BIOGRAPHICAL SKETCH

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NAME: Marian Himstedt

eRA COMMONS USER NAME (credential, e.g., agency login): mhimstedt

POSITION TITLE: Postdoctoral researcher at the University of Lübeck (Department Medical Informatics, Medical Deep Learning Lab)

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion Date MM/YYYY	FIELD OF STUDY
University of Lübeck, Germany	PhD	08/2018	Robotics and Automation
University of Applied Sciences Dresden, Germany	BSc	01/2011	Computer Science

A. Personal Statement

I'm a passionate researcher with strong interests in methods and applications at the crossing of computer vision, machine learning, robotics and medicine. A high motivation for technologies contributing to a better quality of life and health has been significantly driving my personal research in recent years. Prior to returning to research in 2021, I worked in industry and industry-related institutes in the field of localization and mapping (robotics) as well as R&D for medical devices related to radiation therapy. I also lead multiple projects with external partners and (co-) supervised multiple PhD and master students.

B. Positions, Scientific Appointments, and Honors

Positions:

2021 – Present Postdoctoral researcher
Institute for Medical Informatics, University of Lübeck, Germany

2018 – 2021 Research Scientist
Fraunhofer MEVIS, Lübeck, Germany

2017 – 2018 Research engineer
SICK AG, Hamburg, Germany

2013 – 2017 Research assistant
Institute for Computer Engineering, University of Lübeck, Germany

2011 – 2013 Research scientist
University of Applied Sciences Dresden, Germany

2010 – 2011 Research intern
Centre for Autonomous, University of Technology, Sydney, Australia

Awards:

2010 DAAD scholarship for completing final thesis project abroad

C. Contributions to Science

Publications:

[1] Marian Himstedt, Stefanie Häger, Stefan Heldmann, Andreas Petersik, Erich Zähringer, Heiko Gottschling, Manuel Schröder, Thomas Lieth, Jan Modersitzki. DRR to C-arm X-Ray Image Translation with Application to Trauma Surgery. Computer Assisted Radiology and Surgery (CARS), 2021

[2] Marian Himstedt, Alexander Derksen, Nils Papenberg, Jonas Honegger, Benjamin Haas, Tomasz Morgas, Nikola Cihoric, Supriya Chopra, Akshay Mangaj, Jamema Swamidas: Deformable Image Registration using Structure Guidance for Dose Accumulation. International Conference on the Use of Computers in Radiation Therapy (ICCR), Montreal, Canada, 2019

[3] Marian Himstedt, Ulrich Behrje, Erik Maehle: Autonomous Warehouse Navigation using 3D Time- of-Flight Cameras. IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Workshop on Robotics for Logistics in Warehouses and Environments Shared with Humans, Madrid, Spain, 2018

[4] Ulrich Behrje, Marian Himstedt, Erik Maehle: An Autonomous Forklift with 3D Time-of-Flight Camera-Based Localization and Navigation. International Conference on Control, Automation, Robotics and Vision (ICARCV), Singapore, 2018

[5] Marian Himstedt, Erik Maehle: Online Semantic Mapping of Logistic Environments using RGB-D Cameras. International Journal of Advanced Robotic Systems, 2017

[6] Marian Himstedt, Erik Maehle: Semantic Monte-Carlo Localization in Changing Environments using RGB-D Cameras. European Conference on Mobile Robots (ECMR), Paris, France, 2017

[7] Marian Himstedt, Erik Maehle: Camera-based Obstacle Classification for Automated Reach Trucks using Deep Learning. International Symposium on Robotics (ISR), Munich, Germany, 2016

[8] Marian Himstedt, Erik Maehle: Geometry matters: Place Recognition in 2D Range Scans using Geometrical Surface Relations. European Conference on Mobile Robots (ECMR), Lincoln, UK, 2015

[9] Sven Hellbach, Marian Himstedt, Frank Bahrmann, Martin Riedel, Thomas Villmann, Hans-Joachim Böhme: Find rooms for improvement: Towards semi-automatic labeling of occupancy grid maps. 21st International Conference on Neural Information Processing (ICONIP), Sarawak, Malaysia, 2014

[10] Sven Hellbach, Marian Himstedt, Frank Bahrmann, Martin Riedel, Thomas Villmann, Hans-Joachim Boehme: Some room for GLVQ: Semantic Labeling of occupancy grid maps. Proceedings of the Workshop on Self-Organizing Maps, Mittweida, Germany, 2014

[11] Marian Himstedt, Jan Frost, Sven Hellbach, Hans-Joachim Böhme, Erik Maehle: Large Scale Place Recognition in 2D LIDAR Scans using Geometrical Landmark Relations. Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Chicago, United States, 2014

[12] Sven Hellbach, Frank Bahrmann, Marc Donner, Marian Himstedt, Mathias Klingner, Johannes Fonfara, Peter Poschmann, Richard Schmidt, Hans-Joachim Boehme: Learning as an essential ingredient for a Tour Guide Robot. Proceedings of the Workshop - New Challenges in Neural Computation 2013 (NC2 2013), pp. 53-60, Machine Learning Reports, Saarbrücken, 2013

[13] Marc Donner, Marian Himstedt, Sven Hellbach, Hans-Joachim Böhme: Awakening history: Preparing a museum tour guide robot for augmenting exhibits. Proceedings of the 6th European Conference on Mobile Robots (ECMR), Barcelona, Spain, 2013

[14] Sven Hellbach, Marian Himstedt, Hans-Joachim Böhme: What's around me: Towards Non-negative Matrix Factorization based Localization. Proceedings of the 6th European Conference on Mobile Robots (ECMR), Barcelona, Spain, 2013

[15] Marian Himstedt, Sabrina Keil, Sven Hellbach, Hans-Joachim Böhme: A robust graph-based framework for building precise maps from laser range scans. Proceedings of the Workshop on Robust and

Multimodal Inference in Factor Graphs, IEEE International Conference on Robotics and Automation (ICRA), Karlsruhe, Germany, 2013

[16] Marian Himstedt, Alen Alempijevic, Liang Zhao, Shoudong Huang, Hans-Joachim Böhme: Towards ro- bust vision-based self-localization of vehicles in dense urban environments. Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Vilamoura, Portugal, 2012

[17] Hans-Joachim Böhme, Sven Hellbach, Frank Bahrmann, Marc Donner, Johannes Fonfara, Marian Him- stedt, Mathias Klingner, Peter Poschmann, Mathias Rudolf, Richard Schmidt: Assistance Robotics: A survival guide for real world scenarios. Poster and Demo Track of the 35th German Conference on Arti□cial Intelligence (KI), Saarbrücken, Germany, 2012

[18] Marian Himstedt, Sven Hellbach, Hans-Joachim Böhme: Feature extraction from Occupancy Grid Maps using Non-negative Matrix Factorization. Proceedings of the Workshop - New Challenges in Neural Computation 2012 (NC2 2012), Machine Learning Reports, Graz, Austria, 2012

Patents:

[1] Christoph Hansen, Jörg Röwekämper, Marian Himstedt. Method and Device for Supplementing an Electronically Usable Representation of an Environment. European Patent No EP3534110B1. Filled 2018-12-19 by SICK AG