Jia-Li **Yin**

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Summary

Experienced computer programmer with academic experience that has published 7 IEEE journal articles, 8 conference articles, and 1 U.S. patent. Technical specialties include computer vision, deep learning, and machine learning. Able to apply academic competence and programming skills to devise a better problem-solving method for challenging tasks, and can learn new technologies and tools if the need arises.

Research Experience

Power Constrained Image Contrast Enhancement

Taipei, Taiwan

WORKING WITH THE QUALCOMM TECHNOLOGIES, INC., SAN DIEGO, USA — *Sep. 2018 -*

- Published in IEEE ICKII 2018, IEEE TCSVT 2019 and IEEE TMM 2020.
- Developed a saliency-guided deep framework for power consumption suppressing on mobile devices.
- Developed a mixed-norm PCSR-based approach for perceptible image representation on OLED displays while improving power saving.
- Developed an image-quality-lossless end-to-end learning network to achieve power savings in emissive displays.

High dynamic range (HDR) image generation

Taipei, Taiwan

WORKING WITH THE QUALCOMM TECHNOLOGIES, INC., SAN DIEGO, USA — *Sep. 2018 -*

- Published in IEEE ICME 2020. One paper submitted to ACMMM 2020.
- Developed a prior guided deep network to enhance the image details for HDR image generation.
- Developed a reinforcement learning based approach to explore the intermediate image generation in two-exposure fusion for HDR image.

Image Reconstruction and Restoration

Taipei, Taiwan

WORKING WITH THE MULTIMEDIA BIG DATA SYSTEM LAB, YUAN ZE UNIVERSITY — *Sep. 2018 -*

- Published in IEEE TMM 2018, TCSVT 2019, and IEEE ICIP 2019. One paper submitted to IEEE TNNLS.
- Developed a semisupervised learning based model for removing multimodal noise from big imaging dataset.
- Developed a color transferred convolutional neural network for image dehazing.
- Developed a unsupervised learning model for single image haze removal.

Maintenance Efficiency: False Trigger Detection

Taipei, Taiwan

WORKING WITH THE FAR EASTERN ELECTRONIC TOLL COLLECTION CO, LTD. — *Sep. 2018 - Jun. 2019*

- Developed a machine learning-based framework for detecting and analyzing the false triggers in electronic toll collection system.
- Developed data visualization tools for visualizing the framework in electronic toll collection system.

Advanced Driver-Assistance System

Taipei, Taiwan

WORKING WITH THE INNOVATION CENTER FOR BIG DATA AND DIGITAL CONVERGENCE, YUAN ZE UNIVERSITY — *Sep. 2016 - Jun. 2017*

- Published in IEEE Sensors 2018, and TIV 2018, and IEEE TITS 2019.
- Developed an automatic dangerous driving intensity analysis system for intelligent vehicle.
- Developed an advanced driver risk measurement system for usage-Based insurance on big driving data.
- Developed a danger-level analysis framework for dealing with high variety and high volume problems of multisourced driving data.

Honors & Awards

2020	**Outstanding Ph.D. Thesis Awards**, Chinese Image Processing and Pattern Recognition Society	*Taipei, Taiwan*
2019	**Golden Medal Award**, Taiwan Innotech Expo	*Taipei, Taiwan*
2018	**Outstanding Master Thesis Awards**, Institute of Information & Computing Machinery	*Taipei, Taiwan*
2018	**Outstanding Undergraduate Thesis**, Fuzhou University	*Fuzhou, China*
2018	**Top Grade Scholarship**, Fuzhou University	*Fuzhou, China*
2017	**Outstanding Master Thesis Awards**, Taiwan Institute of Electrical and Electronic Engineering (TIEEE)	*Taipei, Taiwan*
2016	**The second prize**, Internet + Innovation Competition	*Fuzhou, China*
2015	**The third prize**, National Electronic Design Competition for Graduate Students	*Hangzhou, China*
2014	**Outstanding League Cadre**, Fuzhou University	*Fuzhou, China*
2014	**First Prize Scholarship**, Fuzhou University	*Fuzhou, China*
2013	**Excellent Student Cadre**, Fuzhou University	*Fuzhou, China*

Education

Department of Computer Science and Engineering, Yuan Ze University *Taoyuan, Taiwan*

PH.D. IN COMPUTER SCIENCE *Sep. 2018 - Jun. 2020*

- Advisor: Prof. Bo-Hao Chen, working with computer vision, deep learning, and machine learning

College of Computer Science and Mathematics, Fuzhou University *Fuzhou, China*

MASTER IN COMPUTER ARCHITECTURE *Sep. 2015 - Mar. 2018*

- Ranked 1st out of 6

Department of Computer Science and Engineering, Yuan Ze University *Taoyuan, Taiwan*

MASTER IN COMPUTER SCIENCE *Sep. 2016 - June. 2017*

- Ranked 2nd out of 50

College of Computer Science and Mathematics, Fuzhou University *Fuzhou, China*

B.S. IN INFORMATION SECURITY *Sep. 2011 - June. 2015*

- Ranked 2nd out of 39
- Outstanding graduates in 2011

Publication

Journal Articles

1. **J. L. Yin**, B. Chen, Y. T. Peng and C. C. Tsai, "Deep Battery Saver: End-to-end Learning for Power Constrained Contrast Enhancement," IEEE Transactions on Intelligent Transportation Systems. (In press)
2. **J. L. Yin**, B. Chen, and K. Lai, "Driver Danger-Level Monitoring System Using Multi-Sourced Big Driving Data," IEEE Transactions on Intelligent Transportation Systems. (In press)
3. **J. L. Yin**, Y. Huang, B. Chen, and S. Ye, "Color Transferred Convolutional Neural Networks for Image Dehazing," IEEE Transactions on Circuits and Systems for Video Technology. (In press)
4. **J. L. Yin**, B. Chen, E. Lai, and L. Shi, "Power-Constrained Image Contrast Enhancement Through Sparse Representation by Joint Mixed-Norm Regularization," in IEEE Transactions on Circuits and Systems for Video Technology, vol. 30, no. 8, pp. 2477-2488, Aug. 2020.
5. **J. L. Yin** and B. Chen, "An Advanced Driver Risk Measurement System for Usage-Based Insurance on Big Driving Data," IEEE Transactions on Intelligent Vehicles, vol. 3, no. 4, pp. 585–594, Dec. 2018.
6. **J. L. Yin**, B. Chen, and Y. Li, "Highly Accurate Image Reconstruction for Multimodal Noise Suppression Using Semisupervised Learning on Big Data," IEEE Transactions on Multimedia, vol. 20, no. 11, pp. 3045–3056, Nov. 2018.
7. **J. L. Yin**, B. Chen, K. Lai, and Y. Li, "An Advanced Driver Assistance System for Dangerous Intensity Analysis from Multimodal Driving Signals," IEEE Sensors Journal, vol. 18, no. 12, pp. 4785–4794, Jun. 2018.

Conference Proceedings

1. S. Ye, **J. L. Yin**, B. Chen, D. Chen, and Y. Wu, "Single Image Glare Removal using Deep Convolutional Networks," IEEE International Conference on Image Processing (ICIP), United Arab Emirates, Oct. 2020. (In press)
2. **J. L. Yin**, B. Chen, Y. Peng, and CC. Tsai, "Deep Prior Guided Network for High-quality Image Fusion," IEEE International Conference on Multimedia and Expo (ICME), London, UK, July. 2020. (In press)
3. **J. L. Yin**, B. Chen, Y. Peng, and Y. Lin, "Color Shifting-Aware Image Dehazing," IEEE International Symposium on Multimedia (ISM), San Diego, USA, pp.128-1283 Dec. 2019.
4. **J. L. Yin**, T. Peng, J. Kuan and B. Chen, "Towards Perspective-Free Pavement Distress Detection via Deep Learning," IEEE Global Conference on Consumer Electronics (GCCE), Osaka, Janpan, Oct. pp.661-662, 2019.
5. L. Huang, **J. L. Yin**, B. Chen and S. Ye, "Towards Unsupervised Single Image Dehazing With Deep Learning," IEEE International Conference on Image Processing (ICIP), Taipei, Taiwan, pp. 2741–2745, Sept. 2019.
6. B. Chen, **J. L. Yin**, and Y. Li, "Image Noise Removing Using Semi-supervised Learning on Big Image Data," IEEE International Conference on Multimedia Big Data (BigMM), Laguna Hills, California, USA, pp. 338–345, Apr. 2017. [Acceptance rate: 23.9%]

Patents

1. **J. L. Yin**, B. Chen, E. Lai, and L. Shi, Method, "Image Processing Device, and Display System for Power-Constrained Image Enhancement," U.S. Patent, Grant No. US10417996B2, Sept. 2019.