

Dr. Stefan Laible



Background

- Abitur at the Graf-Zeppelin-Gymnasium, Friedrichshafen
- Studies of Computer Science at the University of Tuebingen
- Diploma thesis: Klassifikation von Pflanzen anhand 3D-Laserscanner-Daten mittels maschineller Lernverfahren
- December 2009 - November 2010: MINT scholarship of the state of Baden-Württemberg in co-operation with the Robert Bosch GmbH
- 2009 - 2014: Research assistant at the Department of Cognitive Systems, University of Tuebingen
- Since 2015: Research engineer at the Bosch research center in Renningen

Research Interests

- Terrain Classification
- Computer Vision
- Autonomous Navigation

Current Project

- Terrain Mapping

PhD Thesis

- [Spatio-Temporal Terrain Classification for Mapping and Robot Localization](#)

Publications

- [1] Stefan Laible and Andreas Zell. Building local terrain maps using spatio-temporal classification for semantic robot localization. In *Intelligent Robots and Systems (IROS 2014), 2014 IEEE/RSJ International Conference on*, pages 4591--4597, Chicago, IL, September 2014. IEEE, IEEE. [[DOI](#)]
- [2] Stefan Laible, Yasir Niaz Khan, and Andreas Zell. Terrain classification with conditional random fields on fused 3d lidar and camera data. In *European Conference on Mobile Robots (ECMR 2013)*, pages 172--177, Barcelona, Catalonia, Spain, September 2013. IEEE. [[DOI](#)]
- [3] Stefan Laible, Yasir Niaz Khan, Karsten Bohlmann, and Andreas Zell. 3d lidar- and camera-based terrain classification under different lighting conditions. In *Autonomous Mobile Systems 2012*, Informatik aktuell, pages 21--29. Springer Berlin Heidelberg, 2012. [[DOI](#) | [link](#)]
- [4] Ulrich Weiss, Peter Biber, Stefan Laible, Karsten Bohlmann, and Andreas Zell. Plant species classification using a 3d lidar sensor and machine learning. In *Machine Learning and Applications (ICMLA), 2010 Ninth International Conference on*, pages 339--345, Washington, D.C., USA, dec. 2010. IEEE Computer Society, IEEE. [[DOI](#)]

[Profile at Google Scholar](#)

Posters

- Plant Detection, Mapping and Differentiation for Autonomous Agricultural Robots
Ulrich Weiss, Peter Biber, Stefan Laible, Andreas Zell

4th International Conference on Cognitive Systems (CogSys 2010), Zurich, Switzerland

Robot Competitions

- 1st place in SICK robot day 2010 with Team Attempto
- 5th place in Field Robot Event 2011 with Team Attempto

Press

- Feldroboter im Einsatz (Bayer CropScience, 24.06.2010)

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