Curriculum Vitae
Sebastian Brunner

Personal Data

Birthday	July 1, 1989
Nationality	German
Homepage	sebastian-brunner.github.io

Education

2015 – now	**PhD at University Bremen, Chair of Artificial Intelligence** Topic: Autonomous Optimization of Resource-Aware Robotic Behavior
2011 - 2014	**Computer Science at Technical University Munich, M.Sc.** Focus: Robotics and Artificial Intelligence
2011	**Exchange Semester at Technical University Lund**, Sweden Studies in Computer Science
2008 - 2011	**Computer Science at Technical University Munich, B.Sc.** Subsidiary Subject: Electrical Engineering

Professional Experience

2014 - now	**German Aerospace Center - Research Assistant** Topics: Robotics, AI, task control, autonomous system architectures, belief state modeling, semantic planning and scheduling, continuous integration, software engineering Robotic Systems: LRU, AIMM, Omnirob, Jaco, LWR Projects: Arches, EASE SFB, Robex, SpacebotCamp, Euroc, Tapas
2013 - 2014	**German Aerospace Center - Student Research Assistant** Topics: Spacemouse (3D mouse) integration for robot control, software library for non-linear covariance transformation
2012 - 2014	**Robocup Logistics League - Software Core Developer** International Competition: 2x first place, 1x second place Topics: Computer vision, navigation, ROS infrastructure, robot communication
2012 - 2013	**Fortiss Institute - Student Research Assistant** Topics: UAV control software, sensor fusion, bus systems (I2C, COM, USB), sensor data processing, HiL and SiL simulations
2010 – 2011	**Technical University Munich – Tutor** Lectures: Algorithms and Data Structures, Operating Systems

80636 Munich,
Germany

Phone: +4915902155883
Email: sebastiangeorgbrunner@googlemail.com

Selected Publications

2019	Brunner, S. G.; Dömel, A.; Lehner, P.; Beetz, M. & Stulp, F., **Autonomous Parallelization of Resource-Aware Robotic Task Nodes**, IEEE Robotics and Automation Letters, 4, 2599-2606
2018	Brunner, S. G.; Lehner, P.; Schuster, M. J.; Riedel, S.; Belder, R.; Wedler, A.; Leidner, D.; Beetz, M. & Stulp, F., **Design, Execution, and Post-Mortem Analysis of Prolonged Autonomous Robot Operations**, IEEE Robotics and Automation Letters, 3, 1056-1063
2018	Lehner, P.; Brunner, S.; Dömel, A.; Gmeiner, H.; Riedel, S.; Vodermayer, B. & Wedler, A., **Mobile manipulation for planetary exploration**, 2018 IEEE Aerospace Conference, 1-11
2017	Schuster, M. J.; Brunner, S. G.; Bussmann, K.; et al. **Towards Autonomous Planetary Exploration: The Lightweight Rover Unit (LRU), its Success in the SpaceBotCamp Challenge, and Beyond**, Journal of Intelligent & Robotic Systems (JINT), 93, 461-494
2016	Brunner, S. G.; Steinmetz, F.; Belder, R. & Dömel, A., **RAFCON: A Graphical Tool for Engineering Complex, Robotic Tasks**, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)
2016	Brunner, S. G.; Steinmetz, F.; Belder, R. & Dömel, A., **RAFCON: a Graphical Tool for Task Programming and Mission Control**, RoboCup 2016: Robot Soccer World Cup XX, Springer Berlin Heidelberg
2016	Schuster, M. J.; Brand, C.; Brunner, S. G.; et al., **The LRU Rover for Autonomous Planetary Exploration and its Success in the SpaceBotCamp Challenge,** ICARSC - IEEE International Conference on Autonomous Robot Systems and Competitions
2014	Brunner, S. G., **Parallel Sparse Bundle Adjustment for Simultaneous Localization and Mapping,** Master Thesis, TU Munich
2013	Jentzsch, S.; Riedel, S.; Denz, S. & Brunner, S. G., Chen, X.; Stone, P.; Sucar, L. & van der Zant, T. (Eds.), **TUMsBendingUnits from TU Munich: RoboCup 2012 Logistics League Champion,** Robot Soccer World Cup XVI, Springer Berlin Heidelberg, 7500, 48-58

Honors and Awards

1st Place, Robocup Logistics League, Mexico (2012), Netherlands (2013), 2nd Place Brazil (2014)

Award for Outstanding Student Projects, Student Council MPI 2012 + 2013

DAAD Student Exchange Scholarship, 2011, for Exchange Semester in Sweden

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Phone: +4915902155883
Email: sebastiangeorgbrunner@googlemail.com