

Zhang Handuo 张瀚铎

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EDUCATION

NANYANG TECHNOLOGICAL UNIV.

PH.D IN ELECTRICAL &
ELECTRONIC ENGINEERING
Expected Jun. 2020 | Singapore
Cum. GPA: 4.67/5.00

NORTHEASTERN UNIV.

M.Sc IN CONTROL THEORY & CONTROL
ENGINEERING
Expected Jun. 2013 | Shenyang, China
Conc. in Pattern Recognition & Intelligent System
College of Information Science & Engineering

BS IN AUTOMATION

Expected May 2011 | Shenyang, China
Conc. in Automation
College of Information Science & Engineering
Cum. GPA: 3.92 / 4.0
Major GPA: 3.94 / 4.0

LINKS

Github:// github.com/zhanghanduo
LinkedIn:// [handuo-zhang-64785367/](https://www.linkedin.com/in/handuo-zhang-64785367/)

COURSEWORK

GRADUATE

Machine Vision
Image Analysis & Pattern Recognition
Image Segmentation
Convex Optimization
Robotics & Intelligent Sensors
Matrix Analysis
(Teaching Assistant)

UNDERGRADUATE

Motor Theory and Drive
Microcomputer Principle and Single Chip
Principle of Automation Control
Fundamental of Modern Control Theory
Computer Control System
Functional Programming
Artificial Intelligence Technology Foundation

SKILLS

PROGRAMMING

Advanced:
C++ • Python • MATLAB
ROS • Pytorch • Tensorflow • \LaTeX
Intermediate:
Shell • C • Qt • C#

EXPERIENCE

SHENYANG INSTITUTE OF AUTOMATION CHINESE ACADEMY OF SCIENCES | ASSISTANT RESEARCHER

Aug 2013 – Sep 2015 | Shenyang, China

- I was in charge of robot communication and console system development.
- During the two years, I took part in five projects and two of them are supported by nation-level programs.

NTU EEE ROBOTICS I LAB | PROJECT OFFICER

Sep 2015 – Jan 2016 | Singapore

- Worked for the stereo vision based unmanned vehicle team to design and construct the hardware and software platform.
- Lead the project "Using Stereo vision System on a Fast Moving Unmanned Ground Vehicle" and mainly in charge of self localization and map fusion based on multiple cameras. For more details on research paper, please refer to Handuo's Page.

RESEARCH

- GMC: Grid Based Motion Clustering in Dynamic Environment
Handuo Zhang, K Hasith, H Wang, IntelliSys, 2019.
- A hybrid feature parametrization for improving stereo-SLAM consistency
Handuo Zhang, K Hasith, H Wang, ICCA, 2017.
- Ultra-wideband aided fast localization and mapping system
Chen Wang, **Handuo Zhang**, TM Nguyen, L Xie, IROS, 2017.
- Stereo vision based negative obstacle detection
K Hasith, **Handuo Zhang**, H Wang, ICCA, 2017.
- Heading Reference-Assisted Pose Estimation for Ground Vehicles
Han Wang, R Jiang, **Handuo Zhang**, SS Ge. IEEE Transactions on Automation Science and Engineering, 2018.
- Object co-segmentation via weakly supervised data fusion
Shiping Wang, **Handuo Zhang**, H Wang. Computer Vision and Image Understanding, 2017.
- Automatic reading of domestic electric meter: an intelligent device based on image processing and zigbee/ethernet communication
Y Zhang, S Y, X Su, E Shi, **Handuo Zhang**. Journal of Real-Time Processing.

AWARDS

- 2013 National Graduate Scholarship
- 2012 2nd/16 ranking Postgraduate Debate Contest of Northeastern University as the fourth debator
- 2012 2 times of school first-class scholarship
- 2011 1st for 8th National Graduate Mathematical Contest in Modeling
- 2010 Meritorious Winner for 2010 American Mathematical Contest in Modeling