

Curriculum Vitae

Maren Bennewitz

September 25, 2017

Work Address

Institute for Computer Science VI
University of Bonn
Friedrich-Ebert-Allee 144
53113 Bonn
Germany
Phone: +49 (0) 228 7354164
Email: maren@cs.uni-bonn.de
<https://www.hrl.uni-bonn.de>

Personal Record

Date of birth: June 19, 1973
Place of birth: Bonn, Germany
Nationality: German
Family status: Married, two children

Academic Positions

- Professor for humanoid robots, head of the Humanoid Robots Lab, Department of Computer Science, University of Bonn since 2014
- Assistant professor (Juniorprofessorin), head of the Humanoid Robots Lab, Department of Computer Science, University of Freiburg 2008-2014
- Post-doctoral research associate, Humanoid Robots, headed by Sven Behnke, University of Freiburg 2004-2008
- Ph.D. student and research associate, Autonomous Intelligent Systems, headed by Wolfram Burgard, University of Freiburg 1999-2004

Education

- Dr. rer.-nat. (Ph.D.), University of Freiburg Germany 06/2004
Computer Science (with distinction, *summa cum laude*)
Title of the thesis: *Mobile Robot Navigation in Dynamic Environments*
1st reviewer: Wolfram Burgard, University of Freiburg
2nd reviewer: Raja Chatila, LAAS-CNRS, Toulouse, France
- Diplom (M.Sc.), University of Bonn Germany 05/1999
Computer science (major) and Economics (minor)

Services in Academic Positions

- Vice rector for IT and Knowledge Transfer, University of Bonn since 2015
- Central gender equality representative (deputy), University of Freiburg 2011-2014
- Gender equality representative, Faculty of Engineering 2008-2014
- Joint organization of a mentoring program for schoolgirls 2013
- Counseling for students of computer science 2000-2004
(Studienfachberatung Informatik Diplom, Master, Bachelor)

Research Visits

- Stanford University, AI Lab 10/2010
- University of Rome, RoCoCo Lab 06/2005
- Carnegie Mellon University, Pittsburgh, Robotics Institute 08/1998, 02/2001, 07/2002

Project Involvements

- Research Unit *Anticipating Human Behavior* 2017-2020
Funded by the German Research Foundation, principle investigator
- EU project Squirrel 2014-2018
Clearing Clutter Bit by Bit
Funded by the European Commission, principal investigator
- EU project ROVINA 2013-2016
Robots for Exploration, Digital Preservation and Visualization of Archaeological Sites
Funded by the European Commission, principle investigator
- DAAD Procope project viNavHuBot 2015-2016
Visual Navigation of Humanoid Robots
Funded by the German Academic Exchange Service, principal investigator
- Cluster of Excellence *BrainLinks – BrainTools* 2012-2017
Funded by the German Research Foundation, principle investigator
- EU project First-MM 2010-2013
Flexible Skill Acquisition and Intuitive Robot Tasking for Mobile Manipulation in the Real World
Funded by the European Commission, principal investigator
- SFB/TR-8 *Spatial Cognition*, Phase III 2011-2014
Funded by the German Research Foundation, principle investigator of A8-[HumanoidSpace]
- SFB/TR-8 *Spatial Cognition*, Phase II 2009-2010
Funded by the German Research Foundation, principle investigator of A8-[HumanoidSpace]
- Research training group *Embedded Microsystems* since 2009
Funded by the German Research Foundation, member and advisor
- Interdisciplinary research initiative *Security and Society* 2008-2012
University of Freiburg, member
- DFG project *Learning Humanoid Robots* 2004-2008
Funded by the German Research Foundation, researcher

- SFB/TR-8 *Spatial Cognition*, Phase I 2003-2006
Funded by the German Research Foundation, researcher
- EU project WebFAIR 2001-2003
Web Access to Commercial Fairs Through Mobile Agents
Funded by the European Commission, researcher
- CMU Project Nursebot *Robotic Assistants for the Elderly*, researcher 2002
- EU Project Tourbot 1999-2001
Interactive Museum Tele-presence through Robotic Avatars
Funded by the European Commission, researcher
- Minerva: Carnegie Mellon's Robotic Tourguide Project, researcher 1998

Awards

- Second place best video award 2012
at the ACM/IEEE International Conference on Human-Robot Interaction (HRI)
- Among the 10 best papers at the European Conference on Mobile Robots (ECMR) 2009
- World champion RoboCup Humanoid League with Team NimRo 2005-2007
- "Wolfgang-Gentner-Nachwuchsförderpreis" 2004
for one of the three best theses of the Faculty of Engineering, University of Freiburg
- Among the 5 best papers at the European Conference on Mobile Robots 2003
- Finalist best student paper award 2002
at the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)
- Among the 10 best papers 2001
at the International Symposium on Intelligent Robotic Systems (SIRS)
- Second place award "Nachwuchswettbewerb der 4. Dienstleistungstagung" 2001
hosted by the German Federal Ministry of Education and Research (BMBF)
- Among the 10 best papers 2001
at the International Symposium on Intelligent Robotic Systems (SIRS) 2000

Invited Presentations

- ICRA Workshop on Robust Perception, Planning, and Control for Legged Robot Locomotion in Challenging Domains 05/2017
Perception and Motion Planning for Humanoids in 3D Environments
- German-French Winter School on Humanoid and Legged Robots, Toulouse 12/2016
Efficient Humanoid Navigation through Cluttered 3D Environments
- iRobot, Pasadena 10/2016
Navigation and Motion Planning in Human Environments
- Kaercher Cleaning Systems, Future Day 03/2016
Effective Solutions for Perception and Motion Generation of Service Robots in Human Environments
- University of Bremen, Computer Science Institute 09/2015
Humanoid Robots – How do they perceive the environment and plan their motions?

- Workshop on Perception and Planning for Legged Robot Locomotion in Challenging Domains at the IEEE/RSJ International Conference on Intelligent Robots and Systems 09/2015
Efficient Height Map Learning for Traversability Estimation and Footstep Planning
- University of Bonn 05/2015
Service Robots – How do they perceive the environment and plan their motions?
- French-German-Japanese Conference on Humanoid and Legged Robots 05/2014
Whole-Body Motion Planning and Navigation
This talk was given by my PhD student Felix Burget due to my teaching duties
- Rice University, Houston, Department for Computer Science and Bioengineering 04/2014
Navigation with Humanoids in Human Environments
- University of Konstanz 12/2013
Robots – Our New Companions
- University of Bonn, Computer Science Institute 11/2013
Effective Solutions for Perception, Navigation, and Interaction with Service Robots
- Technical University of Braunschweig, Carl-Friedrich-Gauss-Faculty 09/2013
Effective Solutions for Perception, Navigation, and Interaction with Service Robots
- Center for Art and Media, Karlsruhe 06/2013
Robotics: Where we are and where it's going
- Radboud University of Nijmegen, Artificial Intelligence Department 04/2013
Navigation and Motion Planning Techniques for Humanoids
- Workshop on Humanoid Soccer Robots 11/2012
at the IEEE-RAS International Conference on Humanoid Robots
Search-Based Footstep Planning
This talk was given by my PhD student Armin Hornung due to my teaching duties
- French-German Workshop on Perspectives on Cognitive Interaction & Technology 06/2012
University of Bielefeld, Center of Excellence Cognitive Interaction Technology
in collaboration with the Service Scientifique of the French Embassy in Germany
Humanoid Navigation in Complex Indoor Environments
- University of Bremen, Faculty of Mathematics und Computer Science 05/2012
Multimodal Perception for Navigation and Interaction with Humanoid Robots
- University of Stuttgart, 11/2011
Faculty of Informatics Electrical Engineering and Information Technology
Effective Solutions for Perception, Navigation, and Interaction with Service Robots
- Workshop on Humanoid Service Robot Navigation in Crowded & Dynamic Environments 10/2011
IEEE-RAS International Conference on Humanoid Robots
Integrated Perception and Navigation in Complex Indoor Environments
- Georgia Tech, Atlanta, School of Interactive Computing 09/2011
Techniques for Robots Operating in Human Environments
- University of Stuttgart, 05/2011
Faculty of Informatics, Electrical Engineering and Information Technology
Techniques for Robots Acting in Human Environments
- University of Rome, RoCoCo Lab 03/2011
Motion Planning and Robust Navigation with Humanoids

- Stanford University, AI Lab 10/2010
Humanoid Robot Navigation in Complex Indoor Environments
- Colloquium of the Collaborative Research Center 588 Humanoid Robots 09/2010
at the German Conference on Artificial Intelligence
Position Statement
- Technical University of Darmstadt, Computer Science Department 07/2010
Robust Navigation and Natural Interaction with Humanoid Robots
- University of Linköping, Division of Automatic Control 06/2010
Robust Humanoid Robot Navigation
- Workshop on Visual Mapping and Navigation in Outdoor Environments 05/2009
at the IEEE International Conference on Robotics and Automation
Learning Efficient Policies for Vision-based Navigation
- Technical University of Munich, Computer Science Department 05/2009
Probabilistic Techniques for Natural Human-Robot-Interaction and Robust Navigation
- University of Bonn, Autonomous Intelligent Systems Group 03/2009
Learning Policies for Efficient Vision-based Navigation
- SFB/TR 8 Spatial Cognition Colloquium, University of Bremen & Freiburg 12/2008
Natural Interaction with and Robust Navigation for Humanoid Robots
- International Symposium on Recent Advances in Neuro-Robotics 07/2008
University of Freiburg, Neurology Department
Robust Recognition of Complex Gestures for Natural Human-Robot Interaction
- Workshop on Situation Modeling and Recognition 03/2008
University of Freiburg, Institute for Computer Science
in collaboration with the Intelligent Autonomous Systems Group, Siemens AG Munich
Recognition of Human Gestures for Human-Robot Interaction
- Freiburg Center for Data Analysis and Modeling 02/2008
Navigation of and Interaction with Humanoid Robots
- University of Freiburg, Technical Faculty 12/2007
Interaction with and Navigation of Humanoid Robots
- Technology Forum, 10/2006
Fraunhofer Institute for Manufacturing Engineering and Automation
Visual Localization for Mobile Robots
This talk was given by Dr. Cyrill Stachniss due to the birth of my daughter
- Siemens AG Munich, Intelligent Autonomous Systems Group 05/2006
Metric Localization with Scale-Invariant Visual Features using a Single Camera
- Fraunhofer Institute, Autonomous Intelligent Systems 11/2005
Learning and Utilizing Motion Patterns of People & Enabling a Humanoid Robot to Interact with Multiple Persons
- University of Rome, RoCoCo Lab 06/2005
Multimodal Conversation between a Humanoid Robot and Multiple Persons
- Carnegie Mellon University, Robotics Institute 07/2002
Using EM to Learn Motion Behaviors of Persons with Mobile Robots
- University of Münster 02/2002
Service Robots for the Elderly

Teaching Experience

- Lecturer of *Humanoid Robotics* Summer 2015-2017
- Lecturer of *Cognitive Robotics* (joint teaching) Fall 2015-2016
- Teacher of the lab course on *Humanoid Robots*
Fall 2006, 2011, 2012, 2015-2016, Summer 2013-2017
- Teacher of the seminar on *Humanoid Robots* Fall 2015-2016, Summer 2006-2017
- Lecturer of *Systems I (Operating Systems)* Fall 2012, 2013
- Lecturer of *Introduction to Mobile Robotics* (joint teaching) Summer 2008-2014
- Lecturer of *Foundations of Artificial Intelligence* (joint teaching) Summer 2011, 2013
- Lecturer of *Mobile Robotics 2* (joint teaching) Fall 2010, 2011
- Teacher of the seminar on *Robot Navigation* Fall 2006-2013
- Co-Teacher of the lab course on *Robotics* Fall 2006
- Co-teacher of the seminar on *Multi-Robot Action Planning in Dynamic, Uncertain Environments*
Summer 2005
- Co-teacher of the seminar on *Autonomous Systems* Summer 2004
- Teaching Assistant for *Introduction to Computer Science (Informatik I)* (partially taught)
Fall 2000-2003
- Teaching Assistant for *Foundations of Artificial Intelligence* Summer 2000, 2003
- Teaching Assistant for *Algorithms and Data Structures (Informatik II)* Summer 2001
- Co-teacher of a seminar on *Path Planning for Autonomous Mobile Systems* Fall 2000
- Co-teacher of a seminar on *Probabilistic Methods for Mobile Robots* Summer 2000
- Teaching Assistant for *Autonomous Mobile Systems* (partially taught) Fall 1999
- Co-teacher of a seminar on *Autonomous Mobile Systems* Fall 1999
- Co-teacher of a lab course on *Autonomous Mobile Systems* Fall 1999

Supervised PhD Students

- Abd El-Moniem Bayoumi, funded by the DAAD
Finding and Following Humans in Mobile Service Robotics Applications since 04/2014
- Philipp Bruckschen, funded by the DFG within the Research Unit Anticipating Human Behavior
Foresighted Robot Navigation Using Predicted Human Behavior since 05/2017
- Felix Burget, funded by the DFG within the Cluster of Excellence BrainLinks – BrainTools
Motion Imitation and Generation for Mobile Robotic Systems since 03/2013
- Philipp Karkowski, funded by the EC projects ROVINA and Squirrel
Real-Time Locomotion for Humanoids in 3D Environments since 10/2014
- Stefan Osswald, funded by the University of Bonn
Navigation in Human Environments since 10/2014
- Peter Regier, funded by the EC project Squirrel
Navigation and Interaction in Cluttered Environments since 10/2014
- Daniel Maier (finished), funded by the DFG research training group Embedded Microsystems
Efficient Navigation Techniques for Humanoid Robots 2010-2015
- Armin Hornung (finished), funded by the DFG within the SFB/TR 8 Spatial Cognition
Humanoid Robot Navigation in Complex Indoor Environments 2009-2014

Supervised Theses

- Florian Kunze, Bachelor's thesis, ongoing
- Ahmed Morsi Abdelbaki, *Place Recognition for Life-Long Visual SLAM*, Master's thesis, ongoing.
- Shiyuan Bian, *Intermediate Velocities for the Synchronized Holonomic Model*, Master's thesis, ongoing.
- Stephan Fuhrmann, Master's thesis, ongoing.
- Lukas Gesing, Master's thesis, ongoing.
- Thomas Gilles, *Learning Object Affordances for Robot Navigation from RGBD Data*, Master's thesis, ongoing.
- Gerd Mund, *Fast Collision Checking with the Synchronized Holonomic Model*, Bachelor's thesis, ongoing.
- Arindam Roychoudhury, *Nonholonomic Control with Holonomic Preplanning*, Master's thesis, ongoing.
- Ibrahim Shareef, Master's thesis, ongoing.
- Rasha Sheikh, *Appearance-Based Mapping for Humanoid Robots*, Master's thesis, ongoing.
- Katharina Reichel, *A Biochemical Approach to Modeling Learning Mechanisms in Neural Networks*, Master's thesis.
- Elias Khsheibun, *Optimal Coverage Planning with Finite Resources in Crowded Environments*, Master's thesis.
- Aalap Shah, *Bootstrapping Localization Using Depth Information*, Bachelor's thesis.
- Stefan Wrobel, *Vision-Based Self-Calibration of a Humanoid*, Master's thesis.
- Jonas Schlagenhauf, *State Estimation in Cluttered Scenes based on RGBD Data*, Bachelor's thesis.
- Sebastian Böttcher, *Techniques for Clearing Cluttered Environments with Humanoids*, Bachelor's thesis.
- Christian Lutz, *Mapping and Footstep Planning in Cluttered 3D Environments*, Master's thesis.
- Felix Burget, *Whole-Body Motion Planning for Manipulation of Articulated Objects*, Master's thesis.
- Stefan Oßwald, *Techniques for Autonomous Stair Climbing with Humanoid Robots*, Master's thesis, awarded with the VDI-Förderpreis 2012.
- Raphael Schmitt, *Efficient Octree Traversal for Robot Navigation*, Bachelor's thesis.
- Timm Schneevoigt, *Visual Odometry for Humanoid Robots*, Bachelor's thesis.
- Johannes Garimort, *Adaptive Path Planning for Humanoid Robots*, Bachelor's thesis.
- Daniel Maier, *Vision-based Obstacle Avoidance for Mobile Robots*, Master's thesis.
- Jonas Koenemann, *Imitating Human Motions with a Humanoid Robot*, Bachelor's thesis, second place best video award at the ACM/IEEE International Conference on Human-Robot Interaction (HRI).
- Stefan Oßwald, *Reliable Vision-based Navigation with a Humanoid Robot*, Bachelor's thesis.

- Sven Wehner, *Optimizing the Gait of a Humanoid Robot Towards Human-like Walking*, Bachelor's thesis, among the 10 best papers at the European Conference on Mobile Robots (ECMR).
- Armin Hornung, *Learning policies for reliable mobile robot localization*, Master's thesis, awarded with the VDI-Förderpreis 2009.
- Clemens Eppner, *Techniques for Imitation of Manipulative Actions by Robots*, Master's thesis.
- Tobias Axenbeck, *Recognition of Human Gestures from Monocular Images*, Master's thesis.
- Teodora Vatahska, *Feature-based Head Pose Estimation from Images*, Master's thesis.
- Michael Keiser, *Localization and Navigation of Humanoid Robots based on RFID Technology*, Bachelor's thesis.
- Tobias Latzke, *Imitative Reinforcement Learning for Soccer Playing Robots*, Master's thesis.
- Burkard Dümmler, *Cooperative Path Planning*, Master's thesis.

Editorial Services

- Senior Program Committee of the International Joint Conference on Artificial Intelligence (IJCAI), 2017.
- Editor for the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2014-2017.
- Senior Program Committee of the IEEE International Conference on Robotics and Automation (ICRA), 2016.
- Workshop Co-Chair of the IEEE International Conference on Robotics and Automation (ICRA), 2016.
- Area chair for Robotics: Science and Systems (RSS), 2014.
- Editorial Board of the Journal of AI Research (JAIR), since 07/2012.
- Editorial Board of Frontiers in Robotics and AI, 2014-2017.
- Associate Editor for the IEEE-RAS Conference on Humanoid Robots (Humanoids), 2013-2016.
- Associate Editor for the IEEE International Conference on Robotics and Automation (ICRA), 2011-2013, 2017-2018.
- Associate Editor for the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2011-2013.
- Guest editor (together with O. Stasse) of a special issue on "Motion Planning and Navigation with Humanoids" of the International Journal of Humanoid Robotics (IJHR), 2013.
- Associate Editor for the IFAC Symposium on Intelligent Autonomous Vehicles (IAV), 2016.
- Associate Editor for the IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN), 2010, 2011, 2013.

Program Committees

- International Conference on Social Robotics (ICSR), 2014.
- Robotics: Science and Systems (RSS), 2007, 2010-2012, 2015.
- International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS), 2012.

- AAAI Symposium on Turn-Taking and Coordination in Human-Machine Interaction, 2014.
- International Conference on Intelligent Autonomous Systems (IAS), 2008, 2012, 2016.
- European Conference on Mobile Robots (ECMR), 2007, 2009, 2013.
- RSS Workshop on Robot Learning and Planning, 2016.
- AAAI Conference on Artificial Intelligence, Student Abstract and Poster Program, 2013.
- Conference of the Cognitive Science Society (CogSci), 2013.
- ECAI Workshop on Machine Learning for Interactive Systems (MLIS), 2012, 2013.
- Joint International Symposium on Robotics (ISR) and German Conference on Robotics (ROBOTIK), 2014.
- German Conference on Artificial Intelligence (KI), 2009-2012.
- German Conference on Artificial Intelligence (KI) Poster and Demo Track, 2012.
- Starting Artificial Intelligence Research Symposium (STAIRS), 2012.
- International Conference on Informatics in Control, Automation and Robotics (ICINCO), 2008, 2009.
- Informatica Feminale (women's summer university), 2010, 2012.

Reviewing for Journals

- International Journal of Humanoids Robotics (IJHR), 2013.
- IEEE Transactions on Robotics (T-RO), 2005-2013.
- Autonomous Robots (AURO), 2007-2012.
- International Journal of Robotics Research (IJRR), 2007-2011.
- IEEE Transactions on Interactive Intelligent Systems, 2013.
- IEEE Transactions on Systems, Man and Cybernetics, 2004, 2011.
- Robotics and Autonomous Systems (RAS), 2004, 2008, 2012.
- Annals of Mathematics and Artificial Intelligence, 2011.
- The Journal of Robotics, 2011.
- Journal of Field Robotics (JFR), 2009.
- Journal of Physiology, Special Issue on Neuro-Robotics, 2009
- IEEE Transactions on Intelligent Transportation Systems (TITS), 2008.
- International Journal of Control, Automation, and Systems (IJCAS), 2006.
- IEEE/ASME Transactions on Mechatronics, 2006.
- Optics Communications, 2005.

Regular Reviewing for Conferences/Workshops

- Robotics: Science and Systems (RSS)
- International Joint Conference on Artificial Intelligence (IJCAI)
- IEEE International Conference on Robotics and Automation (ICRA)
- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)

- IEEE-RAS Conference on Humanoid Robots (Humanoids)
- ACM/IEEE International Conference on Human-Robot Interaction (HRI)
- International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)
- European Conference on Mobile Robots (ECMR)
- IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN)
- International Conference on Intelligent Autonomous Systems (IAS)
- IVAC Symposium on Intelligent Autonomous Vehicles (IAV)
- German Conference on Artificial Intelligence (KI)
- ECAI Workshop on Machine Learning for Interactive Systems (MLIS)
- Joint International Symposium on Robotics (ISR) and German Conference on Robotics (ROBOTIK)

Other Scientific Services

- Member of the Excellence Committee for the UK Best PhD in Robotics Award, 2018.
- Reviewer for proposals submitted for funding to the German Research Foundation (DFG)
- Reviewer for projects funded within the European Commission (EC) research programme

PhD Committees

- RWTH Aachen University
- University of Bonn
- University of Bremen
- University of Freiburg
- Technical University of Ilmenau
- KTH Royal Institute of Technology, Stockholm
- University of Toulouse

Organizations of Workshops

- Organizer (jointly with O. Stasse and A. del Prete) of the German-French Winter School on Humanoid and Legged Robots, 2016.
- Organizer (jointly with A. Dragan, S. Shah) of the second workshop on “Women in Robotics” at Robotics: Science and Systems (RSS), 2015.
- Organizer (jointly with M. Zillich, D. Pangercic, J. Piater, and M. Fox) of the Workshop “Robots in Clutter: Perception and Interaction in Clutter” at IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2014.
- Organizer (jointly with J. Pineau, A. Thomaz, and L. Takayama) of the first workshop on “Women in Robotics” at Robotics: Science and Systems (RSS), 2014.
- Organizer (jointly with M. Zillich, J. Piater, M. Fox, and D. Pangercic) of the Workshop “Robots in Clutter: Preparing Robots for the Real World” at Robotics: Science and Systems (RSS), 2013.
- Organizer (jointly with O. Stasse) of the Workshop “Motion Planning and Navigation with Humanoids” at the IEEE International Conference on Robotics & Automation (ICRA), 2013.

Further Activities

- Mentor for the Mentoring Program at RWTH Aachen University, since 2017.
- Gender Committee of the IFAC Intelligent Autonomous Vehicles Symposium (IAV), 2016.
- Member of the organization team of the IEEE International Conference on Robotics & Automation (ICRA), career fair co-chair, 2015.
- Lecturer at the “Informatica Feminale” (women’s summer university), 2010.
- Member of RoboCup Team NimbRo (world champion in several competitions), 2005-2007.
- Local organization RoboCup Humanoid League, 2006, 2007.
- Local organization RoboCup German Open, Humanoid League, 2007.
- Child care organization at Robotics: Science and Systems (RSS), 2007.
- Numerous robot demonstrations at open house or girls’ days.
- Robot demonstrations at the Science Days Freiburg, 2001, 2006.
- Robot demonstrations at Hannovermesse (by invitation of SICK AG), 2000-2002.

Publication List

REFEREED JOURNAL/MAGAZINE ARTICLES

- [1] T. C. Bächle, P. Regier, and M. Bennewitz. Sensor und Sinnlichkeit – Humanoide Roboter als soziale Interfaces und die Obsoleszenz des Impliziten. *Navigationen - Zeitschrift für Medien- und Kulturwissenschaften*, 2017.
- [2] S. Osswald, M. Bennewitz, W. Burgard, and C. Stachniss. Speeding-up robot exploration by exploiting background information. In *IEEE Robotics and Automation Letters (RA-L)*, 2016.
- [3] A. Hornung, S. Oßwald, D. Maier, and M. Bennewitz. Monte Carlo localization for humanoid robot navigation in complex indoor environments. *International Journal of Humanoid Robotics (IJHR)*, 2014.
- [4] A. Hornung, K. M. Wurm, M. Bennewitz, C. Stachniss, and W. Burgard. Octomap: An efficient probabilistic 3D mapping framework based on octrees. *Autonomous Robots*, 2013.
- [5] D. Maier, C. Stachniss, and M. Bennewitz. Vision-based humanoid navigation using self-supervised obstacle detection. *International Journal of Humanoid Robotics (IJHR)*, 2013.
- [6] S. Wehner and M. Bennewitz. Gait optimization of humanoids based on human data. *AUTOMATIKA - Journal for Control, Measurement, Electronics, Computing and Communications*, 2011.
- [7] A. Hornung, M. Bennewitz, and H. Strasdat. Efficient vision-based navigation – Learning about the influence of motion blur. *Autonomous Robots*, 29(2), 2010.
- [8] M. Bennewitz, W. Burgard, G. Cielniak, and S. Thrun. Learning motion patterns of people for compliant robot motion. *International Journal of Robotics Research (IJRR)*, 24(1), 2005.
- [9] M. Bennewitz, W. Burgard, and S. Thrun. Finding and optimizing solvable priority schemes for decoupled path planning techniques for teams of mobile robots. *Robotics and Autonomous Systems*, 41, 2002.
- [10] M. Beetz, T. Arbuckle, T. Belker, M. Bennewitz, W. Burgard, A. B. Cremers, D. Fox, H. Grosskreutz, D. Hähnel, and D. Schulz. Integrated plan-based control of autonomous service robots in human environments. *IEEE Intelligent Systems*, 16, 2001.
- [11] S. Thrun, M. Beetz, M. Bennewitz, W. Burgard, A. B. Cremers, D. Dellaert, D. Fox, D. Hähnel, C. Rosenberg, J. Schulte, and D. Schulz. Probabilistic algorithms and the interactive museum tour-guide robot minerva. *International Journal of Robotics Research (IJRR)*, 19(11):972–999, 2000.
- [12] M. Beetz, T. Arbuckle, T. Belker, M. Bennewitz, A. B. Cremers, D. Hähnel, and D. Schulz. Enabling autonomous robots to perform complex tasks. *Zeitschrift KI mit Schwerpunkt Autonome Mobile Systeme*, 4:5–10, 2000.

BOOK CHAPTERS / COLLECTIONS

- [1] W. Burgard, M. Herbert, and M. Bennewitz. World modeling. In B. Siciliano and O. Khatib, editors, *Handbook of Robotics*. Springer Verlag, second edition, 2016.
- [2] M. Bennewitz, F. Faber, D. Joho, and S. Behnke. Intuitive multimodal interaction with communication robot Fritz. In M. Hackel, editor, *Humanoid Robots, Human-like Machines*. I-Tech Education and Publishing, 2007.

- [3] M. Bennewitz and W. Burgard. Serviceroboter für den Pflegebereich. In A. M. Raem, H. Fenger, G. F. Kolb, T. Nikolaus, L. Pientka, R. Rychlik, and T. Vömel, editors, *Handbuch Geriatrie. Lehrbuch für Praxis und Klinik*. Deutsche Krankenhaus Verlagsgesellschaft mbH, Düsseldorf, 2005. In German.

REFEREED CONFERENCE PUBLICATIONS

- [1] S. Oßwald and P. Karkowski and M. Bennewitz. Efficient coverage of 3D environments with humanoid robots using inverse reachability maps. In *Proc. of the IEEE-RAS International Conference on Humanoid Robots (HUMANOIDS)*, 2017.
- [2] A. Bayoumi, P. Karkowski, and M. Bennewitz. Learning foresighted people following under occlusions. In *Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2017.
- [3] M. Missura, D. Lee, O. von Stryk, and M. Bennewitz. The synchronized holonomic model: A framework for efficient motion generation. In *Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2017.
- [4] P. Regier, M. Missura, and M. Bennewitz. Predicting travel time from path characteristics for wheeled robot navigation. In *Proc. of the European Conference on Mobile Robotics (ECMR)*, 2017.
- [5] P. Karkowski, S. Oßwald, and M. Bennewitz. Real-time footstep planning in 3d environments. In *Proc. of the IEEE-RAS International Conference on Humanoid Robots (HUMANOIDS)*, 2016.
- [6] F. Burget, M. Bennewitz, and W. Burgard. BI²RRT*: An optimal sampling-based path planning framework for task-constrained mobile manipulation. In *Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2016.
- [7] P. Regier, S. Oßwald, P. Karkowski, and M. Bennewitz. Foresighted navigation through cluttered environments. In *Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2016.
- [8] V. Ziparo, D. Calisi, G. Grisetti, J. Sarafin, M. Prosmans, L. van Gool, B. Leibe, M. Di Stefano, L. Petti, W. Burgard, F. Nenci, I. Bogoslavskyi, O. Vysotska, M. Bennewitz, and C. Stachniss. A user perspective on the ROVINA project. In *Conf. Proc. of Heritage and Landscape as Human Values - ICOMOS 18 General Assembly*, 2016.
- [9] P. Karkowski and M. Bennewitz. Real-time footstep planning using a geometric approach. In *Proc. of the IEEE International Conference on Robotics & Automation (ICRA)*, 2016.
- [10] A. Bayoumi and M. Bennewitz. Learning optimal navigation actions for foresighted robot behavior during assistance tasks. In *Proc. of the IEEE International Conference on Robotics & Automation (ICRA)*, 2016.
- [11] J. Koenemann, A. Del Prete, Y. Tassa, E. Todorov, O. Stasse, M. Bennewitz, and N. Mansard. Model-predictive control applied to the HRP-2 humanoid. In *Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2015.
- [12] F. Burget, C. Maurer, W. Burgard, and M. Bennewitz. Parameters for motion strategy analysis of Parkinson's disease patients. In *Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2015.
- [13] F. Burget and M. Bennewitz. Stance selection for humanoid grasping tasks by inverse reachability maps. In *Proc. of the IEEE International Conference on Robotics & Automation (ICRA)*, 2015.

- [14] D. Maier and M. Bennewitz. Whole-body self-calibration via graph-optimization and automatic configuration selection. In *Proc. of the IEEE International Conference on Robotics & Automation (ICRA)*, 2015.
- [15] A. Hornung, S. Boettcher, C. Dornhege, A. Hertle, J. Schlagenhauf, and M. Bennewitz. Mobile manipulation in cluttered environments with humanoids: Integrated perception, task planning, and action execution. In *Proc. of the IEEE-RAS International Conference on Humanoid Robots (HUMANOIDS)*, 2014.
- [16] D. Maier, R. Zohouri, and M. Bennewitz. Using visual and auditory feedback for instrument-playing humanoids. In *Proc. of the IEEE-RAS International Conference on Humanoid Robots (HUMANOIDS)*, 2014.
- [17] J. Koenemann, F. Burget, and M. Bennewitz. Real-time imitation of human whole-body motions by humanoids. In *Proc. of the IEEE International Conference on Robotics & Automation (ICRA)*, 2014.
- [18] D. Maier, C. Lutz, and M. Bennewitz. Integrated perception, mapping, and footstep planning for humanoid navigation among 3D obstacles. In *Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2013.
- [19] F. Burget, A. Hornung, and M. Bennewitz. Whole-body motion planning for manipulation of articulated objects. In *Proc. of the IEEE International Conference on Robotics & Automation (ICRA)*, 2013.
- [20] D. Maier, A. Hornung, and M. Bennewitz. Real-time navigation in 3D environments based on depth camera data. In *Proc. of the IEEE-RAS International Conference on Humanoid Robots (Humanoids)*, 2012.
- [21] A. Hornung, A. Dornbush, M. Likhachev, and M. Bennewitz. Anytime search-based footstep planning with suboptimality bounds. In *Proc. of the IEEE-RAS International Conference on Humanoid Robots (Humanoids)*, 2012.
- [22] D. Maier and M. Bennewitz. Appearance-based traversability classification in monocular images using iterative ground plane estimation. In *Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2012.
- [23] S. Oßwald, A. Hornung, and M. Bennewitz. Improved proposals for highly accurate localization using range and vision data. In *Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2012.
- [24] C. Lutz, F. Atmanspacher, A. Hornung, and M. Bennewitz. Nao walking down a ramp autonomously. In *Video Abstract Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2012.
- [25] A. Hornung and M. Bennewitz. Adaptive level-of-detail planning for efficient humanoid navigation. In *Proc. of the IEEE International Conference on Robotics & Automation (ICRA)*, 2012.
- [26] A. Hornung, M. Phillips, E. G. Jones, M. Bennewitz, M. Likhachev, and S. Chitta. Navigation in three-dimensional cluttered environments for mobile manipulation. In *Proc. of the IEEE International Conference on Robotics & Automation (ICRA)*, 2012.
- [27] J. Koenemann and M. Bennewitz. Whole-body imitation of human motions with a nao humanoid. In *Video Abstract Proc. of the ACM/IEEE International Conference on Human-Robot Interaction (HRI)*, 2012.

- [28] S. Oßwald, J.-S. Gutmann, A. Hornung, and M. Bennewitz. From 3D point clouds to climbing stairs: A comparison of plane segmentation approaches for humanoids. In *Proc. of the IEEE-RAS International Conference on Humanoid Robots (Humanoids)*, 2011.
- [29] S. Oßwald, A. Görög, A. Hornung, and M. Bennewitz. Autonomous climbing of spiral staircases with humanoids. In *Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2011.
- [30] D. Maier, M. Bennewitz, and C. Stachniss. Self-supervised obstacle detection for humanoid navigation using monocular vision and sparse laser data. In *Proc. of the IEEE International Conference on Robotics & Automation (ICRA)*, 2011.
- [31] J. Garimort, A. Hornung, and M. Bennewitz. Humanoid navigation with dynamic footstep plans. In *Proc. of the IEEE International Conference on Robotics & Automation (ICRA)*, 2011.
- [32] A. Hornung, Kai M. Wurm, and M. Bennewitz. Humanoid robot localization in complex indoor environments. In *Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2010.
- [33] A. Hornung, M. Bennewitz, and W. Burgard. Learning efficient vision-based navigation. In *Extended Abstract Proc. of the International Conference on Indoor Positioning and Indoor Navigation (IPIN)*, 2010.
- [34] S. Oßwald, A. Hornung, and M. Bennewitz. Learning reliable and efficient navigation with a humanoid. In *Proc. of the IEEE International Conference on Robotics & Automation (ICRA)*, 2010.
- [35] A. Hornung, H. Strasdat, M. Bennewitz, and W. Burgard. Learning efficient policies for vision-based navigation. In *Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2009.
- [36] S. Wehner and M. Bennewitz. Optimizing the gait of a humanoid robot towards human-like walking. In *Proc. of the European Conference on Mobile Robots (ECMR)*, 2009.
- [37] M. Bennewitz, C. Stachniss, S. Behnke, and W. Burgard. Utilizing reflection properties of surfaces to improve mobile robot localization. In *Proc. of the IEEE International Conference on Robotics & Automation (ICRA)*, 2009.
- [38] A. Pretto, E. Menegatti, M. Bennewitz, W. Burgard, and E. Pagello. A visual odometry framework robust to motion blur. In *Proc. of the IEEE International Conference on Robotics & Automation (ICRA)*, 2009.
- [39] C. Eppner, J. Sturm, M. Bennewitz, C. Stachniss, and W. Burgard. Imitation learning with generalized task descriptions. In *Proc. of the IEEE International Conference on Robotics & Automation (ICRA)*, 2009.
- [40] T. Axenbeck, M. Bennewitz, S. Behnke, and W. Burgard. Recognizing complex, parameterized gestures from monocular image sequences. In *Proc. of the IEEE-RAS International Conference on Humanoid Robots (Humanoids)*, 2008.
- [41] C. Stachniss, M. Bennewitz, G. Grisetti, S. Behnke, and W. Burgard. How to learn accurate grid maps with a humanoid. In *Proc. of the IEEE International Conference on Robotics & Automation (ICRA)*, 2008.
- [42] T. Vatahska, M. Bennewitz, and S. Behnke. Feature-based head pose estimation from images. In *Proc. of the IEEE-RAS International Conference on Humanoid Robots (Humanoids)*, 2007.
- [43] D. Joho, M. Bennewitz, and S. Behnke. Pitch estimation using models of voiced speech on three levels. In *Proc. of the IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2007.

- [44] S. Roa, M. Benniswitz, and S. Behnke. Fundamental frequency estimation based on pitch-scaled harmonic filtering. In *Proc. of the IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2007.
- [45] M. Benniswitz, F. Faber, D. Joho, M. Schreiber, and S. Behnke. Towards a humanoid museum guide robot that interacts with multiple persons. In *Proc. of the IEEE-RAS International Conference on Humanoid Robots (Humanoids)*, 2005.
- [46] M. Benniswitz, F. Faber, D. Joho, M. Schreiber, and S. Behnke. Integrating vision and speech for conversations with multiple persons. In *Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2005.
- [47] M. Benniswitz, F. Faber, D. Joho, M. Schreiber, and S. Behnke. Enabling a humanoid robot to interact with multiple persons. In *Proc. of the 1st International Conference on Dextrous Autonomous Robots and Humanoids (DARH)*, 2005.
- [48] G. Cielniak, M. Benniswitz, and W. Burgard. Robust localization of persons based on learned motion patterns. In *Proc. of the European Conference on Mobile Robots (ECMR)*, 2003.
- [49] G. Cielniak, M. Benniswitz, and W. Burgard. Where is ...? Learning and utilizing motion patterns of persons with mobile robots. In *Proc. of the International Joint Conference on Artificial Intelligence (IJCAI)*, 2003.
- [50] M. Benniswitz, W. Burgard, and S. Thrun. Adapting navigation strategies using motions patterns of people. In *Proc. of the IEEE International Conference on Robotics & Automation (ICRA)*, 2003.
- [51] M. Benniswitz, W. Burgard, and S. Thrun. Using EM to learn motion behaviors of persons with mobile robots. In *Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2002.
- [52] M. Benniswitz, W. Burgard, and S. Thrun. Learning motion patterns of persons for mobile service robots. In *Proc. of the IEEE International Conference on Robotics & Automation (ICRA)*, 2002.
- [53] M. Benniswitz, W. Burgard, and S. Thrun. Exploiting constraints during prioritized path planning for teams of mobile robots. In *Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2001.
- [54] M. Benniswitz, W. Burgard, and S. Thrun. Constraint-based optimization of priority schemes for decoupled path planning techniques. In *Proc. of the 24th German / 9th Austrian Conference on Artificial Intelligence*. Springer Verlag, 2001.
- [55] M. Benniswitz, W. Burgard, and S. Thrun. Optimizing schedules for prioritized path planning of multi-robot systems. In *Proc. of the IEEE International Conference on Robotics & Automation (ICRA)*, 2001.
- [56] S. Thrun, M. Benniswitz, W. Burgard, A.B. Cremers, F. Dellaert, D. Fox, D. Hähnel, C. Rosenberg, N. Roy, J. Schulte, and D. Schulz. Minerva: A tour-guide robot that learns. In *Proc. of the the 23rd German Conference on Artificial Intelligence (KI)*. Springer Verlag, 1999.
- [57] M. Beetz, M. Benniswitz, and H. Grosskreutz. Probabilistic, prediction-based schedule debugging for autonomous robot office couriers. In *Proc. of the the 23rd German Conference on Artificial Intelligence (KI)*. Springer Verlag, 1999.
- [58] S. Thrun, M. Benniswitz, W. Burgard, F. Dellaert, D. Fox, D. Hähnel, C. Rosenberg, N. Roy, J. Schulte, and D. Schulz. Minerva: A second-generation museum tour-guide robot. In *Proc. of the IEEE International Conference on Robotics & Automation (ICRA)*, 1999.

- [59] S. Thrun, M. Bennewitz, W. Burgard, A.B. Cremers, F. Dellaert, D. Fox, D. Hähnel, C. Rosenberg, N. Roy, J. Schulte, and D. Schulz. Experiences with two deployed interactive tour-guide robots. In *Proc. of the International Conference on Field and Service Robotics (FSR)*, 1999.

REFEREED SYMPOSIUM/WORKSHOP PUBLICATIONS

- [1] J. Kim, I. H. Shareef, P. Regier, K. P. Truong, V. Charisi, C. Zaga, M. Bennewitz, G. Englebienne, and V. Evers. Automatic ranking of engagement of a group of children “in the wild” using emotional states and deep pose features. In *Proc. of the Workshop on Creating Meaning with Robot Assistants: The Gap Left by Smart Devices at Humanoids*, 2017.
- [2] A. Bayoumi and M. Bennewitz. Efficient human following using reinforcement learning. In *Proc. of the Machine Learning in Planning and Control of Robot Motion Workshop (MLCP) at IROS*, 2015.
- [3] A. Hornung, S. Boettcher, C. Dornhege, A. Hertle, J. Schlagenhaut, and M. Bennewitz. Mobile manipulation with humanoids in cluttered environments. In *Proc. of the IROS Workshop on Robots in Clutter: Perception and Interaction in Clutter*, 2014.
- [4] F. Burget, M. Cenciarini, B. Meier, H. Bast, M. Bennewitz, W. Burgard, and C. Maurer. Towards a closed-loop system for real-time calibration of neural stimulation parameters using motion data. In *Proc. of the ICRA Workshop on Wearable Robotics for Motion Assistance and Rehabilitation – RoboAssist*, 2014.
- [5] D. Maier, C. Lutz, and M. Bennewitz. Autonomous biped navigation through clutter. In *Proc. of the RSS Workshop on Robots in Clutter: Preparing Robots for the Real World*, 2013.
- [6] A. Hornung, D. Maier, and M. Bennewitz. Search-based footstep planning. In *Proc. of the ICRA Workshop on Progress and Open Problems in Motion Planning and Navigation for Humanoids*, 2013.
- [7] A. Hornung, M. Phillips, E. G. Jones, M. Bennewitz, M. Likhachev, and S. Chitta. Navigation in three-dimensional cluttered environments. In *Proc. of the RSS Workshop on Robots in Clutter: Manipulation, Perception and Navigation in Human Environments*, 2012.
- [8] M. Bennewitz, D. Maier, A. Hornung, and C. Stachniss. Integrated perception and navigation in complex indoor environments. In *Proc. of the HUMANOIDS workshop on Humanoid Service Robot Navigation in Crowded and Dynamic Environments*, 2011.
- [9] A. Hornung, E. G. Jones, S. Chitta, M. Bennewitz, M. Phillips, and M. Likhachev. Towards navigation in three-dimensional cluttered environments. In *Proc. of the IROS PR2 Workshop: Results, Challenges and Lessons Learned in Advancing Robots with a Common Platform*, 2011.
- [10] A. Hornung and M. Bennewitz. Robust and adaptive navigation with humanoid robots. In *Extended Abstract Proc. of the RSS Workshop on Motion Planning: From Theory to Practice*, 2010.
- [11] W. Burgard, K. Wurm, M. Bennewitz, C. Stachniss, A. Hornung, R.B. Rusu, and K. Konolige. Modeling the world around us :: An efficient 3d representation for personal robotics. In *Workshop on Defining and Solving Realistic Perception Problems in Personal Robotics at the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2010.
- [12] A. Hornung, M. Bennewitz, C. Stachniss, H. Strasdat, S. Oßwald, and W. Burgard. Learning adaptive navigation strategies for resource-constrained systems. In *Proc. of the 3rd International Workshop on Evolutionary and Reinforcement Learning for Autonomous Robot Systems (ERLARS)*, 2010.

- [13] K.M. Wurm, A. Hornung, M. Bennewitz, C. Stachniss, and W. Burgard. Octomap: A probabilistic, flexible, and compact 3D map representation for robotic systems. In *Proc. of the ICRA Workshop on Best Practice in 3D Perception and Modeling for Mobile Manipulation*, 2010.
- [14] F. Faber, M. Bennewitz, C. Eppner, A. Goerog, A. Gonsior, D. Joho, M. Schreiber, and S. Behnke. The humanoid museum tour guide Robotinho. In *Proc. of the 18th IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN)*, 2009.
- [15] M. Bennewitz, T. Axenbeck, S. Behnke, and W. Burgard. Robust recognition of complex gestures for natural human-robot interaction. In *Proc. of the Workshop on Interactive Robot Learning at Robotics: Science and Systems Conference (RSS)*, 2008.
- [16] F. Faber, M. Bennewitz, and S. Behnke. Controlling the gaze direction of a humanoid robot with redundant joints. In *Proc. of the 17th IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN)*, 2008.
- [17] H. Strasdat, C. Stachniss, M. Bennewitz, and W. Burgard. Visual bearing-only simultaneous localization and mapping with improved feature matching. In *Proc. of the Fachgespräche Autonome Mobile Systeme (AMS)*, 2007.
- [18] M. Bennewitz, F. Faber, D. Joho, and S. Behnke. Fritz – A humanoid communication robot. In *Proc. of the 16th IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN)*, 2007.
- [19] H. Strasdat, M. Bennewitz, and S. Behnke. Multi-cue localization for soccer playing humanoid robots. In *Proc. of the 10th RoboCup International Symposium*, 2006.
- [20] T. Latzke, S. Behnke, and M. Bennewitz. Imitative reinforcement learning for soccer playing robots. In *Proc. of the 10th RoboCup International Symposium*, 2006.
- [21] S. Behnke, M. Schreiber, M. Bennewitz, J. Stückler, H. Strasdat, and J. Schwenk. Designing a team of soccer-playing humanoid robots. In *Proc. of the 37th International Symposium on Robotics (ISR) and 4th German Conference on Robotics (ROBOTIK)*, 2006.
- [22] S. Behnke, M. Schreiber, J. Stückler, H. Strasdat, and M. Bennewitz. NimbRo teensize 2006 team description. In *RoboCup 2006 Humanoid League Team Descriptions (RoboCup 2006)*, 2006.
- [23] S. Behnke, M. Schreiber, J. Stückler, H. Strasdat, and M. Bennewitz. NimbRo kidsize 2006 team description. In *RoboCup 2006 Humanoid League Team Descriptions (RoboCup 2006)*, 2006.
- [24] M. Bennewitz, C. Stachniss, W. Burgard, and S. Behnke. Metric localization with scale-invariant visual features using a single perspective camera. In H.I. Christensen, editor, *European Robotics Symposium 2006*, volume 22 of *STAR Springer tracts in advanced robotics*. Springer Verlag Berlin Heidelberg, Germany, 2006.
- [25] M. Bennewitz, F. Faber, D. Joho, M. Schreiber, and S. Behnke. Multimodal conversation between a humanoid robot and multiple persons. In *Proceedings of the Workshop on Modular Construction of Humanlike Intelligence at the Twentieth National Conferences on Artificial Intelligence (AAAI)*, 2005.
- [26] S. Behnke, M. Bennewitz, J. Müller, and M. Schreiber. NimbRo 2005 team description. In *RoboCup 2005 Humanoid League Team Descriptions (RoboCup 2005)*, 2005.
- [27] S. Behnke and M. Bennewitz. Learning to play soccer using imitative reinforcement. In *Proc. of Workshop on Social Aspects of Robot Programming through Demonstration at the IEEE International Conference on Robotics and Automation (ICRA)*, 2005.

- [28] M. Bennewitz, J. Pastrana, and W. Burgard. Active localization of persons with a mobile robot based on learned motion behaviors. In *Proc. of the third Workshop on Selforganization of Adaptive Behavior (SOAVE)*, 2004.
- [29] M. Bennewitz, G. Cielniak, and W. Burgard. Utilizing learned motion patterns to robustly track persons. In *Proc. of the Joint IEEE International Workshop on Visual Surveillance and Performance Evaluation of Tracking and Surveillance (VS-PETS)*, 2003.
- [30] M. Bennewitz, W. Burgard, and S. Thrun. Learning motion patterns of persons for mobile service robots. In *Proc. of the VDI-Conference Robotik 2002 (Robotik)*, 2002.
- [31] M. Bennewitz and W. Burgard. Finding solvable priority schemes for decoupled path planning techniques for teams of mobile robots. In *Proc. of the 9th International Symposium on Intelligent Robotic Systems (SIRS)*, 2001.
- [32] M. Bennewitz and W. Burgard. An experimental comparison of path planning techniques for teams of mobile robots. In *Proc. of the Fachgespräche Autonome Mobile Systeme (AMS)*, 2000.
- [33] M. Bennewitz and W. Burgard. Coordinating the motions of multiple mobile robots using a probabilistic model. In *Proc. of the 8th International Symposium on Intelligent Robotic Systems (SIRS)*, 2000.
- [34] M. Bennewitz and W. Burgard. A probabilistic method for planning collision-free trajectories of multiple mobile robots. In *Proc. of the Workshop "Service Robotics - Applications and Safety Issues in an Emerging Market" at the 14th European Conference on Artificial Intelligence (ECAI)*, 2000.
- [35] M. Beetz and M. Bennewitz. Planning, scheduling, and plan execution for autonomous robot office couriers. In *Proc. of the Workshop "Integrating Planning, Scheduling and Execution in Dynamic and Uncertain Environments" at the Fourth International Conference on AI in Planning Systems (AIPS)*, 1998.
- [36] M. Bennewitz and M. Beetz. Generating, executing and revising schedules for autonomous robot office couriers. In *Proc. of the Twelfth Workshop on Planning and Configuring (PuK)*, 1998.

THESES

- [1] M. Bennewitz. *Mobile Robot Navigation in Dynamic Environments*. PhD thesis, University of Freiburg, Department of Computer Science, 2004.
- [2] M. Bennewitz. Generieren, Ausführen und Revidieren von Schedules autonomer mobiler Serviceroboter. Master's thesis, University of Bonn, Department of Computer Science, 1999. In German.

MISCELLANEOUS

- [1] M. Bennewitz. Tagungsbericht IROS 2012, Vilamoura, Portugal. *KI - Künstliche Intelligenz*, 2013.
- [2] M. Bennewitz. Tagungsbericht EUROS 2006, European Robotics Symposium, Palermo, Italien. *KI - Künstliche Intelligenz, Themenheft Lernen und Selbstorganisation von Verhalten*, 3:42, 2006.