

# Jianqiang Wang

Nanjing, Jiangsu, China | wangjq@smail.nju.edu.cn | +86-18260039529 | <https://yydlmzyz.github.io/>

## Education

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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, B.S. in Electronic Information Science and Technology	Sept. 2014 - Jun. 2018

## Experience

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<b>Video Coding Research Intern</b> , OPPO – Nanjing, CN	Nov. 2022 – June 2023
<ul style="list-style-type: none"><li>Studied point cloud attribute compression algorithms using deep learning, achieving more than 20% bitrate savings over traditional G-PCC.</li></ul>	
<b>Video Coding Engineering Intern</b> , Aliyun – Hangzhou, CN	June 2020 – Sept. 2020
<ul style="list-style-type: none"><li>Studied HD map compression algorithms, saving 30% of the bitrate compared to the original baseline solution.</li></ul>	
<b>Visiting Student</b> , Shanghai Jiao Tong University – Shanghai, CN	June 2019 – Sept. 2019
<ul style="list-style-type: none"><li>Studied learning-based point cloud geometry compression algorithm and assisted point cloud quality assessment work.</li></ul>	
<b>Assistant Engineer Intern</b> , Duke Kunshan University – Suzhou, CN	June 2018 – Sept. 2018
<ul style="list-style-type: none"><li>Studied raw image compression using deep learning.</li></ul>	

## Selected Publications

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(# 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

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- 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**

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

## **Research Interests**

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

- Learning-based Data Compression
- 3D Data Compression