Jianqiang Wang

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Education

Nanjing University, Ph.D. in Information and Communication Engineering — Sept. 2021 - Dec. 2024
Nanjing University, M.E. in Electronics and Communication Engineering — Sept. 2018 - Jun. 2021
Nanjing University, BS in Electronic Information Science and Technology — Sept. 2014 - Jun. 2018

Experience

Video Coding Research Intern, OPPO – Nanjing, CN — Nov. 2022 – June 2023

- Studied point cloud attribute compression algorithms using deep learning, achieving more than 20% bitrate savings over traditional G-PCC.

Video Coding Engineering Intern, Aliyun – Hangzhou, CN — June 2020 – Sept. 2020

- Studied HD map compression algorithms, saving 30% of the bitrate compared to the original baseline solution.

Visiting Student, Shanghai Jiao Tong University – Shanghai, CN — June 2019 – Sept. 2019

- Studied learning-based point cloud geometry compression algorithm and assisted point cloud quality assessment work.

Assistant Engineer Intern, Duke Kunshan University – Suzhou, CN — June 2018 – Sept. 2018

- Studied raw image compression using deep learning.

Selected Publications

(# Co-first Author, * Corresponding Author)

- **J. Wang**#, R. Xue#, J. Li, D. Ding, Y. Lin and Z. Ma*. "A Versatile Point Cloud Compressor Using Universal Multiscale Conditional Coding – Part I: Geometry", *IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**), doi: 10.1109/TPAMI.2024.3462938.* (CCF-A, IF=20.8)
- **J. Wang**, R. Xue, J. Li, D. Ding, Y. Lin and Z. Ma*. "A Versatile Point Cloud Compressor Using Universal Multiscale Conditional Coding – Part II: Attribute", *IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**), doi: 10.1109/TPAMI.2024.3462945.* (CCF-A, IF=20.8)
- **J. Wang**, D. Ding, Z. Li, X. Feng, C. Cao and Z. Ma*, "Sparse Tensor-Based Multiscale Representation for Point Cloud Geometry Compression,", *IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**), vol. 45, no. 7, pp. 9055-9071, 1 July 2023.* (CCF-A, IF=20.8)
- **J. Wang**, H. Zhu, H. Liu and Z. Ma*, "Lossy Point Cloud Geometry Compression via End-to-End Learning,", *IEEE Transactions on Circuits and Systems for Video Technology (**TCSVT**), vol. 31, no. 12, pp. 4909-4923, Dec. 2021.* [2023 IEEE CAS Society Outstanding Young Author Award] (CCF-B, IF=8.4)
- **J. Wang**, D. Ding, Z. Li and Z. Ma*, "Multiscale Point Cloud Geometry Compression", *2021 Data Compression Conference (**DCC**), Snowbird, UT, USA, 2021, pp. 73-82.* (CCF-B)
- **J. Wang**, D. Ding and Z. Ma*, "Lossless Point Cloud Attribute Compression Using Cross-scale, Cross-group, and Cross-color Prediction", *2023 Data Compression Conference (**DCC**), Snowbird, UT, USA, 2023,pp. 228-237.* (CCF-B)
- **J. Wang** and Z. Ma*, "Sparse Tensor-based Point Cloud Attribute Compression", *2022 IEEE 5th International Conference on Multimedia Information Processing and Retrieval (**MIPR**), CA, USA, 2022, pp. 59-64.*

Honors and Awards

- IEEE CAS Society Outstanding Young Author Award, 2023
- Huawei Scholarship, Nanjing University, 2023
- The Second Prize of the 16th China Post-Graduate Mathematical Contest in Modeling, 2019

Academic Services

Reviewer for TPAMI, TIP, TCSVT, TMM, TOMM, JETCAS, ICME, ICRA, ICIP, etc.

Research Interests

My main interest lies in visual data compression, especially including:

- Learning-based Data Compression
- 3D Data Compression