



Changshuo Wang

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Education

09/2018-07/2023 University of Chinese Academy of Sciences, Circuits and Systems Ph.D. Canditate

Qingdao University of Science and Technology

09/2014-06/2018 Electronic Information Science and Technology

Bachelor

About Me

I will graduate from the University of Chinese Academy of Sciences (UCAS) and the Institute of Semiconductors, Chinese Academy of Sciences, at the end of June 2023. My research interests are **2D/3D Scene Representation**, **generation and Understanding**, **Person Re-identification and Virtual Try-on**.

I am actively seeking a postdoctoral position in the field of 2D/3D computer vision and hope to pursue the following research in the future: (1) Design and development of 2D/3D scene reconstruction and understanding algorithms based on **images/lidar** point clouds, mainly applied in the areas of autonomous driving, robotics, remote sensing, and AR/VR; (2) Research on deep learning-based brain-inspired visual cognition algorithm design.

Honors

| 1. | Outstanding graduate of Beijing | 2023 |
|-----|---|--------------------|
| 2. | Outstanding graduate of University of Chinese Academy of Sciences | 2023 |
| 3. | Director Scholarship from Institute of Semiconductors, Chinese Academy of Sciences | 2023 |
| 4. | National scholarship from University of Chinese Academy of Sciences | 2022 |
| 5. | Merit Student from University of Chinese Academy of Sciences | 2020 & 2021 & 2022 |
| 6. | Best Service Award from HPBD&IS 2019 | 2019 |
| 7. | Outstanding Graduates of Shandong Province, China | 2018 |
| 8. | Honourable Metion of MCM/ICM, USA | 2017 |
| 9. | Second Prize in the 13th "Huawei Cup" National Graduate Mathematical Contest in Modeling | 2016 |
| 10. | First Prize in the 8th China College Students' Mathematics Competition (Non-Mathematics Major G | roup) 2016 |
| 11. | First Prize in the Shandong Provincial Electronic Design Contest | 2016 |
| 12. | National Encouragement scholarship from Qingdao University of Science and Technology | 2015 & 2016 & 2017 |

Project Experience

| 07/2022-12/2022 | Research and implementation of 2D virtual try-on in real environment | Main Participant |
|-----------------|--|------------------|
| 12/2021-12/2022 | Research on person re-identification based on 3D point cloud | Main Participant |
| 10/2020-11/2021 | 3D point cloud understanding based on deep learning | Main Participant |
| 08/2019-09/2020 | Research on Topological Feature Extraction Method Based on Brain Inspiration | Main Participant |

Publications

1. Changshuo Wang, Xin Ning, Linjun Sun, Liping Zhang, Weijun Li, Xiao Bai. Learning Discriminative Features by Covering Local Geometric Space for Point Cloud Analysis, *IEEE Transactions on Geoscience and Remote Sensing*, 2022. (JCR Q1, IF:8.125, Highly Cited Paper)

- **2.** Changshuo Wang, Han Wang, Xin Ning, Shengwei Tian, Weijun Li. 3D Point Cloud Classification Method Based on Dynamic Coverage of Local Area, *Journal of Software*, 2022. (CCF A)
- **3.** Changshuo Wang, Chen Wang, Weijun Li. A Brief Survey on RGB-D Semantic Segmentation Using Deep Learning, *Displays*, vol. 70, 2021. (JCR Q2, IF: 3.074)
- **4.** Huang Zhang, **Changshuo Wang**[†], Jianchu Lin, Baoli Lu, Liping Zhang, Shengwei Tian. Deep Learning-based 3D Point Cloud Classification: A Systematic Survey and Outlook, *Displays*. (JCR Q2, IF:3.074, joint first author)
- **5.** Enhao Ning, Canlong Zhang, **Changshuo Wang**, Xin Ning, Hao Chen, Xiao Bai. Pedestrian Re-ID based on Feature Consistency and Contrast Enhancement, *Displays*. (JCR Q2, IF:3.074)
- **6.** Changshuo Wang, Xin Ning, Luyang Hou, Liping Zhang, Weijun Li, Yizhang Jiang. Brain-inspired Topological Set Network with Mixed Entropy and Attention for Topological Feature, *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, 2022. (3nd under review, JCR Q1, IF: 11.471)
- 7. Changshuo Wang, Xin Ning, Weijun Li, Lusi Li, Xingyu Gao. 3D Person Re-identification Based on Global Semantic Guidance and Local Feature Aggregation, *IEEE Transactions on Circuits and Systems for Video Technology*. (1st under review, JCR Q1, IF:5.859)
- **8.** Changshuo Wang, Xin Ning, Weijun Li, Xingyu Gao. Learning 3D Geometric Structures from Point Clouds for Person Re-identification. *IEEE Transactions on Pattern Analysis and Machine Intelligence*. (1st under review, JCR Q1, IF:24.314)
- **9.** Enhao Ning, **Changshuo Wang**[†], Huang Zhang, Xin Ning, Prayag Tiwari. Occluded Person Re-ID with Deep Learning: A Survey and Perspectives. *Knowledge-Based Systems*. (1st under review, JCR Q1,IF:8.139, joint first author)
- **10.** Zaiyang Yu, Xing Ning, Liping Zhang, **Changshuo Wang**. MV-TransReID: 3D Multi-View Transformer Network for Occluded Person Re-Identification. *ACM MM* 2023. (Under review)

Patents

- 1. Xin Ning, Changshuo Wang, Xiaoli Dong, Weijun Li, Liping Zhang, Linjun Sun. Point cloud semantic segmentation method, device, electronic equipment and storage medium. Invention patent. Patent number: 202210220298.1. (First Participant)
- 2. Xin Ning, Shaolin Zhang, Changshuo Wang, Xiaoli Dong, Weijun Li. Image recognition model training method, image recognition method, and device. Patent for Invention. Patent number: CN112183559B. (First Participant)

Fund application

1. 2022 National Natural Science Foundation of China

Main Participant

2. 2023 National Natural Science Foundation of China

Main Participant

Mentoring experience

I have guided the research work of some students, including those from the University of Ottawa, Beijing University of Chemical Technology, Xinjiang University, South China Normal University, Guangxi Normal University, etc.

Corporate Internship experience

Wave Group · Beijing R&D Center

AI algorithm engineer

Algorithm Research and Application of 2D Virtual Try-On

Jul. 2022-Dec.2022

Academic Services

- **Journal Reviewer:** IET Computer Vision, Displays, Computational Intelligence and Neuroscience, Concurrency and Computation: Practice and Experience(CCPE), Applied Intelligence
- Conference Reviewer: HPBD&IS2019-2021、HDIS2022

Personal Blog/Github

• **CNBlog:** https://www.cnblogs.com/wangchangshuo

• **Github:** https://github.com/changshuowang