Chenhang He

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EDUCATION

Doctor of Philosophy (PhD)   2019.03 - 2023.06

Department of Computing, The Hong Kong Polytechnic University
Advisor: Lei Zhang

Master of Philosophy (MPhil)   2016.09 - 2018.06

Department of Electronic and Information Engineering, The Hong Kong Polytechnic University
Thesis：Object Detection in Video Surveillance, Advisor: Kin-Man Lam

Bachelor of Science   2011.09 - 2016.06

Department of Electronic and Information Engineering, The Hong Kong Polytechnic University
GPA: 3.7/4.0 , **Dean's Honor List**

PUBLICATION

- **Chenhang He***, Ruihuang Li*, Yabin Zhang, Shuai Li, Lei Zhang, "MSF: Motion-guided Sequential Fusion for Efficient 3D Object Detection from Point Cloud Sequences", in **CVPR 2023**. (**The leading results on the Waymo 3D object detection leadboard.**)

- **Chenhang He**, Ruihuang Li, Lei Zhang, "Voxel Set Transformer: A Set-to-Set Approach to 3D Object Detection from Point Clouds", in **CVPR 2022**. (**25 citations**)

- **Chenhang He**, Hui Zeng, Jianqiang Huang, Xian-Sheng Hua and Lei Zhang, "Structure Aware Single-stage 3D Object Detection from Point Cloud", in **CVPR 2020**. (**331 citations, the first place of KITTI BEV detection benchmark.**)

- Ruihuang Li*, **Chenhang He***, Yabin Zhang, Shuai Li, Liyi Chen, Lei Zhang, "SIM: Semantic-aware Instance Mask Generation for Box-Supervised Instance Segmentation", in **CVPR 2023**.

- Ruihuang Li*, **Chenhang He***, Shuai Li, Yabin Zhang, Lei Zhang, "DynaMask: Dynamic Mask Selection for Instance Segmentation", in **CVPR 2023**.

- Shuai Li, Minghan Li, Ruihuang Li, **Chenhang He**, Lei Zhang, "One-to-Few Label Assignment for End-to-End Dense Detection", in **CVPR 2023**.

- Shuai Li, **Chenhang He**, Lei Zhang, "A Dual Weighting Label Assignment Scheme for Object Detection", in **CVPR 2022**. (**17 citations**)

- Ruihuang Li, Shuai Li, **Chenhang He**, Yabin Zhang, Xu Jia and Lei Zhang, "Class-Balanced Pixel-Level Self-Labeling for Domain Adaptive Semantic Segmentation", in **CVPR 2022**. (**11 citations**)

- **Chenhang He** and Lei Zhang, "Improving Monocular 3D Object Detection by Synthetic Images with Virtual Depth", accepted as a book chapter by the *Towards Realistic 3D Deep Learning: Algorithms and Applications*, World Scientific, 2023

- **Chenhang He**, Shun-Cheung Lai and Kin-man Lam, "Improving Object Detection with Relation Graph Inference", in **ICASSP 2019**. (**16 citations**)

- **Chenhang He**, Kin-man Lam, "Fast Vehicle Detection with Lateral Convolutional Neural Network", in **ICASSP 2018**.

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*Equal contribution

- A Sekuboyina, ME Husseini, A Bayat, et al. (**Chenhang He**), "VerSe: A Vertebrae Labelling and Segmentation Benchmark for Multi-Detector CT Images", Medical Image Analysis, 2021.
- Saina Zheng, **Chenhang He**, et al., "Corporate environmental performance prediction in China: An empirical study of energy service companies". (Journal of Cleaner Production)
- Shun-Cheung Lai, **Chenhang He**, Kin-Man Lam, "Low-resolution face recognition based on identity-preserved face hallucination", in **ICIP 2019**.

INTERNSHIP EXPERIENCE

DAMO Academy, Alibaba Group   2019.06 - 2021.11

PROFESSIONAL ACTIVITIES

- Reviewer: IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) 2021
- Reviewer: IEEE Transactions on Image Processing (TIP) 2021
- Reviewer: Pattern Recognition (PR) 2021
- Reviewer: IEEE Robotics and Automation Letters (RA-L) 2021
- Reviewer: IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2022, 2023
- Reviewer: European Conference on Computer Vision (2020)