

Cyrill Stachniss

PROFESSOR · PHOTOGRAMMETRY & ROBOTICS

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Research Interests

Main Areas Robotics; photogrammetry — perception and state estimation; navigation; simultaneous localization and mapping; semantic scene interpretation; learning

Applications autonomous cars; agricultural robotics; service robotics

Education

Habilitation and *venia legendi* in Computer Science

THESIS: *Spatial Modeling and Robot Navigation*

University of Freiburg

11/2009

Dr. rer. nat. (Ph.D.) in Computer Science – *summa cum laude* / mit Auszeichnung

THESIS: *Exploration and Mapping with Mobile Robots*

University of Freiburg

04/2006

Diplom (M.Sc.) in Computer Science – *summa cum laude* / mit Auszeichnung

THESIS: *Goal-directed Obstacle Avoidance for Mobile Robots in Dynamic Environments*

University of Freiburg

08/2002

Vordiplom in Computer Science and in Physics

DEGREE IN COMPUTER SCIENCE: 03/200; DEGREE IN PHYSICS: 11/1999

University of Marburg

1999/2000

Academic Positions

Visiting Professor in Engineering (in parallel to the appointment at Bonn University)

DEPARTMENT OF ENGINEERING SCIENCE, UNIVERSITY OF OXFORD

University of Oxford

02/2022-02/2025

Full Professor (W3) and head of the Photogrammetry & Robotics Lab

PHOTOGRAMMETRY & ROBOTICS LAB, INSTITUTE OF GEODESY AND GEOINFORMATION, UNIVERSITY OF BONN

University of Bonn

since 04/2014

Lecturer (Privatdozent und Akademischer Rat, A13)

LAB FOR AUTONOMOUS INTELLIGENT SYSTEMS, DEPARTMENT OF COMPUTER SCIENCE, UNIVERSITY OF FREIBURG

University of Freiburg

10/2010-03/2014

Deputy professorship (Lehrstuhlvertretung, W3)

LAB FOR AUTONOMOUS INTELLIGENT SYSTEMS, DEPARTMENT OF COMPUTER SCIENCE, UNIVERSITY OF FREIBURG

University of Freiburg

10/2009-09/2010

Guest lecturer

DIPARTIMENTO INFORMÁTICA E INGENIERÍA DE SISTEMAS, UNIVERSITY OF ZARAGOZA

University of Zaragoza

Spring 2009

Akademischer Rat (A13)

LAB FOR AUTONOMOUS INTELLIGENT SYSTEMS, DEPARTMENT OF COMPUTER SCIENCE, UNIVERSITY OF FREIBURG

University of Freiburg

10/2007-09/2009

Postdoc

LAB FOR AUTONOMOUS INTELLIGENT SYSTEMS, DEPARTMENT OF COMPUTER SCIENCE, UNIVERSITY OF FREIBURG

University of Freiburg

10/2006-09/2007

Senior researcher

AUTONOMOUS SYSTEMS LAB, DEP. OF MECHANICAL AND PROCESS ENGINEERING, ETH ZURICH

ETH Zurich

05/2006-10/2006

Ph.D. student and research associate

LAB FOR AUTONOMOUS INTELLIGENT SYSTEMS, DEPARTMENT OF COMPUTER SCIENCE, UNIVERSITY OF FREIBURG

University of Freiburg

12/2002-04/2006

Citation Indices

h-index: 69 · **i10-index: 212** · **Number of citations: 26 766** · all indices determined using GoogleScholar on Mar 25

Honors & Awards

Finalist – IROS 2022 Best Agri-Robotics Paper for <i>Contrastive 3D Shape Completion and Reconstruction for Agricultural Robots using RGB-D Frames</i>	2022
IEEE Robotics & Automation Magazine Best Paper Award for 2021 for <i>Building an Aerial-Ground Robotics System for Precision Farming: An Adaptable Solution</i>	2022
ICRA Outstanding Automation Paper Award for <i>Precise 3D Reconstruction of Plants from UAV Imagery Combining Bundle Adjustment and Template Matching</i>	2022
Best Result on the Segmenting and Tracking Every Point and Pixel Workshop at ICCV 2021 for <i>Contrastive Instance Association for 4D Panoptic Segmentation</i>	2021
Faculty Award 2021 for Geodesy for <i>Adaptive Robust Kernels for Non-Linear Least Squares Problems</i> (N. Chebrolu et al., RAL)	2021
Best Agri-Robotics Paper at IROS 2020 for <i>Unsupervised Domain Adaptation for Transferring Plant Classification Systems to New Field Environments, Crops, and Robots</i>	2020
Finalist – RSS 2020 Best Systems Paper for <i>OverlapNet: Loop Closing for LiDAR-based SLAM</i>	2020
Faculty Award 2019 for Geodesy for <i>A General Framework for Flexible Multi-cue Photometric Point Cloud Registration</i> (I. Bogoslavskyi et al., ICRA)	2019
Best Demo Award of the ICRA 2018 Workshop on <i>Multimodal Robot Perception: Perception, Inference, and Learning for Joint Semantic, Geometric, and Physical Understanding</i>	2018
Finalist – ICRA 2018 Best Service Paper for <i>Real-Time Semantic Segmentation of Crop and Weed for Precision Agriculture Robots Leveraging Background Knowledge in CNN</i>	2018
Finalist – IROS 2017 Best Application Paper for <i>Semi-Supervised Online Visual Crop and Weed Classification in Precision Farming Exploiting Plant Arrangement</i>	2017
ICRA 2017 Best Automation Paper for <i>UAV-Based Crop and Weed Classification for Smart Farming</i>	2017
Finalist – ICRA 2015 Best Service Robotics Paper for <i>Robot, Organize my Shelves! Tidying up Objects by Predicting User Preferences</i>	2015
Faculty Teaching Award (Fakultätslehrpreis) for the lecture <i>Robot Mapping</i> taught in winter term 2012/13	2013
IEEE RAS Early Career Award for my contributions to mobile robot exploration and SLAM	2013
ICRA 2013 Best Associate Editor Award	2013
Finalist – ICRA 2013 Best Student Paper for <i>Robust Map Optimization Using Dynamic Covariance Scaling</i>	2013
Robotics: Science and Systems Early Career Spotlight	2012
Microsoft Research Faculty Fellow	2010
EURON Georges Giralt Award for the best robotics thesis in Europe defended in 2006	2008
Wolfgang-Gentner Award for my Ph.D. thesis <i>Exploration and Mapping with Mobile Robots</i>	2006
Finalist – ICRA 2005 Best Student Paper for <i>Supervised Learning of Places from Range Data using AdaBoost</i>	2005
ICASE-IROS 2004 Best Paper Award on Application for <i>Grid-based FastSLAM and Exploration with Active Loop Closing</i>	2005
Förderpreis des Vereins Deutscher Ingenieure (VDI) for my Master's thesis	2003

Research Projects

Research Project Coordination Activities

Spokesperson of the DFG Cluster of Excellence EXC 2070 PhenoRob	2019-2025
Spokesperson of the DFG Research Unit 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 (member of the board of directors) of 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

Principal Investigator of Funded Research Projects

<p>Lamarr Institute – Lamarr Institute for Machine Learning and Artificial Intelligence Principal investigator, institutionally funded by the Federal Ministry of Education and Research (BMBF) and the State of North Rhine-Westphalia as part of the German government’s AI strategy.</p>	<i>since 2022</i>
<p>Exploiting Repeated Data Acquisitions for Improved Long-term Monitoring Capabilities, project within the DFG AI Research Unit FOR 5351 “AID4Crops” – Automation and AI for Monitoring and Decision Making of Horticultural Crops Principal investigator, funded by the DFG, STA 1051/5-1.</p>	<i>2023-2027</i>
<p>DIGIFOREST – Digital Analytics and Robotics for Sustainable Forestry Principal investigator, funded by the European Commission within Horizon Europe.</p>	<i>2022-2026</i>
<p>DFG Cluster of Excellence EXC 2070 PhenoRob – Robotics and Phenotyping for Sustainable Crop Production Spokesperson and principal investigator, funded by the DFG, EXC 2070</p>	<i>2019-2025</i>
<p>Harmony – Enhancing Healthcare with Assistive Robotic Mobile Manipulation Principal investigator, funded by the European Commission within H2020.</p>	<i>2021-2024</i>
<p>RegisTer – Einsatz von Künstlicher Intelligenz und optischen Sensoren bei der Sortenbeschreibung des Bundessortenamtes in der Register- und Wertprüfung im Rahmen der Sortenzulassung bei Zuckerrüben Principal investigator, funded by the Bundesanstalt für Landwirtschaft und Ernährung (BLE).</p>	<i>2021-2024</i>
<p>Determining Plant Performance Indicators with Agricultural Robots Principal investigator, funded by the Robert Bosch GmbH.</p>	<i>2019-2020</i>
<p>Exploration for Micro Aerial Vehicles, project within the Research Unit FOR 1505 “Mapping on Demand” Principal investigator, funded by the DFG.</p>	<i>2016-2019</i>
<p>Incremental Mapping from Image Sequences, project within the Research Unit FOR 1505 “Mapping on Demand” Principal investigator, funded by the DFG.</p>	<i>2015-2018</i>
<p>Robust Direct Georeferencing of Lightweight UAV, project within the Research Unit FOR 1505 “Mapping on Demand” 2nd principal investigator (Mitantragsteller), funded by the DFG.</p>	<i>2015-2018</i>
<p>Flourish – Aerial Data Collection and Analysis, and Automated Ground Intervention for Precision Farming Principal investigator, funded by the European Commission within H2020.</p>	<i>2015-2018</i>
<p>RobDREAM – Optimising Robote Performance While Dreaming Principal investigator, funded by the European Commission within H2020.</p>	<i>2015-2018</i>
<p>EUROPA2 – European Robotic Pedestrian Assistant 2.0. Vice-coordinator and principal investigator, funded by the European Commission within FP7.</p>	<i>2013-2016</i>
<p>ROVINA – Mobile Robots for Exploration, Digital Preservation and Visualization of Archaeological Sites Coordinator and principal investigator, funded by the European Commission within FP7.</p>	<i>2013-2016</i>
<p>AdvancedEDC – Advanced Intracortical Neural Probes with Electronic Depth Control. Principal investigator, funded by the DFG with in the Cluster of Excellence BrainLinks—BrainTools.</p>	<i>2014-2015</i>
<p>STAMINA – Sustainable and Reliable Robotics for Part Handling in Manufacturing Automation Principal investigator, funded by the European Commission within FP7, participation ended with the move to the University of Bonn in 2014.</p>	<i>2013-2014</i>
<p>Industry project on the automatic evaluation of an obstacle detection systems for cars. Principal investigator, funded by ifm automotive GmbH.</p>	<i>2012</i>
<p>MultiBot – Cooperative Human-Robot Exploration Principal investigator (Mitantragsteller), within the 3rd phase of the SFB/TR 8 “Spatial Cognition”, funded by the DFG.</p>	<i>2011-2014</i>
<p>TAPAS – Robotics-enabled Logistics and Assistive Services for the Transformable Factory of the Future Principal investigator, funded by the European Commission within FP7.</p>	<i>2010-2014</i>
<p>First-MM – Flexible Skill Acquisition and Intuitive Robot Tasking for Mobile Manipulation in the Real World Vice-coordinator and principal investigator, funded by the European Commission within FP7.</p>	<i>2009-2013</i>
<p>EUROPA – European Robotic Pedestrian Assistant Vice-coordinator and principal investigator, funded by the European Commission within FP7.</p>	<i>2009-2012</i>
<p>Industry project on service robotics in industrial applications Principal investigator, funded by MT Robotik AG.</p>	<i>2012</i>
<p>MultiBot – Cooperative Multi-Robot Exploration Principal investigator (Mitantragsteller), within the 2nd phase of the SFB/TR 8 “Spatial Cognition”, funded by the DFG.</p>	<i>2007-2010</i>
<p>RAWSEEDS – Robotics Advancements through Web-publishing of Sensorial and Elaborated Extensive Data Sets Principal investigator, funded by the European Commission within FP7.</p>	<i>2007-2009</i>
<p>Industry project on navigation and service robotics Principal investigator, funded by Toyota Europe.</p>	<i>2007-2009</i>

Industry project on robust simultaneous localization and mapping
Principal investigator, funded by Toyota Europe.

2006

Co-Founded Companies

Pheno-Inspect GmbH located in Oberhausen, Germany

2020

Escarda Technologies GmbH located in Berlin, Germany

2019

DeepUp GmbH / DeepUp Beteiligungs UG located in Bonn, Germany

2019

Consultancy Activities for Companies

Several advisory activities under NDA

N/A

KUKA Roboter / KUKA Laboratories, Augsburg, Germany

2008-2014

Numovis Inc., Menlo Park, CA, USA

2010-2011

MT Robotik AG, Zwingen, Switzerland

2008-2010

Further Academic Activities

42 Wolfsburg Fellow

since 2021

ISPRS WG II/1 – Chair of the Working Group II/1 on Image Orientation of the Intl. Society for Photogrammetry and Remote Sensing

2017-2021

Transdisciplinary Research Area (TRA) – Set up of the TRA “Innovation and Technology for Sustainable Future” within the Excellence Strategy of the University of Bonn together with Joachim von Braun. Subsequently, member of the Steering Committee of the TRA.

2017-2020

Study Commission – Chair (Vorsitzender) of the Study Commission of the Institute of Geodesy and Geoinformation

since 2020

Research Commission – Member of the Research Commission (Forschungskommission) of the Faculty of Agriculture

since 2019

Tenure Track Evaluation Commission – Member of the Tenure Track Commission of the Faculty of Agriculture

since 2019

Recruitment Committees – I have been a member in approx. 12 internal and 8 external recruitment committees (Berufungskommissionen)

since 2014

Institute of Geodesy and Geoinformation – Deputy managing director

2015-2017

External Ph.D. Committee Memberships

University of Oxford, UK

2014, 2021, 2023

Wageningen University, Netherlands

2023

University Rennes, France

2022

TU Berlin, Germany

2022

ETH Zurich, Switzerland

2018, 2019, 2021

RWTH Aachen, Germany

2020, 2021

La Sapienza University of Rome, Italy

2017, 2019-2021

University of Pisa, Italy

2021

University of Lincoln, UK

2019

Queensland University of Technology, Australia

2014, 2018

University of Freiburg, Germany

2014-2017

University of Hannover, Germany

2016

KTH Stockholm, Sweden

2012

University of Sydney, Australia

2011

Polytechnic University of Catalonia, Barcelona, Spain

2011

University of Zaragoza, Spain

2008

Teaching at the University of Bonn

Photogrammetry I – University of Bonn, BSc, lecture, 5 h/week, summer term	<i>since 2014</i>
Photogrammetry II – University of Bonn, BSc, lecture, 3 h/week, winter term	<i>since 2014</i>
Photogrammetry and Remote Sensing – University of Bonn, MSc, lecture, 3 h/week, winter term	<i>since 2014</i>
Mobile Sensing and Robotics I – University of Bonn, MSc, lecture, 3 h/week, winter term	<i>since 2017</i>
Mobile Sensing and Robotics II – University of Bonn, MSc, lecture, 3 h/week, summer term	<i>since 2017</i>
Modern C++ for Computer Vision – University of Bonn, MSc, lecture & project, 4 h/week	<i>since 2015</i>
Techniques for Self-Driving Cars – University of Bonn, MSc, lecture & project, 4 h/week	<i>since 2020</i>
Robot Programming using ROS – University of Bonn, MSc, lecture & project, 4 h/week	<i>2016-2019</i>
Mobile Sensing and Robotics Project – University of Bonn, master project, MSc, every term	<i>since 2018</i>
Mobile Mapping with Multi-Sensor Systems Project – University of Bonn, master project, Msc every term	<i>2015-2017</i>
3D Mapping – University of Bonn, MSc, block module, 4 h/week	<i>2016-2017</i>
Several guest lectures, small lectures & practical courses – University of Bonn	<i>2014-2018</i>

Teaching at the University of Freiburg

Robot Mapping – University of Freiburg, MSc, lecture, 4 h/week, winter term	<i>2012-2013</i>
Introduction to Mobile Robotics – University of Freiburg, MSc, lecture, 4 h/week, shared teaching, summer term	<i>2007-2013</i>
Advanced Robotics/Robotics II – University of Freiburg, MSc, lecture, 4 h/week, shared teaching, winter term	<i>2010-2012</i>
Introduction to Computer Science – University of Freiburg, BSc, lecture, 4 h/week, shared teaching, summer term	<i>2007-2013</i>
Several practical courses and seminars – University of Freiburg	<i>2007-2013</i>

Online Teaching Examples (Links to Youtube Videos)

Self-Driving Cars: An Introduction – Link: https://www.youtube.com/watch?v=EBF1mHqgezM	<i>2020</i>
Mobile Robotics: Monte-Carlo Localization – Link: https://www.youtube.com/watch?v=MsY1ueVDLlO	<i>2020</i>
Mobile Robotics: A* Motion Planning – Link: https://www.youtube.com/watch?v=HR1TNa8Lp7w	<i>2020</i>
5 Min: SIFT Features Explained in 5 Minutes – Link: https://www.youtube.com/watch?v=4AvTMVD9ig0	<i>2020</i>
5 Min: Bundle Adjustment Explained in 5 Minutes – Link: https://www.youtube.com/watch?v=lmj2Jk5t160	<i>2020</i>
Photogrammetric CV: Bundle Adjustment – Link: https://www.youtube.com/watch?v=sobyKHwgBOY	<i>2020</i>
Photogrammetry I: Introduction (in class room) – Link: https://www.youtube.com/watch?v=_mOG_lpPnpY	<i>2015</i>
SLAM Course: Bayes Filter (in class room) – Link: https://www.youtube.com/watch?v=5Pu558YtjYM	<i>2013</i>

Invited Talks

Plenary and Keynote Talks

IPPS – Keynote speech at the Int. Plant Phenotyping Symposium, Wageningen, NL	<i>09/2022</i>
Future of Construction – Keynote speech at the Future of Construction Symposium, Zurich, CH	<i>06/2022</i>
IV Workshop – Keynote speech at IEEE Intelligent Vehicles Symposium Workshop on 3D Deep Learning for Autonomous Driving, Aachen, DE	<i>06/2022</i>
DGR Tage – Keynote speech at Deutsche Gesellschaft für Robotik, remote	<i>10/2021</i>
CEVVE Conference – Keynote speech at the Intl. Conf. on Electric Vehicle and Vehicle Engineering, remote	<i>09/2021</i>
ITCS Workshops – Invited talk at the IEEE Int. Conf. on Intelligent Transportation Systems Workshops, remote	<i>09/2020</i>
ECCV Workshops – Keynote speech at the Europ. Conf. on Computer Vision Workshops, remote	<i>08/2020</i>
ICRA Conference – Keynote speech at the IEEE Int. Conf. on Robotics & Automation, remote	<i>06/2020</i>
BMVA Technical Meeting – Keynote speech at the BMVA Technical Meeting, London, UK	<i>07/2018</i>
ISPRS Congress – Keynote speech at the XXIII ISPRS Congress, Prague, CZ	<i>07/2016</i>
IAS Conference – Plenary talk at the Int. Conf. on Intelligent Autonomous Systems, Padua, IT	<i>07/2014</i>

Other Invited Talks (since 2010)

Carnegie Mellon University, guest lecture, remote	03/2023
University of Oxford, Department of Engineering Science, Oxford, UK	02/2023
University of Oxford, EPSRC Centre for Doctoral Training in Autonomous Intelligent Machines and Systems, remote	01/2023
ETH Distinguished Series in Robotics, Systems and Controls, Zurich, CH	12/2022
Poznan University of Technology, PhD school guest lecture, remote	12/2022
IROS Workshop on Perception and Navigation for Autonomous Robotics in Unstructured Environments, Kyoto, JP	10/2022
CDA Distinguished Speaker Seminar, University of Illinois at Urbana-Champaign, remote	03/2022
42Wolfsburg, Wolfsburg/remote	02/2022
Carnegie Mellon University, Tartan SLAM Series, remote	10/2021
DAGM GCPR 2021 Workshop on Scene Understanding in Unstructured Environments, remote	09/2021
RWTH AI Symposium, Aachen, DE	09/2021
ECMR Workshop on Agricultural Robotics and Automation, remote	08/2021
DAAD International Summer School on Agricultural Robotics, remote	08/2021
Robotics Summer School on SLAM, remote	07/2021
Worcester Polytechnic Institute, remote	11/2020
GeoDIALOG, Bonn, DE	12/2019
University of Lincoln CS Seminar, Lincoln, UK	12/2019
Forschungsklausur der Universität Bonn, DE	12/2019
Symposium Bioeconomy Science Center, Cologne, DE	11/2019
DFG Rundgespräch Landwirtschaft, Berlin, DE	09/2019
TU Dresden Geodetic Colloquium, Dresden, DE	07/2019
Sommerfest der Universität Bonn, Bonn, DE	06/2019
Pontifical Academy of Sciences and of Social Sciences (PAS/PASS), Vatican, VI	05/2019
Forschungszentrum Jülich, IBG-2 Seminar, Jülich, DE	04/2019
UnRAVel GRK Workshop of RWTH Aachen, DE	02/2019
University Club, Bonn, DE	01/2019
Berlin Industrial Group, Berlin, DE	01/2019
ICRA 2018 workshop on long-term autonomy and deployment of intelligent robots in the real world, Brisbane, AUS	05/2018
Postbank Digi-Talk Series, Bonn, DE	04/2018
Universitätsgesellschaft Bonn, DE	04/2018
Core-to-Core Intl. Symposium "3D Lab-Exchange Program", Bonn, DE	03/2018
University of Pisa, IT	10/2017
Festveranstaltung 25 Jahre ZALF, Müncheberg, DE	07/2017
DVW Seminar Vermessung mit unbemannten Flugsystemen, Bonn, DE	02/2016
Tag der Geodäsie 2015, Bonn, DE	05/2015
DVW Seminar on Multi-Sensor-Systems, Hamburg, DE	09/2014
Abschlusskolloquium SFB/TR-8 Spatial Cognition, Bremen, DE	09/2014
Tag der Geodäsie 2014, Bonn, DE	05/2014
University of Stuttgart, DE	02/2014
KUKA Tec Camp, Augsburg, DE	02/2014
Forum für Mathematik und Naturwissenschaften, Freiburg, DE	05/2013
Meeting of the German National Academy of Sciences Leopoldina, Section 2, DE	02/2013
Technical University of Cottbus, DE	02/2013
Radboud University Nijmegen, NL	02/2013
University of Bonn, DE	01/2013
Robotics: Science and Systems Early Carrer Spotlight, Sydney, AUS	07/2012
RSS Workshop on Stochastic Motion Planning, Sydney, AUS	07/2012
DGR-Tage 2011, Karlsruhe, DE	10/2011
University of Amsterdam, NL	10/2011
Georgia Tech, Atlanta, GA, USA	09/2011
Int. Symposium on Robotics Research (ISRR), Flagstaff, AZ, USA	07/2011
Università La Sapienza, Rome, IT	03/2011
PAIL Seminar, Stanford University, Palo Alto, CA	10/2010
Microsoft Research, Redmond, WA	04/2010

Services for Journals

Editorial Activities

Senior Editor for the IEEE Robotics and Automation Letters	2015-2019
Supervising Editor for Special Issue on Precision Agricultural Robotics and Autonomous Farming Technologies of the IEEE Robotics and Automation Letters	2018
Guest Editor for the Journal of Field Robotics for the special issue on Agricultural Robotics	2018/2019
Associate Editor for the IEEE Transactions on Robotics	2008-2013
Guest Editor for the Journal of Field Robotics for the special issue on Agricultural Robotics (Part 1 & 2)	2019/2020
Guest Editor for the Journal of Field Robotics for the special issue on Visual Mapping and Navigation Outdoors	2009/2010

Reviewing

Ad Hoc Networks, 2011; Annals of Mathematics and Artificial Intelligence, 2007, 2013; Artificial Intelligence, 2013; Autonomous Robots, 2004-2008, 2010, 2011, 2014; Computers and Electronics in Agriculture, 2020; IEEE Transactions on Autonomous Mental Development, 2012; IEEE Transactions on Mechatronics, 2012; IEEE Transactions on Robotics, 2004-2015; IEEE Transactions on Systems, Man, and Cybernetics, 2010; IEEE Robotics and Automation Letters, since 2019; IEEE Sensors Journal, 2010; Int. Journal on Robotics Research, 2006, 2008, 2009, 2011-2016; 2019; Int. Journal of Pattern Recognition and Artificial Intelligence, 2007; ISPRS Journal of Photogrammetry and Remote Sensing, 2014, 2016; Journal of Artificial Intelligence Research, 2008; Journal of Geodesy, 2015; Journal of Field Robotics, 2007-2010; since 2018 PLOS One, 2020; Robots and Autonomous Systems, 2005-2015, 2018; RSJ Advanced Robotics, 2005, 2010;

Services for Conferences

Chair Duties

General Chair Int. Conf. on Digital Technologies for Sustainable Crop Production (DIGICROP)	2020, 2022
General Chair Int. Conf. on Unmanned Aerial Vehicles in Geomatics (UAVg)	2017
Program Chair Int. Conf. on Digital Technologies for Sustainable Crop Production (DIGICROP)	2020, 2022
Program Chair Int. Conf. on Unmanned Aerial Vehicles in Geomatics (UAVg)	2017
Program Chair Spatial Cognition (SC)	2012
Area Chair Robotics: Science and Systems (RSS)	2010, 2012
Area Chair Int. Joint Conf. on Artificial Intelligence (IJCAI)	2013
Senior Programm Committee IEEE Int. Conf. on Robotics & Automation (ICRA)	2022
Senior Programm Committee Int. Joint Conf. on Artificial Intelligence (IJCAI)	2017
Associate Editor IEEE Int. Conf. on Robotics & Automation (ICRA)	2009-2015
Associate Editor IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (IROS)	2011-2017, 2020
Exhibition Chair European Conference on Mobile Robots (ECMR)	2021
Workshop Chair , Robotics: Science and Systems (RSS)	2011
Publicity Chair , Spatial Cognition (SC)	2012
Awards Committee , IEEE Int. Conf. on Robotics & Automation (ICRA)	2022
Publicity Chair , Robotics: Science and Systems (RSS)	2007
Publication Chair , Robotics: Science and Systems (RSS)	2007
Local Arrangement Chair , Int. Conf. on Unmanned Aerial Vehicles in Geomatics (UAVg)	2017

Program Committee Memberships

AAAI 2006; AMAS 2008; ECAI 2012; ECMR, since 2007, biannual; GCPR/DAGM 2021; IAS 2012; ICAR 2007-2009; INCINCO 2008; KI 2011; ROBOCOM 2007; RSS 2005-2015, 2020; SAC 2008, 2009; SC 2012, 2014;

Reviewing

AAAI 2005, 2006; ACCV 2022; CogSci 2013; CVPR 2015; ECMR, since 2003, biannual; FSR 2007; GCPR/DAGM 2018, 2021; HRI 2014; IAS 2008; IAV 2004, 2007; ICAR 2005, 2007; ICCV 2015; ICRA, since 2003; ICSR 2011; IJCAI 2003, 2005, 2007, 2017; IROS, since 2002; LCN 2006; MI-CAI 2005; RSS, 2005-2015, 2019, 2020; Robotik 2004, 2006; SC 2004, 2006, 2008;

Workshop/Symposia Organization

ICRA Workshop on “Agricultural Robotics and Automation”	2022
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

Other Reviewing Activities

EC – European Commission, Horizon Europe Project Reviewing	2022
Professorships – External Member of or Reviewer for Prof. Recruitment Committees (9 times)	2016/18-22
DFG – Deutsche Forschungsgemeinschaft, SFBs	2019
DFG – Deutsche Forschungsgemeinschaft, SPPs	2018
DFG – Deutsche Forschungsgemeinschaft, Sachbeihilfen	2014/16/18-21
ERC – European Research Council, ERG Grants	2014/17/18/22
ESPRC – Engineering and Physical Sciences Research Council	2018
FRQ – Les Fonds de recherche du Québec, FRQNT Program	2017
NRFSA – National Research Foundation South Africa	2016
BSF – U.S.-Israel Binational Science Foundation	2015
AvH – Alexander von Humboldt Foundation, Professorships	2014/15
NWO – Netherlands Organisation for Scientific Research	2010/13
Microsoft – MS Research Faculty Fellowships	2011
Springer – STAR series books	2010

Peer-Reviewed Journal/Magazine Articles

- [1] J. Weyler, T. Läbe, F. Magistri, J. Behley, and C. Stachniss. Towards Domain Generalization in Crop and Weed Segmentation for Precision Farming Robots. *IEEE Robotics and Automation Letters (RA-L)*, 2023.
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- [3] R. Marcuzzi, L. Nunes, L. Wiesmann, J. Behley, and C. Stachniss. Mask-Based Panoptic LiDAR Segmentation for Autonomous Driving. *IEEE Robotics and Automation Letters (RA-L)*, 8(2):1141–1148, 2023.
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