Direct-drive actuators avoid complex gearboxes but directly transmit motor torques. They are inherently more safe than traditional actuators with gearboxes but require different types of control approaches. In this context, we are looking for talented students who are pursuing a Master of Science degree in electrical or control engineering to support our research as student assistants (HiWi), interns or by doing their Master thesis in our group. Tasks include:

- Development of control methods for single direct-drive actuators (e.g. position/torque control) and actuator chains
- System identification and quantification of actuator/control properties
- Hard- and software integration (microcontroller programming, ROS)

The position will allow the student to gain hands-on experience with control methods for intelligent systems, as well as be exposed to ongoing research. The concrete position and tasks are subject to discussion with interested candidates. Earliest start date is April 2019.

Embodied Vision Group
The project will be carried out at the Max Planck Institute for Intelligent Systems (MPI-IS) located in Tübingen within the Embodied Vision Group headed by Dr. Joerg Stueckler. The group investigates fundamentals of embodied intelligent agents such as robots that learn to perceive and act within their environment. Further information on the group can be found at https://ev.is.mpg.de

Prerequisites
High motivation, excellent practical and theoretical knowledge in control or electrical engineering, a solid background in mathematics, and solid software engineering skills (C/C++, python) for microcontrollers and x86 platforms are prerequisites. Previous research experience in control or robotics is a plus.

How to apply
Applications should be sent in a single pdf (max. 10MB) per email and include a CV, a short motivation letter (why are you interested in this position/research?), current transcripts of BSc/MSc studies, and optionally other documentation helpful to evaluate your background.

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