Dr.-Ing.
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Born December 19, 1972

Career

2004-present	Postdoctoral Researcher and Lecturer Universität Bremen, Germany Member of the Collaborative Research Center (Sonderforschungsbereich) SFB/TR 8 Spatial Cognition
1998-2003	Researcher Institut für Robotik und Mechatronik Deutsches Zentrum für Luft- und Raumfahrt (DLR), Oberpfaffenhofen, Germany

Research Interests

Simultaneous Localization and Mapping, Probabilistic Robotics, Efficient and Safe Robotics Algorithms, Sport Robotics

Activities/Competence

- Principle investigator for SFB/TR 8 project A7-[FreePerspective] (Aggregation of spatial perceptions into a renderable 3D representation)
- Principle investigator for SFB/TR 8 project T1-[Rolland] (A safe wheelchair with route assistance)
- Principle investigator of project SAMS (Safety component for autonomous mobile systems) funded by the BMBF initiative on service robotics
- Associate Editor of the Robotics and Automation Society Conference Editorial Board conducting the reviews for ICRA
- Workshop Chair for Robotics Science and Systems (RSS), 2007
- Programm committee member for: ECMR 2005, RSS 2006, IJCAI 2007, ECMR 2007
- Reviewer for: IEEE Robotics and Automation Magazine, RoboCup Symposium 2005, RSS 2005, IJCAI 2005, IROS 2005, ICRA 2005, IEEE Transactions on Robotics, International Journal of Robotics and Automation, Informatica, Autonomous Robots, Neural Networks, Journal of Field Robotics, Spatial Cognition 2006

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[2] U. Frese. A discussion of simultaneous localization and mapping. Autonomous Robots, 20(1):25–42, 2006.

[3] U. Frese. Treemap: An O(log n) algorithm for indoor simultaneous localization and mapping. Autonomous Robots, 21(2):103–122, 2006.

[4] U. Frese, B. Bäuml, S. Haidacher, G. Schreiber, I. Schaefer, M. Hähnle, and G. Girzinger. Off-the-shelf vision for a robotic ball catcher. In Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems, Maui, pages 1623 – 1629, 2001.

[5] U. Frese, P. Larsson, and T. Duckett. A multigrid algorithm for simultaneous localization and mapping. IEEE Transactions on Robotics, 21(2):1–12, 2004.

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