



MAX-PLANCK-GESELLSCHAFT

Max Planck Research Group (Cyber Valley) on Embodied Vision (EV)
Max Planck Institute for Intelligent Systems in Tübingen

PhD Candidate Positions in Embodied Vision

from June 2018 or as soon as possible thereafter

We are a young team of scientists trying to understand the principles of intelligent systems that learn to perceive and act in their environment.

Intelligent agents such as robots require the ability to learn and adapt within their environment. Our group investigates novel methods for learning the basic physical functioning of the environment up to complex tasks such as autonomous navigation and object manipulation. Traditional approaches integrate specifically engineered perception and control components to implement such tasks. In contrast, we aim at systems that learn to act and perceive from raw sensor measurements such as images or tactile information acquired during interaction experience. We investigate end-to-end trainable architectures for learning task-relevant representations that allow agents to plan their actions.

We are looking for scientific talents holding an outstanding Master's degree in the computer or natural sciences, electrical or control engineering or applied mathematics, who have studied areas like machine learning, statistics, computer vision or robotics. Areas of particular interest for us at the moment are deep learning, visual scene understanding, visual SLAM, and deep reinforcement learning. Successful candidates will typically have ranked at or near the top of their classes and be highly proficient in written and spoken English. Very good computer science skills as well as a solid mathematical background are required. Prior research experience in computer vision and deep learning is a plus.

The Max-Planck Society is committed to increasing the number of individuals with disabilities in its workforce and therefore encourages applications from such qualified individuals. The Max-Planck Society seeks to increase the number of women in those areas where they are underrepresented and therefore explicitly encourages women to apply.

We are hosted by the MPI for Intelligent Systems in Tübingen, Germany (<http://is.tuebingen.mpg.de>). The institute is a world-class center for foundational research in machine learning, computer vision, robotics and material science. The majority of the institute's scientific employees come from outside of Germany. You will work among gifted students and experienced scientists from all over the world; and have access to excellent infrastructure, including several regular series of tutorials, lectures, journal clubs and invited talks by international guests, as well as a large computer cluster, and dedicated full-time specialists. Tübingen is a scenic medieval university town, cradled in what is simultaneously one of Germany's most beautiful landscapes in one of Europe's most economically successful areas. Stuttgart airport is an hour by bus, Frankfurt airport can be reached in two hours by train. The working language at the institute is English.

The EV group is planned to participate at the structured PhD programme of the International Max Planck Research School on Intelligent Systems (IMPRS-IS), in collaboration with University of Stuttgart and Tübingen University. Once accepted, PhD candidates are encouraged to join IMPRS-IS. Salary will be based on previous experience according to TVÖD guidelines. The position is funded for 3-4 years. An initial PhD candidate contract will be offered for 3 years.

Applications and inquiries should be sent quoting reference number 20.18 to Dr. Joerg Stueckler (see contact details below). Applications must be submitted by email as a single pdf (max. 10 MB) and include a CV, motivation letter with research statement, publication list, transcripts of BSc and MSc degrees, and contact details of 2-3 references. Optionally, up to 2 selected own publications or theses can be included in a second pdf (max. 5 MB). Applications should also indicate earliest date of availability. There is no fixed application deadline; positions remain open until the ideal candidates are found.



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