Le Hui

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Research Interests

My research is in the area of 3D computer vision, especially in 3D scene understanding.

- 3D Feature Extraction Backbone Network
- Fully/Semi-Supervised Point Cloud Semantic & Instance Segmentation
- 3D Single Object Tracking
- Point Cloud Generation
- Large-Scale Point Cloud based Place Recognition
- Point Cloud Registration

Education

Nanjing University of Science and Technology, Nanjing, China Sep. 2017 - July 2022

Ph.D. in Computer Science and Technology, *Supervised by Prof. Jian Yang and Prof. Jin Xie*.

Nanjing University of Science and Technology, Nanjing, China Sep. 2016 - Jun. 2017

M.S. in Computer Science and Technology, *Supervised by Prof. Jian Yang*.

Nanjing University of Science and Technology, Nanjing, China Sep. 2012 - Jun. 2016

B.E. in Software Engineering.

Contests

China Intelligent Vehicle Future Challenge-Offline Test of Cognitive Basic Ability in Complex Traffic Environment, **2nd Place** Nov. 2017

Big Data Challenge-Ali Music Pop Trend Prediction Competition, **9th Place** among more than 5000 competitors July 2016

The ACM International Collegiate Programming Contest (ACM/ICPC), Asia Regional Contest, **Bronze Medal** Nov. 2016

Publications

Google Scholar: https://scholar.google.com/citations?user=se31JGQAAAAJ&hl=en

[1] **L Hui***, L Wang*, M Cheng, J Xie, J Yang. 3D Siamese Voxel-to-BEV Tracker for Sparse Point Clouds[C] // Advances in Neural Information Processing Systems (NeurIPS). 2021. (* equal contribution)

[2] **L Hui**, J Yuan, M Cheng, J Xie, X Zhang, J Yang. Superpoint Network for Point Cloud Oversegmentation[C] // Proceedings of IEEE International Conference on Computer Vision (ICCV). 2021.

[3] **L Hui**, H Yang, M Cheng, J Xie, J Yang. Pyramid Point Cloud Transformer for Large-Scale Place Recognition[C] // Proceedings of IEEE International Conference on Computer Vision (ICCV). 2021.

[4] **L Hui**, M Cheng, J Xie, J Yang, MM Cheng. Efficient 3D Point Cloud Feature Learning for Large-Scale Place Recognition[J] // IEEE Transaction on Image Processing (TIP). 2022.

[5] **L Hui**, R Xu, J Xie, J Qian, J Yang. Progressive Point Cloud Deconvolution Generation Network[C] // Proceedings of the European Conference on Computer Vision (ECCV). 2020.

[6] **L Hui**, X Li, C Gong, M Fang, JT Zhou, J Yang. Inter-Class Angular Loss for Convolutional Neural Networks[C] // Proceedings of the Thirty-Third AAAI Conference on Artificial Intelligence (AAAI). 2019.

[7] Y Zhao*, **L Hui***, J Xie. SSPU-Net: Self-Supervised Point Cloud Upsampling via Differentiable Rendering[C] // Proceedings of the 29th ACM International Conference on Multimedia (ACM MM). 2021. (* equal contribution)

[8] M Cheng, **L Hui**, J Xie, J Yang. SSPC-Net: Semi-supervised Semantic 3D Point Cloud Segmentation Network[C] // Proceedings of the Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI). 2021.

[9] Y Shen, **L Hui**, H Jiang, J Xie, J Yang. Reliable Inlier Evaluation for Unsupervised Point Cloud Registration[C] // Proceedings of the Thirty-Sixth AAAI Conference on Artificial Intelligence (AAAI). 2022.
[10] R Xu, Z Han, **L Hui**, J Qian, J Xie. Domain Disentangled Generative Adversarial Network for Zero-Shot Sketch-Based 3D Shape Retrieval[C] // Proceedings of the Thirty-Sixth AAAI Conference on Artificial Intelligence (AAAI). 2022.
[11] M Cheng, **L Hui**, J Xie, J Yang, H Kong. Cascaded Non-local Neural Network for Point Cloud Semantic Segmentation[C] // IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS). 2020

Academic Service

Conference Reviewer

- IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2021, 2022
- IEEE International Conference on Computer Vision (ICCV), 2021
- European Conference on Computer Vision (ECCV), 2022
- AAAI Conference on Artificial Intelligence (AAAI), 2021, 2022

Journal Reviewer

- Pattern Recognition (PR)