

Yuexin Ma

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· Work Experience ·

- 09. 2020 – present **ShanghaiTech University**
Assistant Professor/Researcher/Ph.D. Advisor
in School of Information Science and Technology
- 10. 2019 – 09.2020 **Hong Kong Baptist University**
Research Assistant Professor in the Department of Computer Science

· Education ·

- 08. 2015 – 08. 2019 **The University of Hong Kong (HKU)**
PhD in Computer Science
Supervisor: Prof. Wenping Wang (IEEE Fellow)
- 09. 2011 – 06. 2015 **Shandong University (SDU)**
Bachelor's degree in Software Engineering

· Research Interest ·

- **Computer Vision**
 - 3D Scene Understanding (detection and segmentation)
 - Point cloud-based perception and modeling
 - Motion/Gesture Recognition and Estimation
- **Intelligent Traffic**
 - Traffic/Trajectory Prediction
 - Motion planning for Autonomous Driving
 - Traffic Simulation

· Research Experience ·

- Robotic and Autonomous Driving Lab (RAL) of Baidu
Advisor: Ruigang Yang (Chief Scientist and Head of Baidu RAL)
Internship 04.2018 - 12.2018
- The University of North Carolina at Chapel Hill (UNC)
Advisor: Dinesh Manocha (ACM Fellow, IEEE Fellow, AAAS Fellow, AAAI Fellow)
Visiting Scholar 09.2017 - 02.2018
- French Institute for Research in Computer Science and Automation (INRIA)
Advisor: Sylvain Lefebvre (Researcher of INRIA)
Visiting Scholar 06.2016 - 08.2016

Publication

(* indicates co-first author or corresponding author)

- Xinge Zhu, Hui Zhou, Tai Wang, Fangzhou Hong, Wei Li, **Yuexin Ma***, Hongsheng Li, Ruigang Yang, Dahua Lin. Cylindrical and Asymmetrical 3D Convolution Networks for LiDAR-based Perception. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2021
- Xidong Peng, Xinge Zhu, **Yuexin Ma***. SIDE: Center-based Stereo 3D Detector with Structure-aware Instance Depth Estimation. *Winter Conference on Applications of Computer Vision (WACV)*, 2022
- Peishan Cong, Xinge Zhu, **Yuexin Ma***. Input-Output Balanced Framework for Long-tailed LiDAR Semantic Segmentation. *IEEE International Conference on Multimedia and Expo (ICME)*, 2021
- Xiao Song, Guorun Yang, Xinge Zhu, Hui Zhou, **Yuexin Ma**, Zhe Wang, Jianping Shi. AdaStereo: An Efficient Domain-Adaptive Stereo Matching Approach. *International Journal of Computer Vision (IJCV)*, 2021.
- Xin Chen, Anqi Pang, Wei Yang, **Yuexin Ma**, Lan Xu and Jingyi Yu. SportsCap: Monocular 3D Human Motion Capture and Fine-grained Understanding in Challenging Sports Videos. *International Journal of Computer Vision (IJCV)*, 2021.
- Xin Chen, Anqi Pang, Wei Yang, **Yuexin Ma**, Lan Xu and Jingyi Yu. TightCap: 3D Human Shape Capture with Clothing Tightness. *ACM Transactions of Graphics (TOG)*, Accepted, 2021.
- Yannan He, Anqi Pang, Xin Chen, Han Liang, Minye Wu, **Yuexin Ma**, Lan Xu. ChallenCap: Monocular 3D Capture of Challenging Human Performances using Multi-Modal References. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Oral, 2021
- Xinge Zhu, Hui Zhou, Tai Wang, Fangzhou Hong, **Yuexin Ma**, Wei Li, Hongsheng Li, Dahua Lin. Cylindrical and Asymmetrical 3D Convolution Networks for LiDAR Segmentation. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Oral, 2021
- Weixiang Yang, Qi Li, Wenxi Liu, Yuanlong Yu, **Yuexin Ma**, Shengfeng He, Jia Pan. Projecting Your View Attentively: Monocular Road Scene Layout Estimation via Cross-view Transformation. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2021
- Runnan Chen, **Yuexin Ma**, Lingjie Liu, Nenglun Chen, Zhiming Cui, Guodong Wei, Wenping Wang. Semi-supervised Anatomical Landmark Detection via Shape-regulated Self-training. *Neurocomputing*, 2021
- **Yuexin Ma***, Xinge zhu*, Xinjing Cheng, Ruigang Yang, Jiming Liu, Dinesh Manocha. AutoTrajectory: Label-free Trajectory Extraction and Prediction from Videos using Dynamic Points. *European Conference on Computer Vision (ECCV)*, 2020
- Xinge Zhu, **Yuexin Ma**, Tai Wang, Yan Xu, Jianping Shi, Dahua Lin. SSN: Shape Signature Networks for Multi-class Object Detection from Point Clouds. *European Conference on Computer Vision (ECCV)*, 2020
- Wei Li, Chengwei Pan, Rong Zhang, Jiaping Ren, **Yuexin Ma**, Jin Fang, Feilong Yan, Qichuan

- Geng, Xinyu Huang, Huajun Gong, Weiwei Xu, Guoping Wang, Dinesh Manocha, Ruigang Yang. AADS: Augmented Autonomous Driving Simulation using Data-driven Algorithms. *Science Robotics*, 2019
- **Yuexin Ma**, Xinge Zhu, Sibao Zhang, Ruigang Yang, Wenping Wang, Dinesh Manocha. TrafficPredict: Trajectory Prediction for Heterogeneous Traffic-Agents. *AAAI Conference on Artificial Intelligence (AAAI), Oral*, 2019
 - Runnan Chen, **Yuexin Ma**, Nenglun Chen, Daniel Lee, Wenping Wang. Cephalometric Landmark Detection by Attentive Feature Pyramid Fusion and Regression-Voting. *International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI)*, 2019
 - Yang Yi, Feng Ni, **Yuexin Ma**, Xinge Zhu, Yuankai Qi, Riming Qiu, Shijie Zhao, Feng Li, Yongtao Wang. High Performance Gesture Recognition via Effective and Efficient Temporal Modeling. *International Joint Conference on Artificial Intelligence (IJCAI)*, 2019
 - Yiling Pan, Bin Wang, Xiaohu Guo, Hua Zeng, **Yuexin Ma**, Wenping Wang. Q-MAT+: an Error-Controllable and Feature-Sensitive Simplification Algorithm for Medial Axis Transform. *International Conference on Geometric Modeling and Processing (GMP)*, 2019
 - **Yuexin Ma**, Dinesh Manocha, Wenping Wang. Efficient Reciprocal Collision Avoidance with Heterogeneous Agents Using CTMAT. *International Conference on Autonomous Agents and Multiagent Systems (AAMAS), Oral*, 2018
 - **Yuexin Ma**, Dinesh Manocha, Wenping Wang. AutoRVO: Local Navigation with Dynamic Constraints in Dense Heterogeneous Traffic. *ACM Computer Science in Cars Symposium (CSCS)*, 2018
 - **Yuexin Ma**, Zhonggui Chen, Wenchao Hu, Wenping Wang. Packing Irregular Objects in 3D Space via Hybrid Optimization. *Symposium on Geometry Processing (SGP)*, 2018
 - Weikai Chen*, **Yuexin Ma***, Sylvain Lefebvre, Shiqing Xin, Jonàs Martínez, Wenping Wang. Fabricable Tile Decors. *ACM Transactions on Graphics (TOG)*, 36(6), 2017.
 - **Yuexin Ma**, Xinge Zhu, Yujing Sun, Bingzheng Yan. Image Tagging by Joint Deep Visual-Semantic Propagation. *Pacific-Rim Conference on Multimedia (PCM)*, 2017,

· Teaching ·

- Computer Graphics II
- Introduction to Programming and Data Structure
- Smart Vehicles
- Visual Analytics and Decision Support
- Principles and Practices of Data Analytics

· Academic Service ·

- Reviewer of CVPR, ICCV, ECCV, AAAI, IJCAI, MICCAI, CVM, and IEEE Transactions on Intelligent Transportation Systems
- Challenge Chair of CVPR [Workshop](#) of Autonomous Driving 2019

· Invited Talk ·

- CCF&CAAI Robot Intelligence Seminar, 2020
- HKSAIR AAAI-19 sharing forum, Hong Kong, 2019
- Department of Computer Science of Shandong University, Qingdao, 2018
- Chinagraph, Guangzhou, 2018
- IEEE Intelligent Vehicle Symposium, Changshu, 2018

· Honor ·

- Outstanding Individual of Baidu RAL 2018
- Best Tutor of the University of Hong Kong 2016
- Hong Kong PhD Fellowship Award (HKPFS) 2015
- Presidential Scholarship of Shandong University 2015
- Google Merit Scholarship 2014
- CCF (China Computer Federation) Top 100 Outstanding Undergraduates of China 2013
- National Scholarship of China 2013,2014