

Wang Han (王晗)

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🏠 <https://wanghan.pro>



EDUCATION

Xi'an Jiaotong University

Aug.2011-Dec.2011

Received Singapore SM3 scholarship and transferred to NTU

Nanyang Technological University

Aug.2012-Jun.2016

Bachelor's Degree in Electrical & Electronic Engineering

First Class Honors

Nanyang Technological University

Jan.2017-Now

Ph.d Candidate in Electrical & Electronic Engineering

Expected graduation date: Jan.2021

PUBLICATIONS

H,Wang, C.Wang, L.Xie, " Online Visual Place Recognition via Saliency Re-identification", in 2020 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS).

H,Wang, C.Wang, L.Xie, "Intensity Scan Context: Coding Intensity and Geometry Relations for Loop Closure Detection", in 2020 IEEE International Conference on Robotics and Automation (ICRA).

H.Wang, L.Chen, M.Ran and L.Xie, " A Binary Content-Based Fast Loop Closure Detection", in 2019 IEEE 14th International Conference on Control and Automation (ICCA), June 2019. pp. 1563-1568.

H.Wang, M.Cao, H.Jiang and L.Xie, "Feasible Computationally Efficient Path Planning for UAV Collision Avoidance", in 2018 IEEE 14th International Conference on Control and Automation (ICCA), June 2018, pp. 576-581.

L.Chen, M.Ran, **H. Wang** and L.Xie, " MPC based Unified Trajectory Planning and Tracking Control", in 2019 IEEE 14th International Conference on Control and Automation (ICCA), June 2019. pp. 374-380.

SKILLS & PROFICIENCY

Research	simultaneous localization and mapping (SLAM) path planning & trajectory optimization visual place recognition (VPR)
Engineering	3D printing

	robotics operating system (ROS) unmanned aerial vehicle (UAV) internet of things (IoT)
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RESEARCH / PROJECT EXPERIENCE

More information can be found in my home page <https://wangan.pro>

Active Mapping and Navigation for Warehouse AGV

Developing robust MPC based path planning and SLAM algorithm to enable autonomous warehouse AGV navigation without any landmarks.

UAV Collision Avoidance for Aircraft Inspection

Building a UAV platform equipped with UWB for aircraft inspection. Developing a light weight collision detection module and collision avoidance algorithm for UAV platform.

Micro-controller based speech recognition for UAV manipulation

Implementing speech recognition on STM32 and use voice to manipulate drones.

Underwater signal exploration and source localization

Developing an underwater signal detection module and identify the signal location.

UGV Scheduling for Container Terminal Operation

Designing an optimal task distribution approach for container terminal operation. Simulating real terminal environment and demonstration algorithm with multiple robots.

EMPLOYMENT HISTORY

STMicroelectronics (R&D)	Jan.2016-May.2016
ST Electronics (ST Robotics Center @ NTU)	Aug.2016-May.2018
Delta (Research Center @ NTU)	Jun.2018-Now

SELECTED AWARDS & ACHIEVEMENTS

PRC Senior Middle 3 Scholarship (2011-2016)

NTU President Research Scholar Award 2014 & 2015 (URECA)

RobotX Maritime International Challenge 2014, Best Teamwork Award

RobotX Maritime International Challenge 2016, Team Leader, 6th place

RobotX Maritime International Challenge 2018, Judge's Special Award

Singapore Amazing Flying Machine Competition 2015 1st Place

Singapore Amazing Flying Machine Competition 2016 2nd Place

NTU Recreational Game 1st Place (Chinese Chess)