Yingbing Chen

INFORMATION

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IELTS 6.5: L7.0 R6.5 W5.5 S6.0

EDUCATION

Xiamen University (XMU), Xiamen, China

Detection Technology and Automatic Equipment   2015.09-2018.06

Advisor: Prof. Dr. Xunyu Zhong   GPA: 3.27/4

Northwestern Polytechnical University (NWPU), Xi'an, China

Electrical Engineering and Automation   2011.09-2015.06

GPA: 3.17/4

JOB EXPERIENCES

Team leader of dance robot club at NWPU,   2012 – 2013.09

R&D Intern in DJI-Innovations, Shenzhen, China.   2014.07-2014.09

Research assistant at ram-lab, HKUST.   2018.08-Present

AWARDS

- Second Prize in undergraduate group, Shaanxi Zone, National College Students Electronic Design Competition, China, 2013.
- Group champion at Rescue Robot Competition Item, China Robo-Cup, 2013.
- Group Champion in dance robot undergraduate group, Regular Biped Robot Competition Item, China Robo-Cup, 2013.

PUBLICATIONS

1. Chen Y, Wang X, Hong S, et al. Motion planning implemented in ROS for mobile robot[C]// Control and Decision Conference. IEEE, 2017:7149-7154.

SPECIAL SKILLS

Proficient in c; Skilled in c plus, circuit design; Understand about python; Familiar with many development environments, e g. ROS; KEIL; ALTIUM DESIGNER; QT; MATLAB; TENSORFLOW and so on.

ABOUT ME

Hobbies and interests: programming, swimming, jogging and singing.

I love robot. With an open mind, I am keen on creative ideas and I adore artisan spirit.

I am always willing to exchange ideas with others and I have a strong sense of team spirit.

- **2013 – 2015**

Rescue robot competition

My work mainly includes: circuit and single-chip system hardware-level design and programming.

Involved knowledges: CAN, USART, I2C bus; PID control for motor; power management and motor drive hardware design. [Link]

Two self-made quadrotors and a remote controller

My work mainly includes: circuit and single-chip system hard-ware level design and programming.

Involved knowledges: high speed I2C and SPI bus; attitude calculation (Kalman filter) and fly control (incremental PID) algorithm design and realization. [Link1] [Link2]

- **2015 – 2018.06**

Two navigation algorithm designs for mobile robot based on ROS system.

Based on 2D-lidar, this two works tried to solve navigation problem for regular/irregular shaped mobile robot in dynamic environment. [Link1] [Link2]

Lattice SLAM: an improved graph-based 2D lidar SLAM algorithm

a smart mobile cabinet = mobile cabinet + IMU + 2D lidar + laptop.

In this work, I put forward a new graph-based SLAM framework to solve the mapping and localization problem instead of the existing ROS packages offered by other researchers.

At the meantime, a hybrid attitude algorithm (extended Kalman filter + cross-product correction) was designed and realized in a STM32 micro-controller, which was used as an IMU to offer the attitude data for the upper computer. [Link]

- **2018.08 – Present**

Research assistant at ram-lab

In this period, I was mainly focused on the research of local path planning system for the outdoor unmanned vehicle. My work mainly includes designs of path planning algorithms, fast collision detection, the architecture design of whole local navigation system and so on.