

Kanzhi Wu

CONTACT INFORMATION

ADDRESS: CB.11.09.30017, Broadway 81, Ultimo, NSW, Australia
PHONE: +61 404768211 / +86 18320775831
EMAIL: kanzhi.wu@gmail.com

RESEARCH INTERESTS

State Estimation	Simultaneous Localization and Mapping (SLAM) Visual Inertia Navigation System (VINS)
Planning	General belief space planning
RGB-D perception	Instance-level object detection 6 DoFs pose estimation RGB-D feature

EDUCATION BACKGROUND

DEC 2016-DEC 2012	Centre for Autonomous Systems, University of Technology Sydney <i>Doctor of Philosophy</i> <i>Thesis: Action for Perception: Active Object Recognition and Pose Estimation in Cluttered Environment</i> Supervisor: Prof. Gamini Dissanyake
SEP 2010-NOV 2012	Astronautics, Northwestern Polytechnical University <i>Master of Engineering</i> <i>Thesis: Binocular Vision Based Pose Estimation and Tracking for non-Cooperative Targets</i>
SEP 2009-SEP 2010	Astronautics, Northwestern Polytechnical University <i>Bachelor of Engineering</i>
SEP 2006-SEP 2009	Honor College , Northwestern Polytechnical University <i>Bachelor of Engineering</i>

WORK EXPERIENCE

Dec 2016-Aug 2017	DJI, Navigation algorithm engineer 3D environment sensing
May 2015	Zhejiang University, Visiting student
Oct 2014-Dec 2015	AMAZON PICKING CHALLENGE 2015, Rank 5 th in 25 teams Lead engineer of the perception module
Jul 2013-Sep 2013	Pempek Systems, Research assistant Localization for underground mining vehicle

PUBLICATIONS

- T-CYB 2017 | RISAS: A Novel Rotation, Illumination and Scale Invariant RGB-D Feature
Kanzhi Wu, Xiaoyang Li, Ravindra Ranasinghe, Gamini Dissanayake and Yong Liu
Submitted to IEEE Transaction on Cybernetics
- RA-L 2016 | Convergence and Consistency Analysis for A 3D Invariant EKF-SLAM
Teng Zhang, **Kanzhi Wu**, Jingwei Song, Shoudong Huang and Gamini Dissanayake
Robotics and Automation Letter, 2016
- IROS 2017(A) | An Invariant-EKF VINS Algorithm for Improving Consistency
Kanzhi Wu, Teng Zhang, Daobilige Su, Shoudong Huang and Gamini Dissanayake
IEEE/RSJ International Conference on Intelligent Robots and Systems
- IROS 2017(B) | Planar Scan Matching Using Incident Angle
Jixin Lv, Yue Wang, Kanzhi Wu, Gamini Dissanayake, Yukinori Kobayashi and Rong Xiong
IEEE/RSJ International Conference on Intelligent Robots and Systems
- ACC 2017 | Gyro-Aided Camera-Odometer Online Calibration and Localization
Dongxuan Li, Kevin Ekenhoff, **Kanzhi Wu**, Yue Wang, Rong Xiong and Guoquan Huang
American Control Conference
- ICRA 2017(A) | RISAS: A Novel Rotation, Illumination, Scale Invariant Appearance and Shape Feature
Kanzhi Wu, Xiaoyang Li, Ravindra Ranasinghe, Gamini Dissanayake and Yong Liu
International Conference on Robotics and Automation
- ICRA 2017(B) | Convergence and Consistency Analysis for a 3-D Invariant-EKF SLAM
Teng Zhang, **Kanzhi Wu**, Jingwei Song, Shoudong Huang and Gamini Dissanayake
International Conference on Robotics and Automation
- RSS-W 2016 | Active Object Detection and Pose Estimation in General Belief Space
Kanzhi Wu, Teng Zhang, Shoudong Huang, Ravindra Ranasinghe, Gamini Dissanayake
Robotic Science and Systems: Robot-Environment Interaction for Perception and Manipulation: Interactive Perception Meets Reinforcement Learning and Optimal Control
- ICRA 2015 | Active Recognition and Pose Estimation of Household Objects in Clutter
Kanzhi Wu, Ravindra Ranasinghe, Gamini Dissanayake
International Conference on Robotics and Automation
- ICARCV 2014 | A Fast Pipeline for Textured Object Recognition in Clutter using an RGB-D Sensor
Kanzhi Wu, Ravindra Ranasinghe, Gamini Dissanayake
International Conference on Automation, Robotics and Computer Vision

SCHOLARSHIPS AND AWARDS

TRAVEL AWARDS ICARCV 2014
ICRA 2015/2017

AWARDS AT UTS Best Poster Presentation- Faculty Research Showcase
International Research Scholarship
Top-Up Scholarship for Research Student

AWARDS AT NPU Tuition Fee Waiver Scholarship for Master Students
Scholarship for Excellent Bachelor Students

PROFESSIONAL ACTIVITIES

MEMBER IEEE Student Member
REVIEWER ICRA/IROS/RSS
ACTA Automatica Sinica
Journal of Intelligent and Robotic Systems

LANGUAGES

ITALIAN: Mother tongue
ENGLISH: Fluent

COMPUTER SKILLS

Operation System: Linux(Ubuntu, Redhat), Windows
Language: C/C++ (ROS, OpenCV, PCL, g2o, gtsam, ceres etc)
Python
Matlab
Version Control: git, svn