

# Ms. LIU Hui

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**EDUCATION**      **City University of Hong Kong**, Kowloon, Hong Kong SAR  
Ph.D candidate, Department of Computer Science, Aug. 2018 – Aug. 2021

**Nanyang Technological University**, Singapore  
Master of Engineering, School of Computer science, Sep. 2012 – Sep. 2014

**Central South University**, Changsha, P.R. China  
Mater of Engineering, School of Communication Engineering, Sep. 2009 – July 2012

**Central South University**, Changsha, P.R. China  
*Talented Students Program (top 3%)*  
Bachelor of Engineering, School of Communication Engineering, Sep. 2005 – July 2009

**RESEARCH INTERESTS**      Image/Video Representation, Processing and Analysis  
Semi/Un-supervised Modeling for Data Clustering/Classification

**WORK EXPERIENCE**      Research Associate, Maritime Institute, Nanyang Technological University  
Oct. 2014 – Aug. 2017  
Supervisor: Professor Lap-Pui Chau  
Project: Contrast Enhanced Vision for Deepwater Monitoring System

                         Research Associate, Department of Computer Science, City University of Hong Kong  
Jan. 2018 – Jun. 2018  
Supervisor: Dr. Shiqi Wang  
Project: Semi-supervised Learning

**HONORS and AWARDS**      **Outstanding Academic Performance Award for Research Degree Students**,  
City University of Hong Kong, Aug, 2020  
**Research Tuition Scholarship**, City University of Hong Kong, Sep, 2020  
**Best Paper Award**, *IEEE International Conference on Digital Signal Processing (IEEE DSP)*, 2016  
**National Inspirational Scholarship (top 5%)**, Central South University, 2008  
**Outstanding Student Award**, Central South University, 2008  
**First Class Scholarship (twice)**, Central South University, 2005 – 2007

**JOURNAL PUBLICATIONS**

1. **Hui Liu**, Yuheng Jia, Junhui Hou, and Qingfu Zhang, “Local-Global Balanced Low-rank Approximation of Hyperspectral Images for Classification”, *IEEE Transactions on Circuits and Systems for Video Technology (IEEE T-CSVT)*, 2021, DOI: 10.1109/TCSVT.2021.3095250.
2. **Hui Liu**, Yuheng Jia, Junhui Hou, and Qingfu Zhang, “Learning Low-rank Graph with Enhanced Supervision”, *IEEE Transactions on Circuits and Systems for Video Technology (IEEE T-CSVT)*, 2021, DOI: 10.1109/TCSVT.2021.3089336.
3. **Hui Liu** and Lap-Pui Chau, “Deepsea video descattering”, *Multimedia Tools & Applications*, vol. 78, no. 20, p28919-28929, 2019.
4. Yuheng Jia, **Hui Liu\***, Junhui Hou, Sam Kwong, and Qingfu Zhang, “Multi-view Spectral Clustering Tailored Tensor Low-rank Representation”, *IEEE Transactions on Circuits and Systems for Video Technology (IEEE T-CSVT)*, 2021. DOI: 10.1109/TCSVT.2021.3055039 (\*Corresponding author).

5. Zhihao Peng, Yuheng Jia, **Hui Liu**, Junhui Hou, and Qingfu Zhang, “Maximum Entropy Subspace Clustering Network”, *IEEE Transactions on Circuits and Systems for Video Technology (IEEE T-CSVT)*, 2021, DOI: 10.1109/TCSVT.2021.3089480.
6. Yuheng Jia, **Hui Liu**, Junhui Hou, Sam Kwong, and Qingfu Zhang, “Semi-supervised Affinity Matrix Learning via Dual-channel Information Recovery”, *IEEE Transactions on Cybernetics (IEEE T-CYB)*, 2021, DOI: 10.1109/TCYB.2020.3041493.
7. Yuheng Jia, **Hui Liu**, Junhui Hou, and Sam Kwong, “Clustering-aware Graph Construction: A Joint Learning Perspective”, *IEEE Transactions on Signal and Information Processing over Networks (IEEE T-SIPN)*, vol. 6, no. 1, pp. 357-370, 2020.
8. Yuheng Jia, **Hui Liu**, Junhui Hou, and Sam Kwong, “Semi-supervised Adaptive Symmetric Nonnegative Matrix Factorization”, *IEEE Transactions on Cybernetics (IEEE T-CYB)*, 2020, *in press*. DOI: 10.1109/TCYB.2020.2969684
9. Yuheng Jia, **Hui Liu**, Junhui Hou, and Sam Kwong, “Pairwise Constraint Propagation with Dual Adversarial Manifold Regularization”, *IEEE Transactions on Neural Networks and Learning Systems (IEEE T-NNLS)*, vol. 31, no. 12, pp. 5575 - 5587, 2020.
10. Yi Wang, **Hui Liu**, and Lap-Pui Chau, “Single Underwater Image Restoration Using Adaptive Attenuation-Curve Prior” *IEEE Transactions on Circuits and Systems I (IEEE T-CAS-I)*, vol. 65, no. 3, pp. 992 - 1002, 2017.

## CONFERENCE PUBLICATIONS

1. **Hui Liu**, Yuheng Jia, Junhui Hou, and Qingfu Zhang, “Imbalance-aware Pairwise Constraint Propagation”, *in Proc. ACM International Conference on Multimedia (ACM MM)*, 2019, pp. 1605-1613.
2. **Hui Liu**, Lap-Pui Chau, “Underwater image restoration based on contrast enhancement” *in Proc. IEEE International Conference on Digital Signal Processing (IEEE DSP)*, 2016, pp. 584-588. (**Best Paper Award**)
3. **Hui Liu**, Lap-Pui Chau, “Underwater image color correction based on surface reflectance statistics” *in Proc. Asia-Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA ASC)*, 2015, pp. 996-999.
4. Yuheng Jia, **Hui Liu\***, Junhui Hou, and Qingfu Zhang, “Clustering Ensemble Meets Low-rank Tensor Approximation”, *in Proc. AAAI Conference on Artificial Intelligence (AAAI)*, 2021, *in press*. (\*Corresponding author).
5. Zhihao Peng, **Hui Liu**, Yuheng Jia, and Junhui Hou, “Attention-driven Graph Clustering Network”, *ACM International Conference on Multimedia (ACM MM)*, 2021, *Accept*
6. Zhiyu Zhu, **Hui Liu**, Junhui Hou, Huanqiang Zeng, “Semantic-Embedded Unsupervised Spectral Reconstruction from Single RGB Images in the Wild”, *IEEE/CVF International Conference on Computer Vision (ICCV)*, 2021, *Accept*.
7. Mantang Guo, Jing Jin, **Hui Liu**, and Junhui Hou, “Learning Dynamic Interpolation for Extremely Sparse Light Fields with Wide Baselines”, *IEEE/CVF International Conference on Computer Vision (ICCV)*, 2021, *Accept*.
8. Yi Wang, **Hui Liu**, Lap-Pui Chau, “Single Underwater Image Restoration using attenuation curves” *in Proc. IEEE International Symposium on Circuits and Systems (IEEE ISCAS)*, 2017, pp. 992-1002.

**TEACHING  
EXPERIENCE**

**Department of Computer Science, City University of Hong Kong**

**Teaching Assistant, CS4335** Design and Analysis of Algorithms,  
Semester A, 2018 – 2020.

**Teaching Assistant, CS2402** Introduction to Computational Probability Modeling,  
Semester B, 2018 – 2020.