

Curriculum Vitae

Cyrill Stachniss

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Prof. Dr. Cyrill Stachniss

University of Bonn

Inst. of Geodesy and Geoinformation

Lab for Photogrammetry & Robotics

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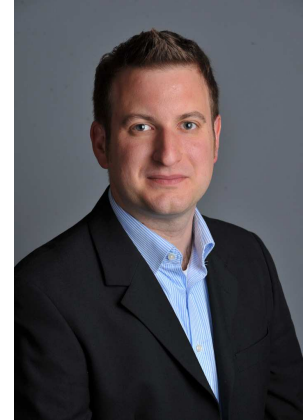
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<https://scholar.google.com/citations?user=8vib2IAAAAAJ>

<https://www.youtube.com/c/CyrillStachniss>



Areas of Interest

Probabilistic robotics; photogrammetry; perception and state estimation; simultaneous localization and mapping; navigation; agriculture robotics; classification; robot learning

Education

- Habilitation and *venia legendi* in computer science 11/2009
University of Freiburg, Germany
Habilitation thesis: *Spatial Modeling and Robot Navigation*
- Dr. rer. nat. (Ph.D.) in computer science—*summa cum laude (with distinction)* 04/2006
University of Freiburg, Germany
Ph.D. thesis: *Exploration and Mapping with Mobile Robots*
1st Reviewer: Prof. Dr. Wolfram Burgard, University of Freiburg
2nd Reviewer: Prof. Dr. Dieter Fox, University of Washington, WA
- Diplom (M.Sc.) in computer science—*summa cum laude (with distinction)* 08/2002
University of Freiburg, Germany
Diploma thesis: *Goal-directed Obstacle Avoidance for Mobile Robots in Dynamic Environments*
- Vordiplom in computer science 03/2000
University of Marburg, Germany
- Vordiplom in physics 11/1999
University of Marburg, Germany

Academic Positions

- Full professor and chair for photogrammetry & robotics since 04/2014
University of Bonn, Institute of Geodesy and Geoinformation
- University lecturer (Privatdozent und Akademischer Rat) 10/2010-03/2014
University of Freiburg, Department of Computer Science
- Deputy professorship at the Autonomous Intelligent Systems Lab 10/2009-09/2010
during the sabbatical of Prof. Dr. Wolfram Burgard (W3-Lehrstuhlvertretung)
University of Freiburg, Department of Computer Science
- Guest lecturer spring 2009
University of Zaragoza (Spain), Departamento Informática e Ingeniería de Sistemas
- Akademischer Rat 10/2007-09/2009
University of Freiburg, Department of Computer Science
- Postdoc 11/2006-09/2007
University of Freiburg, Department of Computer Science, Lab for Autonomous Intelligent Systems headed by Prof. Dr. Wolfram Burgard
- Senior researcher 05/2006-10/2006
Eidgenössische Technische Hochschule (ETH) Zurich, Department of Mechanical and Process Engineering, Autonomous Systems Lab headed by Prof. Dr. Roland Siegwart
- Ph.D. student and research associate 12/2002-04/2006
University of Freiburg, Department of Computer Science, Lab for Autonomous Intelligent Systems headed by Prof. Dr. Wolfram Burgard

Academic Activities/Memberships

- Spokesperson of the Cluster of Excellence *Proposal EXC 2070* since 2017
“PhenoRob - Robotics and Phenotyping for Sustainable Crop Production”, *under review*.
- Member of the “Ausschuss Geodäsie der Bayerischen Akademie der Wissenschaften”, Munich since 11/2015
- Deputy Director of the Institute of Geodesy and Geoinformation 10/2015-12/2017
University of Bonn
- Vorstand (executive board) der Außenlabore Agrar-Geodäsie-Ernährung since 01/2016
University of Bonn

Citation Indices

h-index: 46, i10-index: 116, citations: 10,896 (determined using “Google Scholar” on March 14)

Honors and Awards

- IROS 2017 Best Application Paper Finalist 2017
for the work *Semi-Supervised Online Visual Crop and Weed Classification in Precision Farming Exploiting Plant Arrangement*

- ICRA 2017 Best Automation Paper 2017
for the work *UAV-Based Crop and Weed Classification for Smart Farming*
- ICRA 2015 Best Service Robotics Paper Finalist 2015
for the work *Robot, Organize my Shelves! Tidying up Objects by Predicting User Preferences*
- Faculty Teaching Award (Fakultätslehrpreis) 2013
for my lecture *Robot Mapping* taught in winter term 2012/13
- IEEE RAS Early Career Award 2013
for my contributions to mobile robot exploration and simultaneous localization and mapping
- ICRA 2013 Best Associate Editor Award 2013
- ICRA 2013 Best Student Paper Finalist 2013
for the work *Robust Map Optimization Using Dynamic Covariance Scaling*
- Robotics: Science and Systems Early Career Spotlight 2012
- Microsoft Research Faculty Fellow 2010
- EURON Georges Giralt Award 2008
for the best robotics thesis in Europe defended in 2006
- Wolfgang-Gentner Award 2006
for the Ph.D. thesis *Exploration and Mapping with Mobile Robots*
- ICRA 2005 Best Student Paper Finalist 2005
for the work *Supervised Learning of Places from Range Data using AdaBoost*
- ICASE-IROS 2004 Best Paper Award on Application 2005
for the work *Grid-based FastSLAM and Exploration with Active Loop Closing*
- Förderpreis des Vereins Deutscher Ingenieure (VDI) 2003
for the Master's thesis *Goal-directed Obstacle Avoidance for Mobile Robots in Dynamic Environments*

Research Project Coordination Activities

- Spokesperson of the DFG FOR 1505 "Mapping on Demand" 2015-2019
- Coordinator of the EC funded FP7 project ROVINA 2013-2016
- Vice-Coordinator of the EC funded FP7 project EUROPA2 2013-2014
- "Vorstandsmitglied" in the SFB-TR 8 "Spatial Cognition" 2013-2014
- Vice-Coordinator and scientific project manager of the FP7 project First-MM 2010-2013
- Vice-Coordinator and scientific project manager of the FP7 project EUROPA 2009-2012

Funded Projects

- Principal investigator of the project "Exploration for Micro Aerial Vehicles" 2016-2019
Funded by the DFG Research Unit FOR 1505 "Mapping on Demand".
- Principal investigator of the project "Incremental Mapping from Image Sequences". 2015-2018
Funded by the DFG Research Unit FOR 1505 "Mapping on Demand".
- Principal investigator of the project "Robust Direct Georeferencing" 2015-2018
of Lightweight UAV. Funded by the DFG Research Unit FOR 1505 "Mapping on Demand".

- Principal investigator of the project Flourish 2015-2018
Flourish—Aerial Data Collection and Analysis, and Automated Ground Intervention for Precision Farming. Funded by the European Commission, H2020.
- Principal investigator of the project RobDREAM 2015-2018
RobDREAM—Optimising Robote Performance While Dreaming. Funded by the European Commission, H2020.
- Principal investigator of the project AdvancedEDC 2014-2015
AdvancedEDC—Advanced Intracortical Neural Probes with Electronic Depth Control. Funded by the DFG with in the cluster of excellence BrainLinks–BrainTools.
- Vice-Coordinator and principal investigator of the EU project EUROPA2 2013-2016
EUROPA2—European Robotic Pedestrian Assistant 2.0. Funded by the European Commission, FP7.
- Principal investigator of the EU project STAMINA 2013-2017
STAMINA—Sustainable and Reliable Robotics for Part Handling in Manufacturing Automation. Participation ended with the move to the University of Bonn, FP7.
- Coordinator and principal investigator of the EU project ROVINA 2013-2016
ROVINA—Mobile Robots for Exploration, Digital Preservation and Visualization of Archeological Sites. Evaluated in the FP7-ICT-Call 9 with 15/15 points. Funded by the European Commission, FP7.
- Principal investigator of a project with ifm automotive 2012
on the automatic evaluation of an obstacle detection systems for cars. Funded by ifm automotive GmbH.
- Principal investigator of a project in 3rd phase of the SFB/TR 8 2011-2014
SFB/TR-8 “Spatial Cognition”, Project A3-MultiBot, funded by the German Research Foundation (DFG).
- Principal investigator of the EU project TAPAS 2010-2014
TAPAS—Robotics-enabled Logistics and Assistive Services for the Transformable Factory of the Future. Funded by the European Commission.
- Vice-Coordinator and principal investigator of the EU project First-MM 2010-2013
First-MM—Flexible Skill Acquisition and Intuitive Robot Tasking for Mobile Manipulation in the Real World. Funded by the European Commission, FP7.
- Vice-Coordinator and principal investigator of the EU project EUROPA 2009-2012
EUROPA—European Robotic Pedestrian Assistant. Funded by the European Commission. The proposal has been evaluated as the best among all STREP and IP proposals in the April 2008 FP7-ICT-Call 3 on robotics and cognitive systems
- Principal investigator of a project on service robotics in industrial applications 2008-2010
Funded by the MT Robotik AG.
- Principal investigator of a project in the 2nd phase of the SFB/TR-8 2007-2010
SFB/TR 8 “Spatial Cognition”, Project A3-MultiBot, funded by the German Research Foundation (DFG).
- Principal investigator of the EU project RAWSEEDS 2007-2009
RAWSEEDS—Robotics Advancements through Web-publishing of Sensorial and Elaborated Extensive Data Sets. Funded by the European Commission.
- Principal investigator of a project on navigation and service robotics 2007-2009
Funded by Toyota Europe.

- Principal investigator of a project on robust simultaneous localization and mapping 2006
Funded by Toyota Europe. Involved in the acquisition and realization of this project.
- Contributions to projects without being a principal investigator
EU project BACS (2006-2009); BMBF project DESIRE (2006-2009); EU project CoSy (2004-2008); SFB/TR 8 “Spatial Cognition”, 1st phase (2003-2006); EU project WebFAIR (2001-2003)

Consulting for Industry

- KUKA Roboter/KUKA Laboratories, Augsburg, Germany 2008-2014
- Numovis Inc., Menlo Park, CA, USA 2010-2011
- MT Robotik AG, Zwingen, Switzerland 2008-2010

Invited Talks

- Keynote speech at the BMVA Technical Meeting, U.K. 07/2018
- ICRA2018 workshop on Long-term autonomy and deployment of intelligent robots in the real world, Australia 05/2018
- Postbank “Digi-Talk” Series, Germany 04/2018
- Universitätsgesellschaft Bonn, Germany 04/2018
Novel Technologies Towards Sustainable Crop Production
- Core-to-Core International Symposium “3D Lab-Exchange Program”, Germany 03/2018
Autonomous Robots Operating in the Real World – From Cultural Heritage Preservation to Urban Navigation and Sustainable Agriculture
- University of Pisa, Italy 10/2017
Robot Perception in Agricultural Environments
- 25 Jahre ZALF, Müncheberg, Germany 07/2017
Robotics and Intelligent Systems for Agricultural Applications
- Keynote speech at the XXIII ISPRS Congress, Prague, Czech Republic 07/2016
ROVINA & EUROPA2: Flexible Navigation for Mobile Robots in the Real World
- DVW Seminar Vermessung mit unbemannten Flugsystemen, Bonn, Germany 02/2016
Was braucht man für autonome Kopter?
- Tag der Geodäsie 2015 (Geodesy Day 2015), Bonn, Germany 05/2015
Vermessung mit Oktokoptern
- DVW Seminar on Multi-Sensor-Systems, Hamburg, Germany 09/2014
Tutorial on Particle Filters for State Estimation
- Abschlusskolloquium SFB/TR-8 Spatial Cognition, Bremen, Germany 09/2014
Localization, Mapping, and Exploration – Achievements and Open Challenges
- Plenary talk at the Int. Conf. on Intelligent Autonomous Systems, Padua, Italy 07/2014
Flexible Longterm Navigation for Mobile Robots Operating in the Real World
- Tag der Geodäsie 2014 (Geodesy Day 2014), Bonn, Germany 05/2014
Wie Roboter die Welt verstehen

- University of Stuttgart, Germany 02/2014
Autonomous Navigation for Mobile Robots in the Real World
- KUKA Tec Camp, Augsburg, Germany 02/2014
Probabilistic State Estimation
- Forum für Mathematik und Naturwissenschaften, Freiburg, Germany 05/2013
Robots and Probabilities – A Success Story
- Meeting of the German National Academy of Sciences Leopoldina, Section 2 02/2013
Robots in Urban Environments
- Technical University of Cottbus, Germany 02/2013
Probabilistische Methoden für die Roboternavigation
- Radboud University Nijmegen, The Netherlands 02/2013
Towards Lifelong Navigation for Mobile Robots
- University of Bonn, Germany 01/2013
Probabilistische Methoden für die Perzeption und Entscheidungsfindung – von grundlegenden Problemen zu realen Systemen
- Robotics: Science and Systems Early Career Spotlight, Sydney, AUS 07/2012
Towards Lifelong Navigation for Mobile Robots
- RSS Workshop on Stochastic Motion Planning, Sydney, AUS 07/2012
Mutual Information for Effective Localization, Mapping and Exploration
- University of Stuttgart, Germany 11/2011
Probabilistische Methoden für Autonome Roboter – von grundlegenden Problemen zu realen Systemen
- University of Amsterdam, The Netherlands 10/2011
Probabilistic Techniques for Intelligent, Robust, and Autonomous Robots
- DGR-Tage 2011, Karlsruhe, Germany 10/2011
Autonomous Intelligent Systems
- Georgia Tech, Atlanta, GA 09/2011
Probabilistic Techniques for Autonomous Intelligent Robots
- Int. Symposium on Robotics Research (ISRR), Flagstaff, AZ 08/2011
Pose Graph Compression for Laser-based SLAM
- University of Stuttgart, Germany 05/2011
Probabilistische Techniken für intelligente, robuste und autonome Roboter
- Università La Sapienza, Rome, Italy 03/2011
Articulation Models for Mobile Manipulation Tasks
- PAIL Seminar, Stanford University, Palo Alto, CA 10/2010
Modeling Articulated Objects for Mobile Manipulation
- Microsoft Research, Redmond, WA 04/2010
Probabilistic Robotics
- USC Distinguished Lecture Day of Robotics, University of Southern California (USC), Los Angeles, CA 03/2010
Hierarchical Optimization on Manifolds
- Technical University of Munich, Germany 04/2009
Probabilistic Approaches for Cognitive Robots

- University of Oxford, UK 03/2009
Learning Kinematic Models for Articulated Objects
- Kolloq. Mathematik und Informatik, Philipps University, Marburg, Germany 09/2008
Building Maps with Mobile Robots
- Kolloq. Mechatronik und Intelligente Sensorik, University of Bielefeld, Germany 02/2008
Extracting Semantic Information About the Environment from Sensor Data Using Machine Learning Techniques
- Invited Tutorial at ECMR 2007, Freiburg, Germany 09/2007
Mapping with Rao-Blackwellized Particle Filters
- RSS Workshop on Sensor Networks, Atlanta, GA 06/2007
Cooperative Multi-Robot Exploration
- German-American Frontiers of Engineering, Hamburg, Germany 04/2007
Probabilistic Techniques for Robot Navigation
- Fraunhofer IPA, Stuttgart, Germany 10/2006
Vision-Based Localization for Mobile Robots
- University of Southern California (USC), Los Angeles, CA 04/2006
Improving Robot Navigation by Using Semantic Place Information
- Massachusetts Institute of Technology (MIT), Boston, MA 04/2006
Information Gain-based Exploration for Mobile Robots Using Rao-Blackwellized Particle Filters
- IROS 2005 Advanced Tutorial on SLAM, Edmonton, Canada 08/2005
Rao-Blackwellized Particle Filters and Loop Closing
- Università La Sapienza, Rome, Italy 06/2005
Mapping and Exploration Using Rao-Blackwellized Particle Filters
- Carnegie Mellon University (CMU), Pittsburgh, PA 07/2002
Goal-Directed Obstacle Avoidance in Dynamic Environments Under Dynamic Constraints

Teaching Activities

- *Photogrammetry I* since 2014
University of Bonn, BSc, lecture, 5 h/week, every summer term
- *Photogrammetry II* since 2014
University of Bonn, BSc, lecture, 3 h/week, every winter term
- *Photogrammetry and Remote Sensing* since 2014
University of Bonn, MSc, lecture, 3 h/week, every winter term
- *Robot Mapping* 2013/14 & 2014/15
University of Freiburg, MSc, lecture, 4 h/week, winter term
- *Introduction to Mobile Robotics* 2007 – 2013
University of Freiburg, MSc, lecture, 4 h/week, shared teaching, summer term
- *Advanced Techniques for Mobile Robotics/Robotics II* 2009/10 – 2011/12
University of Freiburg, MSc, lecture, 4 h/week, shared teaching, winter term
- *Einführung in die Informatik (Introduction to CS)* 2007 – 2013
University of Freiburg, BSc, lecture, 4 h/week, partially shared teaching, summer term

- Other lectures (Wahlpflichtmodule), University of Bonn, MSc, 4 h/week
 - *3D Mapping* 2016/17
 - *Robot Programming using ROS* 2016/17
 - *Introduction to C++ for Image Processing* since 2015
 - *Dense Fisheye Stereo* 2015/16
 - *Autonomous Exploration for 3D Reconstruction* 2014/15
 - *Exploration of Unknown Environments with Mobile Platforms* 2014
- Master Projects, University of Bonn, MSc, 5 h/week, every term
 - *Mobile Mapping with Multi-Sensor Systems* since 2015
- *Simultaneous Localization and Mapping* 2009
Guest lecturer at the University of Zaragoza (Spain), Ph.D. course
- Practical Courses, University of Freiburg, MSc, 2 h/week, partially shared teaching
 - *People Localization* 2012/13
 - *Simultaneous Localization and Mapping* 2010/11
 - *Autonomous Slotcar Racing* 2009/08
 - *Location-based Services* 2007/08
 - *The Robot Photographer* 2004/05
- Seminars, University of Freiburg, MSc, 2 h/week, shared teaching
 - *Humanoid Robots* 2010 & 2012
 - *Probabilistic Graphical Models* 2011
 - *Robot Navigation* 2009/10
 - *Motion Planning* 2007/08

External Ph.D. Committee Memberships

- ETH Zürich, Switzerland 2018
- Queensland University of Technology, Australia 2018
- University of Hannover, Germany 2016
- University of Freiburg, Germany 2014–2017
- University of Oxford, UK 2014
- Queensland University of Technology, Australia 2014, 2018
- KTH Stockholm, Sweden 2012
- University of Sydney, Australia 2011
- Polytechnic University of Catalonia, Barcelona, Spain 2011
- University of Zaragoza, Spain 2008

Advisory Board Membership

- ILIAD – Intra-Logistics with Integrated Automatic Deployment since 2015

Services for Journals

- Senior Editor for the IEEE Robotics and Automation Letters (RA-L) since 2015
- Associate Editor for the IEEE Transactions on Robotics (T-RO) 2008-2013
- Guest Editor for the Journal of Field Robotics for the special issue on Mapping and Navigation Outdoors 2009/2010 Visual
- Reviewing
 - Journal of Geodesy (JOGE) 2015
 - ISPRS Journal of Photogrammetry and Remote Sensing 2014,2016
 - IEEE Transactions on Robotics (T-RO) since 2004
 - Autonomous Robots (AuRo) 2004-2008,2010,2011,2014
 - Int. Journal on Robotics Research (IJRR) 2006, 2008, 2009, 2011-2016
 - Robots and Autonomous Systems (RAS) since 2005
 - Journal of Field Robotics (JFR) 2007-2010
 - Artificial Intelligence 2013
 - IEEE Transactions on Mechatronics (T-MECH) 2012
 - IEEE Transactions on Autonomous Mental Development 2012
 - RSJ Advanced Robotics 2005, 2010
 - Ad Hoc Networks 2011
 - IEEE Sensors Journal 2010
 - IEEE Transactions on Systems, Man, and Cybernetics 2010
 - Journal of Artificial Intelligence Research (JAIR) 2008
 - Annals of Mathematics and Artificial Intelligence (AMAI) 2007,2013
 - Int. Journal of Pattern Recognition and Artificial Intelligence (IJPRAI) 2007

Conference Services

- General Chair
 - Int. Conf. on Unmanned Aerial Vehicles in Geomatics (UAVg) 2017
- Program Chair
 - Int. Conf. on Unmanned Aerial Vehicles in Geomatics (UAVg) 2017
 - Spatial Cognition (SC) 2012
- Area Chair
 - Robotics: Science and Systems (RSS) 2010, 2012
 - Int. Joint Conf. on Artificial Intelligence (IJCAI) 2013
- Associate Editor
 - IEEE Int. Conf. on Robotics & Automation (ICRA) 2009-2015
 - IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (IROS) since 2011
- Senior Programm Committee
 - Int. Joint Conf. on Artificial Intelligence (IJCAI) 2017
- Workshop Chair
 - Robotics: Science and Systems (RSS) 2011

- Publicity Chair
 - Spatial Cognition (SC) 2012
 - Robotics: Science and Systems (RSS) 2007
- Publication Chair
 - Robotics: Science and Systems (RSS) 2007
- Local Arrangement
 - Int. Conf. on Unmanned Aerial Vehicles in Geomatics (UAVg) 2017
 - IEEE Int. Conf. on Advanced Intelligent Mechatronics (AIM) 2007
- Conference Management System
 - Robotics: Science and Systems (RSS) 2006
 - IEEE Int. Conf. on Advanced Intelligent Mechatronics (AIM) 2007
- Program Committee
 - Robotics: Science and Systems (RSS) 2005–2015
 - Europ. Conf. on Artificial Intelligence (ECAI) 2012
 - National Conf. on Artificial Intelligence (AAAI) 2006
 - Int. Conf. on Autonomous Agents and Multiagent Systems (AAMAS) 2008
 - Int. Conf. on Advanced Robotics (ICAR) 2007, 2009
 - Int. Conf. on Intelligent Autonomous Systems (IAS) 2012
 - European Conf. on Mobile Robots (ECMR) since 2007 (biannual)
 - Spatial Cognition (SC) 2012, 2014
 - German Conf. on Artificial Intelligence (KI) 2011
 - Int. Conf. on Robot Communication and Coordination (ROBOCOMM) 2007
 - Int. Conf. on Informatics in Control, Automation, and Robotics (ICINCO) 2008
 - ACM Symp. on Applied Computing, Embedded Systems and Robotics track 2008
 - ACM Symp. on Applied Computing, Intelligent Robotics Systems track 2009
- Poster Program Committee
 - IEEE Int. Conf. on Robotics & Automation (ICRA) 2006
- Reviewing
 - Int. Conf. on Computer Vision (ICCV) 2015
 - Conf. on Computer Vision and Pattern Recognition (CVPR) 2015
 - Int. Joint Conf. on Artificial Intelligence (IJCAI) 2003, 2005, 2007, 2017
 - National Conf. on Artificial Intelligence (AAAI) 2005, 2006
 - Robotics: Science and Systems (RSS) 2005–2015
 - IEEE Int. Conf. on Robotics & Automation (ICRA) since 2003
 - IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (IROS) since 2002
 - ACM/IEEE Int. Conf. on Human-Robot Interaction (HRI) 2014
 - Int. Conf. on Field and Service Robotics (FSR) 2007
 - Annual Meeting of the Cognitive Science Society (CogSci) 2013
 - IEEE Conf. on Local Computer Networks (LCN) 2006
 - Int. Conf. on Automation and Robotics (ICAR) 2005, 2007
 - Int. Conf. on Intelligent Autonomous Systems (IAS) 2008

- European Conf. on Mobile Robots (ECMR) since 2003 (biannual)
- Int. Conf. on Social Robotics (ICSR) since 2011
- Mexican Int. Conf. on Artificial Intelligence (MICAI) 2005
- Intelligent Autonomous Vehicles (IAV) 2004, 2007
- Spatial Cognition (SC) 2004, 2006, 2008
- Robotik 2004, 2006

Workshop/Symposia Services

- Organizer
 - ICRA Workshop on “Robotic Vision and Action in Agriculture: the future of agri-food systems and its deployment to the real-world” 2018
 - ICRA Workshop on “What Sucks in Robotics and How to Fix It - Lessons Learned from Building Complex Systems” 2014
 - FAIM Workshop on Cognitive Technical Systems 2014
 - RSS Workshop on Robotic Exploration, Monitoring, and Information Collection 2013
 - ICRA Workshop on Visual Mapping and Navigation in Outdoor Environments 2009
- Program Committee
 - RSS Workshop on multiple view geometry in robotics (MVGRO) 2014, 2015
 - ICRA Workshop Proposal “Got rejected? Let the community review your paper!” 2015
 - Int. Workshop on the Algorithmic Foundations of Robotics (WAFR) 2012
 - Starting Artificial Intelligence Research Symposium (STAIRS) 2012
 - RSS Workshop on Long-term Operation in Changing Environments 2012
 - ICCV Workshop on Challenges and Opportunities in Robot Perception 2011
 - ICRA Workshop on Intelligent Transportation Systems 2010
 - ICRA Workshop on Visual Mapping and Navigation in Outdoor Environments 2009
 - ICRA Workshop on Safe Navigation in Open and Dynamic Environments – Application to Autonomous Vehicles 2009
 - RSS Workshop Inside Data Association 2008
 - IROS Workshop on Planning, Perception and Navigation for Intelligent Vehicles 2008, 2015, 2017

Other Reviewing Services

- Fonds de recherche du Québec, FRQNT Program 2017
- National Research Foundation South Africa 2016
- U.S.-Israel Binational Science Foundation 2015
- European Commission, ERC Grants 2014, 2017
- Deutsche Forschungsgemeinschaft (DFG) 2014, 2016
- Alexander von Humboldt Foundation 2014, 2015
- Netherlands Organisation for Scientific Research (NWO) 2010, 2013
- Microsoft Research Faculty Fellowships 2011
- Springer STAR series 2010

Publication List

Cyrill Stachniss

Peer-Reviewed Journal/Magazine Articles

- [1] E. Palazzolo and C. Stachniss. Effective Exploration for MAVs Based on the Expected Information Gain. *Drones*, 2(1), 2018.
- [2] L. Nardi and C. Stachniss. User preferred behaviors for robot navigation exploiting previous experiences. In *Journal on Robotics and Autonomous Systems (RAS)*, 2017.
- [3] N. Chebrolu, P. Lottes, A. Schaefer, W. Winterhalter, W. Burgard, and C. Stachniss. Agricultural robot dataset for plant classification, localization and mapping on sugar beet fields. *The Int. Journal of Robotics Research (IJRR)*.
- [4] J. Jung, C. Stachniss, and C. Kim. Automatic room segmentation of 3d laser data using morphological processing. *ISPRS International Journal of Geo-Information*, 2017.
- [5] I. Bogoslavskyi and C. Stachniss. Efficient online segmentation for sparse 3d laser scans. *PFG – Journal of Photogrammetry, Remote Sensing and Geoinformation Science*, pages 41–52, 2017.
- [6] O. Vysotska and C. Stachniss. Improving slam by exploiting building information from publicly available maps and localization priors. *PFG – Journal of Photogrammetry, Remote Sensing and Geoinformation Science*, 85(1):53–65, 2017.
- [7] C. Merfels and C. Stachniss. Sensor fusion for self-localisation of automated vehicles. *PFG – Journal of Photogrammetry, Remote Sensing and Geoinformation Science*, 2017.
- [8] P. Lottes, M. Hoferlin, S. Sanders, and C. Stachniss. Effective vision-based classification for separating sugar beets and weeds for precision farming. *Journal of Field Robotics*, 34(6):1160–1178, 2017.
- [9] N. Abdo, C. Stachniss, L. Spinello, and W. Burgard. Organizing objects by predicting user preferences through collaborative filtering. *The Int. Journal of Robotics Research (IJRR)*, 2016.
- [10] O. Vysotska and C. Stachniss. Lazy data association for image sequences matching under substantial appearance changes. *IEEE Robotics and Automation Letters (RA-L)*, 1(1):1–8, 2016.
- [11] J. Schneider, C. Stachniss, and W. Förstner. On the accuracy of dense fisheye stereo. *IEEE Robotics and Automation Letters (RA-L)*, 1(1):227–234, 2016.
- [12] S. Osswald, M. Bennewitz, W. Burgard, and C. Stachniss. Speeding-up robot exploration by exploiting background information. *IEEE Robotics and Automation Letters (RA-L)*, 2016.
- [13] D. Perea Ström, I. Bogoslavskyi, and C. Stachniss. Robust exploration and homing for autonomous robots. *Journal on Robotics and Autonomous Systems (RAS)*, 2016. In press.
- [14] Ch. Beekmans, J. Schneider, T. Laebe, M. Lennefer, C. Stachniss, and C. Simmer. Cloud photogrammetry with dense stereo for fisheye cameras. *Atmospheric Chemistry and Physics*, 16:14231–14248, 2016.
- [15] Pratik Agarwal, Wolfram Burgard, and Cyrill Stachniss. A survey of geodetic approaches to mapping and the relationship to graph-based slam. *IEEE Robotics & Automation Magazine*, 2014.

- [16] R. Kümmerle, M. Ruhnke, B. Steder, C. Stachniss, and W. Burgard. Autonomous robot navigation in highly populated pedestrian zones. *Journal of Field Robotics*, 2014.
- [17] B. Frank, C. Stachniss, R. Schmedding, M. Teschner, and W. Burgard. Learning object deformation models for robot motion planning. *Journal on Robotics and Autonomous Systems (RAS)*, 2014.
- [18] C. Stachniss and W. Burgard. Particle filters for robot navigation. *Foundations and Trends in Robotics*, 3(4):211–282, 2012. Published 2014.
- [19] W. Burgard and C. Stachniss. Gestatten, Obelix! *Forschung – Das Magazin der Deutschen Forschungsgemeinschaft*, 1, 2013. In German, invited.
- [20] D. Maier, C. Stachniss, and M. Bennewitz. Vision-based humanoid navigation using self-supervised obstacle detection. *The Int. Journal of Humanoid Robotics (IJHR)*, 2013.
- [21] K.M. Wurm, C. Dornhege, B. Nebel, W. Burgard, and C. Stachniss. Coordinating heterogeneous teams of robots using temporal symbolic planning. *Autonomous Robots*, 2013.
- [22] K.M. Wurm, H. Kretschmar, R. Kümmerle, C. Stachniss, and W. Burgard. Identifying vegetation from laser data in structured outdoor environments. *Journal on Robotics and Autonomous Systems (RAS)*, 2013.
- [23] A. Hornung, K.M. Wurm, M. Bennewitz, C. Stachniss, and W. Burgard. OctoMap: An efficient probabilistic 3d mapping framework based on octrees. *Autonomous Robots*, 34:189–206, 2013.
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