

Meng Wang

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BIOGRAPHY

Meng Wang joined Lingnan University, Hong Kong, as a tenure-track Assistant Professor since August 2024. She holds a Ph.D. degree from the City University of Hong Kong under the supervision of Prof. Shiqi Wang in 2021, a Master's degree in Computer Application Technology from Peking University under the supervision of Prof. Wen Gao, and Prof. Xiaodong Xie in 2018, a B.Sc. in Electronic Engineering from China Agricultural University in 2015. She has been actively participating in the development of VVC, AVS3 and JPEG-AI standards and 27 technical proposals have been adopted. She has authored or co-authored over 60 refereed journal articles/conference papers. Her primary research interests include image and video coding and processing and generative coding.

WORKING EXPERIENCES

- **Lingnan University** **Hong Kong**
from 2024.08
Assistant Professor in School of Data Science
- **City University of Hong Kong** **Hong Kong**
2021.10–2024.08
Postdoc in Department of Computer Science
Supervisor: Prof. Shiqi Wang

EDUCATION

- **City University of Hong Kong** **Hong Kong**
2018.09–2021.09
Ph.D. of Computer Science,
Supervisor: Prof. Shiqi Wang
Thesis: Content Adaptive Compression and Optimization Techniques for Video Coding
- **Peking University** **Beijing**
2015.08–2018.07
Master of Computer Application Technology,
Supervisor: Prof. Xiaodong Xie
Thesis: Research on Low-Complexity Algorithm of High-Efficiency Video Coding
- **China Agricultural University** **Beijing**
2011.08–2015.07
Bachelor of Electronic Information Engineering,
Honor's Program
Thesis: Research on Hardware Design of Adaptive Loop Filter

PAPERS AND PROPOSALS

Published Papers.....

1. **Meng Wang**, Junru Li, Li Zhang, Kai Zhang, Hongbin Liu, Shiqi Wang, Sam Kwong, and Siwei Ma
“Extended Coding Unit Partitioning for Future Video Coding”, *IEEE Transactions on Image Processing*,

vol. 29, pp. 2931-2946, Nov. 2019.

2. **Meng Wang**, Shiqi Wang, Junru Li, Li Zhang, Yue Wang, Siwei Ma, and Sam Kwong "Low Complexity Trellis-Coded Quantization in Versatile Video Coding", *IEEE Transactions on Image Processing*, vol. 30, pp. 2378-2393, Jan. 2021.
3. **Meng Wang**, Jizheng Xu, Li Zhang, Junru Li, Kai Zhang, Shiqi Wang and Siwei Ma "Compressed Screen Content Image Super Resolution", *ACM Transactions on Multimedia Computing, Communications and Applications*, vol. 19, issue 6, Article No.: 209, pp. 1–20
4. **Meng Wang**, Semih Esenlik, Zhaobin Zhang, Yaojun Wu, Kai Zhang, Li Zhang and Shiqi Wang "Leveraging Conv-Attention for Efficient and High-Quality JPEG AI Image Coding", *IEEE Data Compression Conference (DCC) 2024 (Accepted)*.
5. **Meng Wang**, Jizheng Xu, Li Zhang, Junru Li, and Shiqi Wang "Super Resolution for Compressed Screen Content Video", *IEEE Data Compression Conference (DCC) 2021*:pp. 173-182.
6. **Meng Wang**, Junru Li, Li Zhang, Hongbin Liu, Jizheng Xu, and Shiqi Wang "Revisiting Local Texture Correlation for Rate-Distortion Optimized Intra Coding", *IEEE Data Compression Conference (DCC) 2020*: 273-282.
7. **Meng Wang**, Junru Li, Li Zhang, Kai Zhang, Hongbin Liu, Shiqi Wang, Sam Kwong, and Siwei Ma "Extended Quad-Tree Partitioning for Future Video Coding", *IEEE Data Compression Conference (DCC) 2019*: 300-309.
8. **Meng Wang**, Jizheng Xu, Li Zhang, Junru Li, and Shiqi Wang "Multi-hypothesis inspired super-resolution for compression distorted screen content image", *Applications of Digital Image Processing XLIV*. SPIE, 2021, 11842: 24-30.
9. **Meng Wang**, Kai Zhang, Li Zhang, Yaojun Wu, Yue Li, Junru Li, and Shiqi Wang "Transform Skip Inspired End-to-end Compression for Screen Content Image", *2022 IEEE International Conference on Image Processing (ICIP)*, Bordeaux, France, 2022, pp. 3848-3852
10. **Meng Wang**, Kai Zhang, Li Zhang, Yue Li, Junru Li, Yue Wang, and Shiqi Wang "End-to-end Image Compression with Swin-Transformer", *2022 IEEE International Conference on Visual Communications and Image Processing (VCIP)*, Suzhou, China, 2022, pp. 1-5.
11. **Meng Wang**, Shiqi Wang, Junru Li, Li Zhang, Yue Wang, and Siwei Ma "SSIM Motivated Quality Control for Versatile Video Coding", *2020 Asia-Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA ASC)*, Auckland, New Zealand, 2020, pp. 1122-1127.
12. **Meng Wang**, Junru Li, Li Zhang, Kai Zhang, Hongbin Liu, Shiqi Wang, Siwei Ma "Fast Coding Unit Splitting Decisions for the Emergent AVS3 Standard", *IEEE Picture Coding Symposium (PCS) 2019*: 1-5
13. **Meng Wang**, Xiaodong Xie, Junru Li, Huizhu Jia, Wen Gao "Fast Rate Distortion Optimized Quantization Method Based on Early Detection of Zero Block for HEVC," *IEEE International Conference on Multimedia Big Data (BigMM) 2017*: 90-93
14. **Meng Wang**, Xiaodong Xie, Hongfei Fan, Shanshe Wang, Junru Li, Shengfu Dong, Guoqing Xiang, Huizhu Jia "Fast rate distortion optimized quantization method for HEVC," *IEEE International Symposium on Circuits and Systems (ISCAS) 2017*: 1-4 (Poster)
15. Yingwen Zhang, **Meng Wang***, Junru Li, Shiqi Wang, Siwei Ma, and Weisi Lin "Toward the Achievable Rate-Distortion Bound of VVC Intra Coding: A Beam Search-Based Joint Optimization Scheme" *IEEE Transactions on Image Processing*, 2023. (Accepted, *Corresponding Author)
16. Jiancong Chen, **Meng Wang***, Pingping Zhang, Shurun Wang and Shiqi Wang, "Sparse-to-Dense: High Efficiency Rate Control for End-to-end Scale-Adaptive Video Coding," *IEEE Transactions on Circuits and Systems for Video Technology*, 2023. (Accepted, *Corresponding Author)
17. Zhenhao Sun, **Meng Wang**, Peilin Chen, Xu Wang, Shiqi Wang, Sam Kwong, "Revisiting All-Zero Block Detection for Versatile Video Coding," *IEEE Transactions on Circuits and Systems for Video Technology*, 2024. (Accepted)
18. Junru Li, **Meng Wang**, Li Zhang, Kai Zhang, Hongbin Liu, Shiqi Wang, Siwei Ma, and Wen Gao

- "Unified Intra Mode Coding Based on Short and Long Range Correlations," *IEEE Transactions on Image Processing*, vol. 29, pp. 7245-7260, Jun. 2020.
19. Junru Li, **Meng Wang**, Li Zhang, Shiqi Wang, Kai Zhang, Shanshe Wang, Siwei Ma, and Wen Gao "Sub-sampled Cross-component Prediction for Emerging Video Coding Standards," *IEEE Transactions on Image Processing*, vol. 30, pp. 7305-7316, Aug. 2021.
 20. Yi Chen, **Meng Wang**, Shiqi Wang, Zhangkai Ni, and Sam Kwong, "A CTU-level Screen Content Rate Control for Low-delay Versatile Video Coding," *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 33, no. 9, pp. 5227-5241, Sept. 2023
 21. Pingping Zhang, **Meng Wang**, Baoliang Chen, Rongqun Lin, Xu Wang, Shiqi Wang, and Sam Kwong, "Learning-based Compression for Noisy Images in the Wild," *IEEE Transactions on Circuits and Systems for Video Technology*, 2022.
 22. Jiaqi Zhang, **Meng Wang**, Chuanmin Jia, Shanshe Wang, Siwei Ma, and Wen Gao "Scalable Intra Coding Optimization for Video Coding," *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 32, no. 10, pp. 7092-7106, Oct. 2022.
 23. Yunhao Mao, **Meng Wang**, Zhangkai Ni, Shiqi Wang, and Sam Kwong, "Neural Network Based Rate Control for Versatile Video Coding", *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 33, no. 10, pp. 6072-6085, Oct. 2023
 24. Yunhao Mao, **Meng Wang**, Shiqi Wang, and Sam Kwong, "High-Efficiency Rate Control for Versatile Video Coding Based on Composite Cauchy Distribution," *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 32, no. 4, pp. 2371-2384, April 2022
 25. Rongqun Lin, **Meng Wang**, Pingping Zhang, Shiqi Wang, Sam Kwong, "Multiple Hypotheses Based Motion Compensation for Learned Video Compression," *Neurocomputing*, 2023.
 26. Peilin Chen, Wenhan Yang, **Meng Wang**, Long Sun, Kangkang Hu, and Shiqi Wang, "Compressed Domain Deep Video Super-Resolution," *IEEE Transactions on Image Processing*, vol. 30, pp. 7156-7169, Aug. 2021.
 27. Qi Mao, Chongyu Wang, **Meng Wang**, Shiqi Wang, Ruijie Chen, Libiao Jin, Siwei Ma, "Scalable Face Image Coding via StyleGAN Prior: Towards Compression for Human-Machine Collaborative Vision," *IEEE Transactions on Image Processing*, 2023. (Accepted)
 28. Xiangrui Liu **Meng Wang**, Shiqi Wang and Sam Kwong, "Bilateral Context Modeling for Residual Coding in Lossless 3D Medical Image Compression," *IEEE Transactions on Image Processing*, 2024. (Accepted)
 29. Pingping Zhang, Shiqi Wang, **Meng Wang**, Jiguo Li, Xu Wang, and Sam Kwong, "Rethinking Semantic Image Compression: Scalable Representation with Cross-modality Transfer," *IEEE Transactions on Circuits and Systems for Video Technology*, 2023. (Accepted)
 30. Xiaohan Fang, Peilin Chen, **Meng Wang**, Xi Xie, Shiqi Wang, Shanshe Wang, and Siwei Ma, "Exploiting Bidirectional Quality Impulse for Reference Picture Resampled Gaming Video Coding," *IEEE Transactions on Circuits and Systems for Video Technology*, 2024.(Accepted)
 31. Xinju Wu, Pingping Zhang, **Meng Wang**, Peilin Chen, Shiqi Wang and Sam Kwong, "Geometric Prior Based Deep Human Point Cloud Geometry Compression," *IEEE Transactions on Circuits and Systems for Video Technology*, 2024.(Accepted)
 32. Yixuan Li, Bolin Chen, Baoliang Chen, **Meng Wang**, Shiqi Wang and Weisi Lin, "Perceptual Quality Assessment of Face Video Compression: A Benchmark and An Effective Method," *IEEE Transactions on Multimedia*, 2024. (Accepted)
 33. Yang Li, Shengbin Meng, Xinfeng Zhang, **Meng Wang**, Shiqi Wang, Yue Wang, and Siwei Ma, "User-generated Video Quality Assessment: A Subjective and Objective Study," *IEEE Transactions on Multimedia*, vol. 25, pp. 154-166, 2023.
 34. Junru Li, Li Zhang, Kai Zhang, Hongbin Liu, **Meng Wang**, Shiqi Wang, Siwei Ma, and Wen Gao, "Prediction with Multi-Cross Component for Future Video Coding," *IEEE MultiMedia*, Nov. 2020.
 35. Zhaobin Zhang, Semih Esenlik, Yaojun Wu, **Meng Wang**, Kai Zhang and Li Zhang, "End-to-End

Learning-based Image Compression with A Decoupled Framework," *IEEE Transactions on Circuits and Systems for Video Technology*, 2023. (Accepted)

36. Xi Xie, **Meng Wang**, Junru Li, Kai Zhang, Li Zhang and Shiqi Wang, "Enhanced Motion Compensated Temporal Filter for VVenC," in *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 34, no. 11, pp. 12086-12091, Nov. 2024
37. Feng Xing, Yingwen Zhang, **Meng Wang**, Hengyu Man, Yongbing Zhang, Shiqi Wang, Xiaopeng Fan and Wen Gao, "Mining Temporal Priors for Template-generated Video Compression." *IEEE Transactions on Circuits and Systems for Video Technology* 2025 (Accepted).
38. Yingwen Zhang, **Meng Wang**, Junru Li, Kai Zhang, Li Zhang and Shiqi Wang, "A Theoretical and Experimental Study for Dependent Learned Rate-Distortion Optimization," in *IEEE Transactions on Circuits and Systems for Video Technology* 2025 (Accepted).
39. Zeming Zhao, Xiaohai He, Shuhua Xiong, **Meng Wang** and Shiqi Wang, "Spatial-temporal Correlation Information Based Rate Control for Versatile Video Coding," in *IEEE Transactions on Circuits and Systems for Video Technology* 2025 (Accepted).
40. Riyu Lu, Yingwen Zhang, Hengyu Man, **Meng Wang**, Shiqi Wang and Xiaopeng Fan, "Learning the Scale in Reference Picture Resampling for Versatile Video Coding," in *IEEE Transactions on Multimedia*, vol. 27, pp. 5831-5842, 2025
41. Pingping Zhang, Shiqi Wang, **Meng Wang**, Peilin Chen, Wenhui Wu, Xu Wang and Sam Kwong, "HNR-ISC: Hybrid Neural Representation for Image Set Compression," in *IEEE Transactions on Multimedia*, vol. 27, pp. 28-40, 2025
42. Zhenhao Sun, **Meng Wang**, Shiqi Wang and Sam Kwong, "LEC-Codec: Learning-Based Genome Data Compression," in *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, vol. 21, no. 6, pp. 2447-2458, Nov.-Dec. 2024
43. Peilin Chen, Xiaohan Fang, **Meng Wang**, Shiqi Wang and Siwei Ma, "Compact Visual Data Representation for Green Multimedia—A Human Visual System Perspective," in *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, vol. 15, no. 1, pp. 16-30, March 2025
44. Xiaohan Fang, Peilin Chen, **Meng Wang** and Shiqi Wang. Immersive video interaction system: a survey[J]. *Visual Intelligence*, 2025, 3(1): 5.
45. Xiaohan Fang, Peilin Chen, **Meng Wang** and Shiqi Wang, "Examining the role of compression in influencing AI-generated image authenticity." *Scientific Reports* 15.1 (2025): 12192.
46. Jiaqi Zhang, **Meng Wang**, Chuanmin Jia, Qi Wang, Shanshe Wang, Siwei Ma and Wen Gao, "Fast Partition Mode Decision via a Plug-in Fully Connected Network for Video Coding," *2022 Data Compression Conference (DCC)*, 2022, pp. 222-231.
47. Junru Li, **Meng Wang**, Li Zhang, Kai Zhang, Shiqi Wang, Shanshe Wang, Siwei Ma, Wen Gao, "Sub-Sampled Cross-Component Prediction for Chroma Component Coding," *IEEE Data Compression Conference (DCC) 2020*: 203-212 (Candidate of the Capocelli Prize)
48. Junru Li, Li Zhang, Kai Zhang, Hongbin Liu, **Meng Wang**, Shiqi Wang, Siwei Ma, Wen Gao, "Prediction with Multi-Cross Component," *IEEE International Conference on Multimedia and Expo Workshops (ICMEW) 2020*: 1-6
49. Junru Li, **Meng Wang**, Li Zhang, Kai Zhang, Hongbin Liu, Shiqi Wang, Siwei Ma, Wen Gao, "History-Based Motion Vector Prediction for Future Video Coding," *IEEE International Conference on Multimedia and Expo (ICME) 2019*: 67-72
50. Zhenhao Sun, **Meng Wang**, Shiqi Wang and Sam Kwong, "Complexity-Configurable Learning-based Genome Compression," *IEEE Picture Coding Symposium (PCS) 2021*: 1-5
51. Junru Li, Falei Luo, Yun Zhou, Shanshe Wang, **Meng Wang**, Siwei Ma "Content Based Fast Intra Coding for AVS2," *IEEE International Conference on Multimedia Big Data (BigMM) 2017*: 94-97
52. Rongqun Lin, Pingping Zhang, **Meng Wang**, Shiqi Wang and Sam Kwong, "Deep Video Compression for P-frame in Sub-sampled Color Spaces," *IEEE International Symposium on Circuits and Systems (ISCAS) 2022*.

53. Xi Xie, Kai Zhang, Li Zhang, **Meng Wang**, Junru Li, and Shiqi Wang, "Efficient Interpolation Filters for Chroma Motion Compensation in Video Coding," IEEE Visual Communication and Image Processing Conference (VCIP) 2022.
54. Xi Xie, Kai Zhang, Li Zhang, **Meng Wang**, Junru Li, and Shiqi Wang, "Low Complexity Transcoding from HEVC to VVC", 2023 IEEE International Conference on Multimedia and Expo (ICME), Brisbane, Australia, 2023, pp. 2573-2578.
55. Peilin Chen, Bolin Chen, **Meng Wang**, Shiqi Wang and Zhu Li, "Visual Data Compression for Metaverse: Technology, Standard, and Challenges", 2023 IEEE International Conference on Metaverse Computing, Networking and Applications (MetaCom), Kyoto, Japan, 2023, pp. 360-364
56. Yingwen Zhang, **Meng Wang**, Junru Li and Shiqi Wang "Performance Exploration of Jointly Rate-Distortion Optimized HEVC Intra Encoder", IEEE Data Compression Conference (DCC) 2024 (Accepted).
57. Qi Mao, Tianhan Yang, Yinuo Zhang, Zijian Wang, **Meng Wang**, Shiqi Wang, Libiao Jin and Siwei Ma, "Extreme Image Compression Using Fine-tuned VQGANs", IEEE Data Compression Conference (DCC) 2024 (Accepted).
58. Feng Xing, Yingwen Zhang, **Meng Wang**, Hengyu Man, Yongbing Zhang, Shiqi Wang and Xiaopeng Fan "An Efficient Hidden Markov Model-Based Sample Adaptive Offset Mode Decision Algorithm for Versatile Video Coding," 2025 Data Compression Conference (DCC), Snowbird, UT, USA, 2025, pp. 407-407
59. Zeming Zhao, **Meng Wang**, Xiangjie Sui, Xiaohai He and Shiqi Wang, "CTU-Level Rate Control with λ Optimization Based on Visual Gaze Mechanism for 360-Degree Versatile Video Coding," 2025 IEEE International Conference on Image Processing (ICIP), Anchorage, AK, USA, 2025, pp. 641-646.
60. Zhenhao Sun, **Meng Wang**, Yingwen Zhang, Shiqi Wang and Sam Kwong, "Early Determination for Intra Block Copy Prediction with Refined Screen Content Detection," 2024 IEEE International Conference on Visual Communications and Image Processing (VCIP), Tokyo, Japan, 2024, pp. 1-5
61. Pingping Zhang, Xiangrui Liu, **Meng Wang**, Shiqi Wang and Sam Kwong, "2D Gaussian Splatting for Image Compression." APSIPA Transactions on Signal and Information Processing 13.6 (2024).
62. Fangtao Zhou, Xiaofeng Huang, Peng Zhang, **Meng Wang**, Zhao Wang, Yang Zhou and Haibin Yin, "Enhanced screen content image compression: A synergistic approach for structural fidelity and text integrity preservation." Proceedings of the 32nd ACM International Conference on Multimedia. 2024.
63. Siyuan Xu, Peilin Chen, Yue Liu, **Meng Wang**, Shiqi Wang and Sam Kwong, "Reveal Fluidity Behind Frames: A Multi-Modality Framework for Action Quality Assessment," 2024 IEEE 26th International Workshop on Multimedia Signal Processing (MMSP), West Lafayette, IN, USA, 2024, pp. 1-6

Adopted Standard Proposals.....

1. **Meng Wang**, Junru Li, Li Zhang, Kai Zhang, Hongbin Liu, Yue Wang, Pengwei Zhao, Dingkun Hong, Shiqi Wang, "Extended Quad-tree Partitions," AVS-M4507, Oct. 2018.
2. **Meng Wang**, Junru Li, Li Zhang, Kai Zhang, Hongbin Liu, Shiqi Wang, Siwei Ma, "Non-CE: Fast encoder with adjusted threshold in dependent quantization" JVET-O0256, Jul. 2019.
3. **Meng Wang**, Semih Esenlik, etc., "wg1m100160-CPM-[JPEG AI Non-CE] Syntax Elements Simplification for RVS, LSBS and SKIP", JPEG-AI wg1m100160, Jul. 2023.
4. **Meng Wang**, Semih Esenlik, etc., "wg1m100076-CPM-[JPEG AI CE] Report on CE4.5 - Simplified Attention Models in JPEG AI VM, LSBS and SKIP", JPEG-AI wg1m100076, Jul. 2023.
5. Junru Li, **Meng Wang**, Li Zhang, Kai Zhang, Hongbin Liu, Jizheng Xu, Yue Wang, Pengwei Zhao, Dingkun Hong: "Fast EQT design for I slices", AVS-4567, Dec. 2018.
6. Junru Li, **Meng Wang**, Li Zhang, Kai Zhang, Hongbin Liu, Jizheng Xu, Yue Wang, Pengwei Zhao, Dingkun Hong, Shiqi Wang, Yinji Piao, Kiho Choi, "Chroma coding with Two-Step Cross-component Prediction," AVS-M4632, Dec.2018.
7. Junru Li, **Meng Wang**, Li Zhang, Kai Zhang, Hongbin Liu, Jizheng Xu, Yue Wang, Pengwei Zhao, Dingkun Hong, Shiqi Wang, "A Simplified LUT for TSCPM," AVS-M4658, Jan. 2019.

8. Junru Li, **Meng Wang**, Li Zhang, Kai Zhang, Hongbin Liu, Jizheng Xu, Yue Wang, Pengwei Zhao, Dingkun Hong, Shiqi Wang, "Modified Comparison Logic for TSCPM," AVS-M4726, Mar. 2019.
9. Junru Li, Li Zhang, Kai Zhang, Hongbin Liu, **Meng Wang**, Shiqi Wang, Shanshe Wang and Siwei Ma, "On Intra Prediction Mode Selection," AVS-M5107, Dec. 2019.
10. Junyan Huo, Yanzhuo Ma, Shuai Wan, Yuanfang Yu, **Meng Wang**, Li Zhang, Kai Zhang, Hongbin Liu, Jizheng Xu, Shiqi Wang, Junru Li, Shanshe Wang, Wen Gao, "CCLM derived with four neighbouring samples," JVET-N0271, Mar. 2019.
11. Junru Li, Li Zhang, Kai Zhang, Hongbin Liu, **Meng Wang**, Shiqi Wang, Shanshe Wang and Siwei Ma, "Cleanups for AVS3 Specification," AVS-M5105, Dec. 2019.
12. Junru Li, Li Zhang, Kai Zhang, Hongbin Liu, Jizheng Xu, **Meng Wang**, Yue Wang, Pengwei Zhao, Dingkun Hong, Zhongliang LiRiyang Zhao: "Modified HMVP for parallel coding support", AVS-M4659, Jan, 2019.
13. Junru Li, Li Zhang, Kai Zhang, Hongbin Liu, Jizheng Xu, **Meng Wang**, Shiqi Wang, Shanshe Wang and Siwei Ma, "Frequency-based Intra Mode Coding", AVS-M4972, Aug. 2019.
14. Junru Li, Li Zhang, Kai Zhang, Hongbin Liu, Jizheng Xu, **Meng Wang**, Shiqi Wang, Shanshe Wang and Siwei Ma, "Supplemental Information about Frequency-based Intra Mode Coding," AVS-M5106, Dec. 2019.
15. Junru Li, Li Zhang, Kai Zhang, Hongbin Liu, Jizheng Xu, Meng Wang, Shiqi Wang, Shanshe Wang and Siwei Ma, "Fast Skip and Direct Mode Decision Algorithm," AVS-M5157, Mar. 2020.
16. Junru Li, Li Zhang, Kai Zhang, Hongbin Liu, Jizheng Xu, **Meng Wang**, Shiqi Wang, Shanshe Wang and Siwei Ma, "Prediction from Multi-cross Components," AVS-M5108, Dec. 2019.
17. Yuhuai Zhang, Kai Zhang, Li Zhang, Hongbin Liu, Junru Li, **Meng Wang**, Yue Wang, "Implicit selection of transforms for intra coding," AVS-M4772, June. 2019.
18. Yuhuai Zhang, Kai Zhang, Li Zhang, Hongbin Liu, Junru Li, **Meng Wang**, Yue Wang, "Extended implicit selection of transforms for intra coding," AVS-M4873, Aug. 2019.
19. Yuhuai Zhang, Kai Zhang, Li Zhang, Hongbin Liu, Junru Li, **Meng Wang**, Yue Wang, Shanshe Wang, Siwei Ma: Enhanced secondary transform, M5159, Mar. 2020
20. Yuhuai Zhang, Kai Zhang, Li Zhang, Hongbin Liu, Junru Li, **Meng Wang**, Yue Wang, Shanshe Wang, Siwei Ma: Implicit selection of transform skip mode, M5160, Mar. 2020
21. Tianliang Fu, Hongbin Liu, Kai Zhang, Li Zhang, Jizheng Xu, Junru Li, **Meng Wang**, Yue Wang, Pengwei Zhao, Dingkun Hong: "Improvements of Affine Mode", AVS-4565, Dec. 2018.
22. Junru Li, Kai Zhang, Li Zhang, Hongbin Liu, **Meng Wang**, Shiqi Wang, Shanshe Wang and Siwei Ma: "Hierarchical GOP structure of 32 for random access", AVS-M6161, Feb. 2021.
23. Junru Li, **Meng Wang**, Yue Li, Li Zhang, Kai Zhang, Siwei Ma, Shiqi Wang, Xiaozhen Zheng, Yan Zhou, Dong Liu, "Hook for AI Coding," AVS-M6363, Apr. 2021.
24. Xi Xie, Kai Zhang, Li Zhang, Junru Li, **Meng Wang**, Shiqi Wang, "(ECM) EE2-2.6: Long-tap interpolation filtering on chroma components", ISO/IEC JTC1/SC29, Doc.JVET-Z0117, Apr. 2022
25. Sun Zhenhao, **Wang Meng**, Zhang Qiudan, Wang Rongjie, Wang Shiqi, Kuang Dehu, Liu Xianming, Zhu Zexuan: Implementation of base compression codec based on neural network, AVS M6480
26. Sun Zhenhao, **Wang Meng**, Wang Shiqi, Liu Xianming, Yang Meng, Zhu Zexuan, Wang Rongjie, Kuang Dehu: Multi-step implementation of base compression codec based on neural network, AVS M6644
27. Sun Zhenhao, **Wang Meng**, Wang Shiqi, Liu Xianming, Zhu Zexuan, Wang Rongjie, Kuang Dehu: Neural Network-Based Base Coding End Prediction and Entropy Coding Partial Decoupling Optimization, AVS M6847

PROFESSIONAL ACTIVITY

Special Session.....

- IEEE MMSP 2024, organizer of "Exploring Generative AI Technologies in Multimedia Signal Processing"

Reviewer Service.....

- IEEE Transactions on Pattern Analysis and Machine Intelligence (T-PAMI)
- IEEE Transactions on Image Processing (T-IP).
- IEEE Transactions on Circuits and Systems for Video Technology (T-CSVT).
- Journal of Visual Communication and Image Representation
- IEEE Signal Processing Letters (SPL)
- IET Electronics Letters (EL)
- IEEE Access
- ACM International Conference on Multimedia (ACM MM)
- IEEE International Conference on Multimedia and Expo (ICME)
- IEEE Picture Coding Symposium (PCS)
- IEEE International Symposium on Circuits and Systems (ISCAS)
- IEEE The International Conference on Acoustics, Speech, & Signal Processing (ICASSP)
- IEEE International Conference on Visual Communications and Image Processing (VCIP)
- IEEE International Workshop on Multimedia Signal Processing (MMSP)
- The IEEE / CVF Computer Vision and Pattern Recognition Conference (CVPR)

Teaching.....

- CDS 534 Database Management 2024/25
- CDS 521 Foundation of Artificial Intelligence 2025/26

Teaching Assistant.....

- CS1102 Introduction to Comp Studies 2018/19 Semester A
- CS2402 Intro to Comp Prob Modeling 2018/19 Semester B
- CS4487 Machine Learning 2019/20 Semester A
- CS2402 Intro to Comp Prob Modeling 2019/20 Semester B
- CS2313 Computer Programming 2020/21 Semester A
- CS4186 Comp Vision & Image Processing 2020/21 Semester B
- CS5187 Vision and Image 2020/21 Semester B

GRANT RECORDS

- "High efficiency compression for visual scene data", WANG, M. (PI), LU Research Committee, Start-up Grant, HK \$ 100,000.00, 16/02/25 to 15/02/27
- "Generative Artificial Intelligence-based Visual Data Compression", WANG, M. (PI), LU Research Committee, Faculty Research Grant, HK\$50,000.00, 1/04/25 to 30/03/26
- "Intelligent and Efficient Transcoding for the Versatile Video Coding", WANG, M. (PI), LU Research Committee, Faculty Research Grant, HK\$50,000.00, 1/11/25 to 30/10/26

HONORS AND AWARDS

- Top Performance Award in the VVC Encoder-only Track of The Grand Challenge on Neural Network-based Video Coding in IEEE ISCAS (2025)
- Top Performance Award in the Hybrid Track of The Grand Challenge on Neural Network-based Video Coding in IEEE ISCAS (2024)
- Top Performance Award in the End-to-end Track of The Grand Challenge on Neural Network-based

Video Coding in IEEE ISCAS (2024)

- Top Performance Award in the VVC Encoder-only Track of The Grand Challenge on Neural Network-based Video Coding in IEEE ISCAS (2024)
- Silver Medal, 48th International Exhibition of Inventions Geneva (2023)
- Technology Innovation Award in ChinaMM (2022)
- AVS Industry Technology Innovation Award (2019/2021)
- Outstanding Academic Performance Award in City University of Hong Kong (2020)
- Research Tuition Scholarship in City University of Hong Kong (2020)