.
- Contributing to the design and refinement of a controlled VR experiment.
- Supporting participant recruitment and data collection.
- Processing and analyzing questionnaire, behavioral and interaction data.
- Interpreting findings and writing a Master's thesis.

Education & Experience

- Master's student in human-robot interaction, cognitive science, biomedical engineering, computer science, or a related field, or a related discipline.
- Familiarity with Unity, VR hardware, or interactive prototyping.
- Motivation to conduct empirical research and work with human participants.
- Good oral and written communication skills in English.
- Experience with experimental design or user studies is an advantage.

Our Offer

- An international, multidisciplinary, and highly motivating working environment.
- Extensive mentoring and supervision.
- Access to state-of-the-art lab facilities.

Application

Applications should include a **CV** and an informative **transcript** from your current academic program. **In your email, please describe what interests you in this project, and how your previous experiences have prepared you for it.**

Please send your application to Philipp Müller (mueller@is.mpg.de) and Patricia Capsi-Morales (patri.capsi@gmail.com).

For any questions regarding the position, please also feel free to contact either of us.