Hejia Zhang

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https://hejiazhang.me

EDUCATION

University of Southern California *Los Angeles, USA*

M.S. in Computer Science (Intelligent Robotics)

Honor Viterbi Master's Best Research Award (Department of Computer Science) *2017 – 2019*

Zhejiang University *Hangzhou, China*

B.E. in Bioengineering

Honor Second-Class Scholarship for Outstanding Merits *2013 – 2014*

Third-Class Scholarship for Outstanding Merits *2015 – 2016*

ACADEMIC EXPERIENCE

Robotic Embedded Systems Laboratory (Prof. Gaurav S. Sukhatme)

Research Assistant, University of Southern California *02/2018 – Present*

- Conducting peer-reviewed research on robotics and machine learning (see publications)
- Designing and developing robot learning environments for Sawyer robot, in simulation and on the real robot
- Developing open-source deep reinforcement learning framework *Garage*[1]
- Supporting diagnosis and repair of hardware problems on RESL's PR2 robot, reached out to research groups from several universities for potential solutions

Interactive and Collaborative Autonomous Robotic Systems Lab (Prof. Stefanos Nikolaidis)

Research Specialist, University of Southern California *02/2019 – Present*

- Conducting peer-reviewed research on human-robot interaction and collaboration (see publications)

Institute of Biosystem Automation and Information Technology (Prof. Hui Fang)

Research Assistant, Zhejiang University *02/2016 – 06/2017*

- Developed real-time point cloud data processing software, responsible for GUI, data-processing modules
- Prototyped novel systems for rapidly detecting the ATP content of plants (see patents)

PUBLICATIONS

- **Hejia Zhang**, Po-Jen Lai, Sayan Paul, Suraj Kothawade and Stefanos Nikolaidis. **Learning Collaborative Manipulation Tasks from Unlabeled Youtube Videos**. *Under review for International Symposium on Robotics Research (ISRR)*, 2019.
- **Hejia Zhang**, Eric Heiden, Stefanos Nikolaidis, Joseph J. Lim, and Gaurav S. Sukhatme. **Auto-conditioned Recurrent Mixture Density Networks for Learning Generalizable Robot Skills**[2]. *Under review for International Conference on Intelligent Robots and Systems (IROS)*, 2019.

[1] https://github.com/rlworkgroup/garage

[2] Extented abstract is slected for spotlight talk at Southern California Robotics Symposium (SCR), 2019

- Ryan Julian[3], Eric Heiden[3], Zhangpeng He, **Hejia Zhang**, Stefan Schaal, Joseph J. Lim, Gaurav S. Sukhatme, Karol Hausman. **Scaling simulation-to-real transfer by learning composable robot skills**. *Presented at International Symposium on Experimental Robotics (ISER)*, 2018.
- Zhanpeng He[3], Ryan Julian[3], Eric Heiden, **Hejia Zhang**, Stefan Schaal, Joseph J. Lim, Gaurav S. Sukhatme, Karol Hausman. **Simulator Predictive Control: Using Learned Task Representations and MPC for Zero-Shot Generalization and Sequencing**. *Presented at Conference on Neural Information Processing System 2018 Deep Reinforcement Learning Workshop.*

PATENTS

- Fang, Hui; **Zhang, Hejia**; Zhang, Xuzhou; He, Yong. 2017. **Method for rapidly detecting content of ATP of plant leaf.** CN107515211A, filed Dec 26, 2017. Patent Application
- Fang, Hui; **Zhang, Hejia**; Zhang, Xuzhou; He, Yong. 2017. **Method and device for rapidly detecting content of ATP in tomato flesh.** CN107478579A, filed Dec 15, 2017. Patent Application
- Fang, Hui; **Zhang, Hejia**; Zhang, Xuzhou; He, Yong. 2017. **Apparatus for rapidly detecting ATP content of plant.** CN107515200A, filed Dec 26, 2017. Patent Application

ACADEMIC SERVICES

- Reviewer: IEEE/RSJ International Conference on Intelligent Robots and Systems (2 reviews)

WORK EXPERIENCE

USC Viterbi Department of Computer Science

Course Producer, Los Angeles, USA *05/2019 – 08/2019*

- Designed assignments and course materials for CSCI 545: Robotics
- Setup 5 KINOVA JACO assistive robotic arms from scratch for lab usage

Seetatech Technology Co., Ltd

R&D Engineer, Beijing, China *06/2017 – 12/2017*

- Developed and maintained face recognition cloud platform which accepts and processes user management, face feature management and face recognition requests from hundreds of different organizations
- Implemented online data annotation platform which allows non-technical users to clean and annotate unlabeled data
- Developed GPU accelerated video decoding modules which significantly improves video decoding speed and reduces CPU usage
- Developed face recognition access control system which has been employed in a lot of schools and companies
- Supervised and managed software development interns

[3]Equal contribution