

Curriculum Vitae | Ming Song

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Current Address: Göttinger Str. 59, 30449 Hanover, Germany

EDUCATION BACKGROUND

Leibniz University Hannover (Hanover, Germany) **10/2016 – Present**

- **Major:** Navigation and Field Robotics - **Degree:** Master of Science **05/2017 – Present**
- German Language Training **10/2016 – 04/2017**

**Major GPA: 2.5/1.0 (Academic grading in Germany for 90/120 CPs,
3.3 in 4.0 scale)**

Xidian University (Xi'an, China) **09/2012 – 06/2016**

- **Major:** Biomedical Engineering – **Degree:** Bachelor of Engineering

**Major GPA: 3.2/4.0 (3.7/4.0 for last two years of four years,
Ranking 1/88.)**

RESEARCH PROJECTS

Trajectory Estimation via Iterative Extended Kalman Filter with Extracted Observation Features from Environment. **02/2019 – 04/2019**

Type: Semester Project

Advisor: M. Sc. Sören Vogel

- **Main Tech:** Programming skill (MATLAB), Kalman Filter Algorithm, van Loan method.
- **Duties:** Took charge of paper reading, implementation of Iterative Extend Kalman, optimization and Evaluation of results.

Dynamic Estimation of Process Noise based on Different Motion Models (via van Loan method) **12/2019 – 02/2019**

Type: Semester Project

Advisor: M. Sc. Benjamin Tennstedt

- **Main Tech:** Programming skill (MATLAB), Kalman Filter Algorithm, van Loan method.
- **Duties:** Took charge of paper reading, implementation of Extend Kalman Filter and van Loan method.

Optimizing Strapdown Algorithms with Different Approaches **10/2018 – 12/2019**

Type: Semester Project

Advisor: M. Sc. Benjamin Tennstedt

- **Main Tech:** Programming skill (MATLAB), Inertial Measurement Unit (IMU), Strapdown Algorithm.
- **Duties:** Implemented and optimized lever arm compensation to Strapdown Algorithms

Optimizing Semantic Segmentation Result with Deep Learning Approaches

04/2018 – 08/2018

Role: Graduate Research Assistant

Advisor: M.Sc Torben Peters

- **Main Tech:** Programming skills (Python, Tensorflow, Pytorch etc.), deep learning method (Convolutional Neural Network).
- **Duties:** Completed data processing, programming, deep learning approach implementation

Locating with Point Cloud Features

04/2017 – 07/2018

Type: Semester Project

Advisor: M.Sc Steffen Busch

- **Main Tech:** Machine vision algorithm (ICP, RANSAC), Programming skills (C++, Python, ROS), Linux, Laser Scanner(Velodyne64)

- **Duties:** Took charge of feature extraction and matching

Lego autonomous driving car development

10/2017 – 02/2018

Type: Semester Project

Advisor: M.Sc Steffen Busch

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- **Main Tech:** Programming skills (C++, Python, ROS), Linux, Laser Scanner (Hokuyo URG-04LX-UG01)

- **Duties:** developed location and navigation strategy; implemented algorithm

Study of Event-Related Potentials in Adolescent Addicted to Smoking 06/2015 – 06/2016

Type: Undergraduate Final Year Project

Advisor: Associate Professor Kai Yuan

- **Main Tech:** Matlab, EEGLAB, Analyzer
- **Duties:** Read papers; processed and analyzed data; evaluated the results; wrote report

ACADEMIC CONTESTS

RoboCup@work Competition

10/2017 – Present

- **Duties:** served as the Algorithm developer, Programmer; developed Robot in ROS framework with C++ and Python; developed algorithms for vision tasks, includes barrier detection and workpiece recognition etc.
- **Achievement:** 6th place in RoboCup German Open 2018 (Magdeburg, Germany); 5th place in RoboCup 2018 (Montreal, Canada)

Micro-MRI Based Verification System for Circulating Tumor Cell

07/2014 – 11/2015

- **Duties:** served as the project leader; supervised the project progress; optimized system
- **Achievement:** Excellence Award in National Undergraduate Innovation Program (Ratio: 4/366); Grand Prize in the 27th Xidian University “Spark Cup” Extracurricular Scientific and Technological Works Contest (Ratio: 9/3298)

Design of Smart Vehicle Based on Surface EMG Control

08/2014 – 11/2014

- **Duties:** served as the project leader; programed with Microcontroller; designed the System
- **Achievement:** First Prize in the 26th Xidian University “Spark Cup” Extracurricular Scientific and Technological Works Contest (Ratio: 100/3156)

EMPLOYMENT EXPERIENCE

Institute of Cartography and Geoinformatics of Leibniz University Hanover (Hanover, Germany)

12/2017 – 09/2018

- Served as a research assistant, support research project includes data labeling, label tool programming and helping with optimization of results

International Office of Leibniz University Hanover (Hanover, Germany) 07/2017 – Present

- Served as a student assistant in Asia Department, support international student affairs

LEADERSHIP & VOLUNTEER EXPERIENCES

Leibniz University Hannover (Hannover, Germany)

- **Director of Hannover Chinese Students and Scholars Association 06/2016 – 06/2017**
 - ◆ Organized a lot of wonderful activities, such as the 2017 Hannover Chinese Spring Festival Evening, the 1st North Germany Basketball Match for Chinese People, and Career Fair (for opportunities in German companies)
 - ◆ Served as a voluntary translator in an international exhibition

Xidian University (Xi'an, China)

- **Volunteer Teacher in Rural Areas in Hanzhong City, Shaanxi Province 07/2015 – 08/2015**
 - ◆ Offered Chinese and English classes to left-behind children

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- ◆ Showed sincere concern for the left-behind children in China rural areas
- **Secretary of Youth League Committee, School of Life Science & Technology 11/2012 – 06/2015**
 - ◆ Planned the school's welcome party for freshmen for two times
 - ◆ Directed summer social practices, international cultural festivals, chorus festivals
 - ◆ Arranged a dance festival and designed a video to present and publicize it
- **Director of Debate Team, School of Life Science and Technology 04/2013 – 11/2014**
 - ◆ Founded the debate team
 - ◆ Recruited new members and established debate strategies to train the team
 - ◆ Organized the team to participate in various debate contests

HONORS & AWARDS

Special Grade Scholarship, Xidian University (Ratio: 2/391)	09/2015
Third-class Scholarship, Xidian University (Ratio: 40/391)	09/2014
Pacemaker to Merit Student, Xidian University (Ratio: 12/5107)	07/2016
Outstanding Graduates, Xidian University (Ratio: 30/5107)	07/2016
Outstanding Student Leader, Xidian University (Ratio: 25/5107)	07/2016
Outstanding Student (for two times), Xidian University (Ratio: 80/5107)	07/2014; 06/2015
Advanced Individual in Social Practice, Xidian University	11/2013