CURRICULUM VITAE

Zheyu Zhuang

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A PhD graduate in robotics from the Australian National University with over four years of experience deploying novel learning-based visual manipulation algorithms for real-world robots. Equipped with a wide range of essential skills for modern manipulation research, including but not limited to control problem formulation, setup of simulated and real-world environments, data collection, deep learning, computer vision, real-world deployment, and human-robot collaboration system integration.

EDUCATION

PhD*, Robotics — **2017 ~ 2022**
The Australian National University & The Australian Centre of Excellence for robotic Vision
Supervisor: Prof. Robert Mahony
** Completed oral defence, thesis currently undergoing external review; expected to graduate in November 2022.*

BSc, Electronic and Communication & Mechatronics (Double Major) — **2013 ~ 2016**
First Class Honours, The Australian National University.

PUBLICATIONS

GoferBot: A Visual Guided Human-Robot Collaborative Assembly System — **2022**
Zhuang, Z., Ben-Shabat, Y., Zhang ,J., Gould, S., and Mahony, R.,
IEEE International Conference on Intelligent Robots and Systems (IROS).

End-to-end Multi-Instance Robotic Reaching from Monocular Vision — **2021**
Zhuang, Z., Yu, X. and Mahony, R.,
IEEE International Conference on Robotics and Automation (ICRA).

LyRN (Lyapunov Reaching Network): A Real-Time Closed Loop approach from Monocular Vision — **2020**
Zhuang, Z., Yu, X. and Mahony, R.,
IEEE International Conference on Robotics and Automation (ICRA).

Learning Real-time Closed Loop Robotic Reaching from Monocular Vision by Exploiting A Control Lyapunov Function Structure — **2019**
Zhuang, Z., Leitner, J. and Mahony, R.,
IEEE International Conference on Intelligent Robots and Systems (IROS)

Learning Innovations for State Estimation — **2021**
Kennedy, G., Gao, J., **Zhuang, Z.**, Yu, X. and Mahony, R.,
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS).

Stereo Event-Frame Camera Dataset for 3D Perception — **2021**
Wang, Z., Ng, Y., Pan, L., **Zhuang, Z.**, and Mahony, R.,
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS).

6DoF Object Pose Estimation via Differentiable Proxy Voting Loss **2020**
Yu, X., **Zhuang, Z.**, Koniusz, P. and Li, H.,
British Machine Vision Conference (BMVC)

Cartman: The Low-cost Cartesian Manipulator That Won the Amazon Robotics Challenge **2018**
Morrison, D., Tow, A.W., Mctaggart, M., Smith, R., Kelly-Boxall, … **Zhuang, Z.**, Lehnert, C., Reid, I., Corke, P. and Leitner, J.
IEEE International Conference on Robotics and Automation (ICRA).

Semantic Segmentation from Limited Training Data **2018**
Milan, A., Pham, T., Vijay K., Morrison, D., Tow A., Liu L., …, **Zhuang**, Z., Lehnert, C., Lin, G., Reid, I., Corke, P. and Leitner, J.,
IEEE International Conference on Robotics and Automation (ICRA).

TUTORING & TEACHING

Workshop Designer & Head Tutor **2020 & 2021**
Robotic Vision Summer School
Design and develop a workshop series that integrates SLAM and learning-based object detection into real-world robots. Parts of the workshop content have been incorporated into the Intelligent Robotic Course (ECE4078) at Monash University.

Tutor **2017 ~ 2021**
System Engineering, Robotics, Computer Vision (Undergraduate & Graduate)
Deliver tutorials over specific course materials, demonstrate lab content and facilitate students' understanding of course content.

Guest Lecturer **2018**
ANU CECS Summer School
Deliver a guest lecture regarding artificial intelligence in warehouse automation.

AWARDS

The Best Team Project **2020**
Australian Centre of Excellence for Robotic Vision Annual Symposium

The Best Technical Demo **2019**
Australian Centre of Excellence for Robotic Vision Annual Symposium

The First Place (as a member of Team ACRV) **2017**
Amazon Robotic Challenge 2017

Latest Update: July 2022