Karsten Bohlmann

Background

- Study of Electrical engineering at University of Karlsruhe (Karlsruhe, Germany)
- Diploma thesis: "Self-Localization of a Mobile Robot using Geodata and GPS"
- Research assistant at the Department of Computer Architecture, University of Tübingen

Research Interests

- Cooperative Robotics
- Mobile Robots in Unstructured Environments

Projects

- Person detection and autonomous person following
- Cooperative robot teams in outdoor areas
- Design of a robot platform for research in the field of off-road robotics
- SICK Robot Day. We regularly participate at the international robot competition organized by the SICK AG in Waldkirch, Germany.

Publications

[1] Sebastian Buck, Richard Hanten, Karsten Bohlmann, and Andreas Zell. Multi-sensor payload detection and acquisition for truck-trailer agvs. In *Robotics and Automation (ICRA), 2017 IEEE International Conference on*, Singapore, 2017.

[2] Sebastian Buck, Richard Hanten, Karsten Bohlmann, and Andreas Zell. Generic 3d obstacle detection for agvs using time-of-flight cameras. In *Intelligent Robots and Systems (IROS), 2015 IEEE/RSJ International Conference on*, pages 4119 -- 4124, Daejeon, Korea, October 2016. [DOI]

[3] Karsten Bohlmann, Henrik Marks, and Andreas Zell. Automated odometry self-calibration for car-like robots with four-wheel-steering. In *IEEE International Symposium on Robotic and Sensors Environments (ROSE)*, Magdeburg, Germany, November 2012. Accepted for publication.

[4] Karsten Bohlmann, Andreas Beck-Greinwald, Sebastian Buck, Henrik Marks, and Andreas Zell. Autonomous person following with 3d lidar in outdoor environments. In *1st International Workshop on Perception for Mobile Robots Autonomy (PEMRA 2012)*, Poznan, Poland, September 2012.

[5] 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]

[6] Yasir Niaz Khan, Philippe Komma, Karsten Bohlmann, and Andreas Zell. Grid-based visual terrain classification for outdoor robots using local features. In *IEEE Symposium on Computational Intelligence in Vehicles and Transportation Systems (CIVTS 2011)*, pages 16 -- 22, Paris, France, apr 2011. [DOI]

[7] 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]

[8] Karsten Bohlmann, Peter Biber, and Andreas Zell. Using geographical data and sonar to improve GPS localization for mobile robots. In *4th European Conference on Mobile Robots (ECMR 2009)*, pages 55--60, Mlini/Dubrovnik, Croatia, September 2009.

Robot Competitions

- 1st place in SICK robot day 2010 with Team Attempto

- 5th place in Field Robot Event 2011 with Team Attempto
- 2nd place in SICK robot day 2012 with Student Team Attempto

Diploma Thesis

Self-Localization of a Mobile Robot using Geodata and GPS
Karsten Bohlmann
Institute of Systems Optimization, University of Karlsruhe, Karlsruhe, May 2007

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