



Regine Hartwig

"As an engineer, I want to develop new technologies to solve the problems of today."

Education

- 01/2019 – 05/2019 **Master of Science**, *Nanyang Technological University*, Singapore.
Exchange Program
- 04/2017 – 05/2019 **Master of Science**, *Technical University*, Munich.
Specialization in Automation and Robotics
- 10/2013 – 03/2017 **Bachelor of Science**, *Technical University*, Munich.
- 09/2003 – 06/2012 **Higher Education Entrance Qualification**, *Feodor-Lynen-Gymnasium*, Planegg.
- 09/1999 – 08/2003 **Transfer**, *Primary School*, Martinsried.

Experience

- 06/2022 – Now **PhD Student**, *Computer Vision Group Technical University*, Munich.
Computer Vision Group, Prof. Daniel Cremers
- 06/2019 – 05/2022 **Research Assistant**, *Research Hospital Technical University*, Munich.
BMBF Project Compass: Navigation and Visualization in Minimally-Invasive Surgery
- 05/2018 – 12/2018 **Master Thesis**, *Arnold and Richter Cine Technology GmbH*, Munich.
Investigation of Error Propagation in FPGA Implementation of Digital Video Signal Processing Pipeline
- 11/2016 – 03/2017 **Bachelor Thesis**, *Mercateo AG*, Munich.
Statistical Modeling and Analysis of Information Spreading, Supervision: Prof. Dr. Martin Kleinsteuber, Chair of Machine Learning and Geometric Optimization

Publications

- [1] Regine Hartwig et al. "Constrained Visual-Inertial Localization With Application And Benchmark in Laparoscopic Surgery". In: *Int. Conf. on Robotics and Automation (ICRA)*. IEEE, 2022. URL: <https://arxiv.org/pdf/2202.11075.pdf>.
- [2] Dirk Wilhelm et al. "Ethical, legal and social implications in the use of artificial intelligence-based technologies in surgery: principles, implementation and importance for the user". In: *Der Chirurg; Zeitschrift Fur Alle Gebiete Der Operativen Medizin* 93.3 (2022), pp. 223–233.

Awards

2017 – 2019 Deutschlandstipendium

IT Skills

Advanced C++, PYTHON, Git, Ceres, Sophus, OpenCV, Error Modeling, \LaTeX
Intermediate Linux, MATLAB, C, CMake
Basic Assembler, Virtual Machines, Docker

Communication Skills and Organizations

- 2021 **Standardization Committee**, *DICOM*, Standardization of Camera Calibration Parameters in DICOM Medical Imaging Standard.
- 2020 **CARS Conference**, *Research Group MITI*, Munich, Managing first hybrid CARS Conference with Zoom Meetings and Live Cameras in Lecture Hall.
- 2019 **Engagement**, *NTU Sailing Club*, Singapore, Division of labour and communication in a boat crew.
- 2014 **Head of Planning a Department Freshman Party**, *Students Council*, Munich, Acquisition of time management and group motivation skills.
- 2008 **Member**, *Youth national team in synchronized swimming*, Germany.

Languages

German Mother Tongue
English Fluent C1
Spanish Advanced B1
Indonesian Beginner, Basic Conversations
Latin Latinum

Interests

- Sailing
- Badminton
- Indonesian Culture
- Surfing
- Design