Name	Linwei Zhu (朱林卫)
Title	Associate Professor
Affiliation	Shenzhen Institutes of Advanced Technology (SIAT), Chinese Academy of Sciences (CAS).
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Research Interests

- ●Multimedia Signal Processing, Image/Video Coding
- ●Computer Vision, Underwater Image/Video Enhancement and Compression
- ●3D Video Coding, View Synthesis
- ●Point Cloud Enhancement and Compression

Education Experience

- ●2016.01 – 2019.02, PhD, City University of Hong Kong (Supervisor: Prof. Sam Kwong, IEEE Fellow)
- ●2011.09 – 2013.06, Visiting Student, SIAT, CAS
- ●2010.09 – 2013.06, Master, Ningbo University
- ●2006.09 – 2010.06, Bachelor, Tianjin University of Technology

Work Experience

- ●2023.01 – Now, Associate Professor, SIAT, CAS
- ●2021.07 – 2022.12, Assistant Professor, SIAT, CAS
- ●2018.11 – 2021.06, Postdoctoral Fellow, SIAT, CAS (Supervisor: Prof. Yun Zhang)
- ●2013.07 – 2015.12, Research Assistant, SIAT, CAS

Honors and Awards

- ●IEEE Senior Member, 2026.06
- ●Shenzhen Overseas High-caliber Personnel Peacock Plan Level C, 2019.09
- ●Outstanding Academic Performance Award of City University of Hong Kong, 2018.08
- ●Research Tuition Scholarship of City University of Hong Kong, 2018.09 - 2018.12
- ●Outstanding Academic Performance Award of City University of Hong Kong, 2017.10
- ●Research Tuition Scholarship of City University of Hong Kong, 2017.09 - 2018.08
- ●Research Tuition Scholarship of City University of Hong Kong, 2016.09 - 2017.08
- ●Studentship of City University of Hong Kong, 2016.01 - 2018.12
- ●Dean’s Scholarship of Shenzhen Institutes of Advanced Technology (top 5%), 2013.01
- ●Graduate National Scholarship (top 2%), 2012.12
- ●Tianjin Municipal People’s Government Scholarship, 2009.11
- ●First Prize of National Undergraduate Mathematical Content in Modeling (Tianjin), 2008.11

Research Grants

- ●Chinese Academy of Sciences, President’s International Fellowship Initiative, Distinguished Scientist, Patrick Le Callet (IEEE Fellow), PI, 2026.06-2027.12
- ●Guangdong Basic and Applied Basic Research Foundation, PI, 2025.01 - 2027.12.
- ●Intelligent Policing Key Laboratory of Sichuan Province, PI, 2025.01 - 2027.12.
- ●Chinese Academy of Sciences, President’s International Fellowship Initiative, Visiting Scientist, Yo-Sung Ho (IEEE Fellow), PI, 2025.01-2025.12
- ●Shenzhen Science and Technology Program, PI, 2023.11 - 2026.11.
- ●Guangdong Basic and Applied Basic Research Foundation, PI, 2022.01 - 2024.12.
- ●China Postdoctoral Science Foundation, PI, 2021.06 - 2022.06.
- ●Natural Science Foundation of China (NSFC), PI, 2020.01- 2022.12.
- ●China Postdoctoral Science Foundation, PI, 2019.06 - 2021.06.

Selected Journal Publication (# indicates corresponding author)

[1] **Linwei Zhu#**, Junhao Zhu, Xu Zhang, Huan Zhang, Ye Li, Runmin Cong, and Sam Kwong, "Enhanced Quality Aware Scalable Underwater Image Compression", **ACM Transactions on Multimedia Computing, Communications, and Applications (ACM TOMM)**, vol. 22, no. 6, article 174, pp. 1-19, 2026.

[2] **Linwei Zhu**, Ruxu Liang, Yun Zhang#, Hui Yuan, and Sam Kwong, "Temporal Consistency Aware Dynamic Point Clouds Color Attribute Enhancement", **IEEE Transactions on Multimedia (T-MM)**, vol. 28, pp. 2744-2757, 2026, 2026.

[3] Shiyu Feng, **Linwei Zhu#**, Yun Zhang, Na Li, and Shiqi Wang, "C-CTX: Cubic-Checkerboard Context Entropy Model for Learned Image Compression", **IEEE Transactions on Multimedia (T-MM)**, vol. 28, pp. 1756-1766, 2026.

[4] Junhao Zhu, **Linwei Zhu#**, Tao Tian, Wenhui Wu, and Jingchao Cao, "Deep Feature Prior-Guided Conditional Diffusion Model for Underwater Image Enhancement", **IEEE Signal Processing Letters (IEEE SPL)**, vol. 33, pp. 86-90, 2026.

[5] **Linwei Zhu**, Ruxu Liang, Yun Zhang#, Gangyi Jiang, and Yo-Sung Ho, "Geometry Guided Latent Diffusion Model for Static Point Cloud Color Attribute Denoising", **IEEE Signal Processing Letters (IEEE SPL)**, vol. 32, pp. 2947-2951, 2025.

[6] Huan Zhang, Xu Zhang, **Linwei Zhu#**, Yun Zhang, Jiangzhong Cao, and Wing Kuen Ling, "Enhancing 3D Video Watching Experiences: Tacking Compression and 3D Warping Distortions in Synthesized View with Perceptual Guidance", **Expert Systems with Applications (ESWA)**, vol. 264, pp. 125853:1-12, 2025.

[7] **Linwei Zhu**, Yun Zhang#, Na Li#, Wenhui Wu, Shiqi Wang, and Sam Kwong, "Neural Network Based Multi-Level In-Loop Filtering for Versatile Video Coding", **IEEE Transactions on Circuits and Systems for Video Technology (IEEE T-CSVT)**, vol. 34, no. 11, pp. 12092-12096, 2024.

[8] Yun Zhang, Haoqin Lin, Jing Sun, **Linwei Zhu#**, and Sam Kwong, "Learning to Predict Object Wise Just Recognizable Distortion for Image and Video Compression", **IEEE Transactions on Multimedia (IEEE T-MM)**, vol. 26, pp. 5925-5938, 2024.

[9] **Linwei Zhu**, Yun Zhang#, Na Li, Gangyi Jiang, and Sam Kwong, "Deep Learning Based Intra Mode Derivation for Versatile Video Coding", **ACM Transactions on Multimedia Computing, Communications, and Applications (ACM TOMM)**, vol. 19, no. 2s, article 96, pp. 1-20, 2023.

[10] **Linwei Zhu,** Yun Zhang#, Na Li, Jinyong Pi, and Shiqi Wang, "Circular Intra Prediction for 360 Degree Video Coding", **Journal of Visual Communication and Image Representation (JVCIR)**, vol. 74, pp.103000:1-12, Jan. 2021.

[11] **Linwei Zhu**, Yun Zhang#, Shiqi Wang, Sam Kwong, Xin Jin, and Yu Qiao, "Deep Learning Based Chroma Prediction for Intra Versatile Video Coding", **IEEE Transactions on Circuits and Systems for Video Technology (IEEE T-CSVT)**, vol. 31, no. 8, pp. 3168-3181, Aug. 2021.

[12] **Linwei Zhu,** Sam Kwong#, Yun Zhang, Shiqi Wang, and Xu Wang, "Generative Adversarial Network Based Intra Prediction for Video Coding", **IEEE Transactions on Multimedia (IEEE T-MM)**, vol. 22, no. 1, pp. 45-58, Jan. 2020.

[13] **Linwei Zhu**, Yun Zhang, Shiqi Wang, Hui Yuan, Sam Kwong#, and Horace H. S. Ip, "Convolutional Neural Network Based Synthesized View Quality Enhancement for 3D Video Coding", **IEEE Transactions on Image Processing (IEEE T-IP)**, vol. 27, no. 11, pp. 5365-5377, Nov. 2018.

[14] **Linwei Zhu**, Yun Zhang, Sam Kwong#, Xu Wang, and Tiesong Zhao, "Fuzzy SVM Based Coding Unit Decision in HEVC", **IEEE Transactions on Broadcasting (IEEE T-BC)**, vol. 64, no. 3, pp. 681-694, Sep. 2018.

[15] **Linwei Zhu**, Yun Zhang#, Zhaoqing Pan, Ran Wang, Sam Kwong, and Zongju Peng, "Binary and Multi-Class Learning Based Low Complexity Optimization for HEVC Encoding", **IEEE Transactions on Broadcasting (IEEE T-BC)**, vol. 63, no. 3, pp. 547-561, Sep. 2017.

[16] **Linwei Zhu**, Yun Zhang#, Na Li, Gangyi Jiang, and Sam Kwong, "Machine Learning Based Fast H.264/AVC to HEVC Transcoding Exploiting Block Partition Similarity", **Journal of Visual Communication and Image**

Representation (JVCIR), vol. 38, pp. 824-837, Jul. 2016.

[17] **Linwei Zhu**, Yun Zhang#, Xu Wang, and Sam Kwong, “View Synthesis Distortion Elimination Filter for Depth Coding in 3D Video Broadcasting”, **Multimedia Tools and Applications (MTA)**, vol. 74, no. 15, pp. 5935-5954, Aug. 2015

[18] **Linwei Zhu**, Yun Zhang#, Mei Yu, Gangyi Jiang, and Sam Kwong, “View Spatial Temporal Post Refinement for View Synthesis in 3D Video Systems”, **Signal Processing: Image Communication (SPIC)**, vol. 28, no. 10, pp. 1342-1357, Nov. 2013.

Key Words

video coding, image coding, view synthesis, multi-view video coding, depth image based rendering, underwater image enhancement, point cloud enhancement, point cloud coding, image quality assessment, point cloud assessment, light field image coding, light field image quality assessment

Editorial Experience

Lead Guest Editor, Electronics, Special issue "Trends and Prospects in Image/Video Generation Technologies"

Reviewer Experience

Served as a regular peer reviewer for authoritative journals and flagship conferences in the field of image processing, multimedia coding and signal processing, with accumulated more than 100 professional paper review experiences.

1. IEEE Transactions on Circuits and Systems for Video Technology (62 papers)
2. IEEE Transactions on Multimedia (18 papers)
3. IEEE Transactions on Image Processing (28 papers)
4. IEEE Signal Processing Letters (11 papers)
5. IEEE Transactions on Broadcasting (2 papers)
6. Signal Processing: Image Communication (7 papers)
7. Expert Systems With Applications (5 papers)