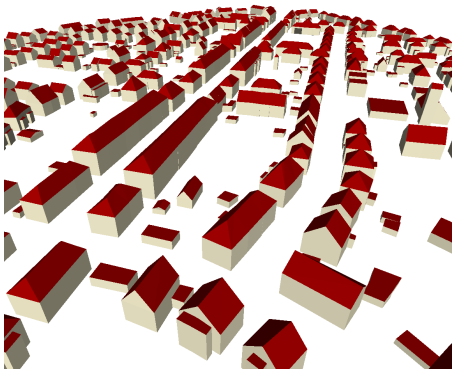
Max Planck Institute for Intelligent Systems
Perceiving Systems

PhD Scholarship in Computer Vision and Machine Learning at the MPI for Intelligent Systems in Tübingen

Visual Scene Understanding is one of the fundamental challenges in computer vision. While recent advances in object detection, semantic image segmentation and classification have spurred novel interest in the subject, most existing approaches work on single images only. At MPI for Intelligent Systems in Tübingen we are interested in lifting semantic image segmentation into 3D and reasoning about objects spatially and temporally using multi-view video sequences taken from a movable platform driving through a city. The goal of this project is to develop compact 3D scene representations and efficient inference methods based on probabilistic graphical models (e.g., High-Order Markov Random Fields) that reason about the scene geometry and assign semantic class labels to objects, such as 'tree', 'building' and 'car'. The evaluation will be performed on real-world sequences[1] where ground truth is established from aerial images, map information and using crowdsourcing techniques. We are looking for a passionate student, interested in solving such high-level computer vision tasks with the help of statistical models.



Talented students interested in other related research areas are welcome to apply as well!

You should posess an excellent Master's degree in computer science (or a related field), with a focus on computer vision and machine learning. A solid mathematical background and very good programming (C++, Python, MATLAB) and computer (Linux, Windows) skills are required. You share our passion for teaching computers how to see and you have done some previous research in this field (e.g., internships, research papers, etc.). We expect that you know why you want to do a PhD with us.

We at the MPI for Intelligent Systems in Tübingen[2] offer a friendly working environment in a lovely old town, situated in a hilly area south of Stuttgart, Germany, with a high quality of life. Max Planck Institutes are internationally renowned and regarded as the foremost organisation for fundamental research in Germany. This PhD position is open at the Perceiving Systems Department in the MPI for Intelligent Systems, headed by Prof. Michael Black and will be supervised jointly by Andreas Geiger and Michael Black. The working language is English. Salary and benefits according to public service pay scale (TVöD) or stipend guidelines, respectively. The Max Planck Society is an equal opportunity employer; women and people with disabilities are encouraged to apply.

To apply for this position, please send your application to ps-apply@tuebingen.mpg.de. Your application must include your CV, university transcripts, academic records, references to (international) people who can talk about your research abilities and a research statement. Please also include your thesis and, if available, your latest research papers. If you have any further questions about this position, please contact us by mail.

[1] http://www.cvlibs.net/datasets/kitti [2] http://ps.is.tuebingen.mpg.de