Yijun Yuan

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Education

Sept. 2018 – Present	🔖 **M.E., Computer Science and Technology, School of Information Science and Technology, ShanghaiTech University, China**.
Sept. 2014 – Jun. 2018	🔖 **B.E., Computer Science and Technology, School of Information Science and Technology, ShanghaiTech University, China**.

Visiting

Oct. 2019 - Dec. 2019	🔖 **Andreas Nüchter's Group, Julius Maximilian University of Würzburg**.

Employment

Feb. 2019 – May. 2019	🔖 **Computer Vision Engineer Intern, Nullmax Inc**.

Experience

Teaching

Spring 2018	🔖 **Teaching Assistant**, Computer Architecture I.

Research

Fall 2016 - Aug. 2017	🔖 **Computer Vision** (**1.** Coarse-to-fine Retina Vessel Segmentation via Deep Neural Network, **2.** Crowd Counting).
Sept. 2017 - Aug. 2018	🔖 **Mapping, Robotics** (**1.** Automatic Generation of Hierarchical Area Topology Representations from 2D Grid Maps (Bachelor's Thesis), **2.** Fast Gaussian Process Occupancy Mapping (ICARCV2018), **3.** Incrementally building topology graphs via distance maps (RCAR2019), **4.** Topological Area Graph Generation and its Application to Path Planning (ICAR2019).)
May. 2018 - Nov. 2018	🔖 **Machine Learning** (**1.** Deep Kernel Learning with Randomized Sketches, **2.** CBCT Calibration).
Oct. 2018 - Jan. 2019	🔖 **Robot Arm** (Use RL/IL on Arms with Vrep simulator and openAI RL baseline).
Feb. 2019 - May. 2019	🔖 **Computer Vision** (FCN-based Descriptor for Planar Object Tracking)

Experience (continued)

Feb. 2019 - Sept. 2019	🔖 **Planning, Rescue Robotics** (Configuration-Space Flipper Planning for Rescue Robots (SSRR2019); Configuration-space flipper planning on 3D terrains)
May. 2019 - present	🔖 **Computer Vision** (Point cloud representation for 3D registration)

Research Publications

1. Yuan, Y., Xu, Q. & Schwertfeger, S. (2019). Configuration-space flipper planning on 3d terrain. *arXiv preprint arXiv:1909.07612*.

2. Hou, Y., JiaYuan & Schwertfeger, S. (2019). Area graph: Generation of topological maps using the voronoi diagram. In *2019 ieee international conference on advanced robotics (icar)* (to be published). IEEE.

3. Yuan, Y., Wang, L. & Schwertfeger, S. (2019). Configuration-space flipper planning for rescue robots. In *2019 ieee international symposium on safety, security, and rescue robotics (ssrr)* (pp. 36–42). IEEE.

4. Yuan, Y. & Schwertfeger, S. (2019). Incrementally building topology graphs via distance maps. In *2019 ieee international conference on real-time computing and robotics (rcar)* (to be published). IEEE.

5. Yuan, Y., Kuang, H. & Schwertfeger, S. (2018). Fast gaussian process occupancy maps. In *2018 15th international conference on control, automation, robotics and vision (icarcv)* (pp. 1502–1507). IEEE.

Awards

2016	🔖 **Dean's Scholarship** ShanghaiTech University.
2017	🔖 **Excellent Scholarship**, ShanghaiTech University.
2018	🔖 **Fan's Favorite Prize, NO.4 in total score, Best on HPCG and Tensorflow**, ISC 2018 high performance competition, Frankfurt, Germany.
2019	🔖 **DAAD-Short Term Scholarship**

Skills

Professional skills	🔖 Robotics, Computer Vision (traditional and DL), Kernel Learning
Programming	🔖 Python, C++, C, MATLAB, R
Software	🔖 ROS, Gym, 3DTK
Simulator	🔖 Vrep
Framework	🔖 Tensorflow, Pytorch
Language	🔖 English (fluent), Chinese (native)