Associate Professor U, KIN TAK

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Academic Qualification

Ph.D. in Computer Technology and its Application, Macau University of Science and Technology (2007~2012)
M.S. in Computer Technology and its Application, Macau University of Science and Technology (2002~2004)
B.S. in Electrical and Electronics Engineering, University of Macau (1992~1996)

Teaching Area

Digital Circuits and Digital Circuits Experiment
Computer Organization and Computer Organization Experiment
Digital Signal Processing Experiments
CAD for Circuits
Embeded System

Research Area

Digital Signal Processing
Data Security
Embedded System: Application based on microprocessors, ISP PLD, FPGA and DSP
AI in Education

Working Experience

Associate Professor in FIE of Macau University of Science and Technology (2023~now)

Assistant Professor in FIE of Macau University of Science and Technology (2012~2023)

Lecturer in FIT of Macau University of Science and Technology (2005~2012)
FIT Lab Technician in Macau University of Science and Technology (2001~2005)
Electronic Engineer in bel Fuse Ltd. (1996~2001)

Academic Publication （selected）

Guojun Liang, **KinTak U**, Xin Ning, Prayag Tiwari, Slawomir Nowaczyk, Neeraj Kumar. Semantics-Aware Dynamic Graph Convolutional Network for Traffic Flow Forecasting. IEEE Transactions on Vehicular Technology [SCI], Vol 72(6), pp 7796-7809, 2023
Guojun Liang, **KinTak U**, Haichang Yin, Jin Liu, Huibin Luo. Multi-scale hybrid attention graph convolution neural network for remote sensing images super-resolution. Signal Processing [SCI]. Vol 207, 108954, 2023

Weikang Zhao, **KinTak U***, Huibin Luo. Adaptive non-uniform partition algorithm based on linear canonical transform. Chaos, Solitons & Fractals [SCI]. Volume 163, October 2022

Weikang Zhao, **KinTak U***, Huibin Luo. An image super-resolution method based on polynomial exponential function and non-uniform rectangular partition. The Journal of Supercomputing [SCI] (2022).

Huibin Luo, **KinTak U** & Weikang Zhao. Multi-focus image fusion through pixel-wise voting and morphology. Multimedia Tools and Applications [SCI] (2022).

WeiKang Zhao, **KinTak U**, HuiBin Luo. Image representation method based on Gaussian function and non-uniform partition. Multimedia Tools and Applications [SCI] (2022).

Guojun Liang, **KinTak U***, Jianbin Chen, Zhiying Jiang. Real-time traffic anomaly detection based on Gaussian mixture model and hidden Markov model. Concurrency and Computation: Practice and Experience [SCI]. 2021.

Yichen Li, KinTak U. Zero-watermark Design based on non-uniform BTC partition. 18th International Conference on Wavelet Analysis and Pattern Recognition (ICWAPR2021) [EI]. 2021

Mingqiang shi, KinTak U. Color-comics-image sketch-style transformation based on conditional generative adversarial network. 17th International Conference on Wavelet Analysis and Pattern Recognition (ICWAPR2020) [EI]

Haitao Chen, KinTak U. Image colored-pencil-style transformation based on generative adversarial network. 17th International Conference on Wavelet Analysis and Pattern Recognition (ICWAPR2020) [EI]

Bo-wen Zeng, KinTak U. Low-light image enhancement algorithm based on lime with pre-processing and post-processing. 17th International Conference on Wavelet Analysis and Pattern Recognition (ICWAPR2020) [EI]

Huibin Wang,Junyan Zhong, KinTak U. Matryoshka Attack: Research on an Attack Method of Recommender System Based on Adversarial Learning and Optimization Solution. 17th International Conference on Wavelet Analysis and Pattern Recognition (ICWAPR2020) [EI]

Qin Lyu, KinTak U. A Multi-focus Image-fusion Scheme Based on non-Uniform Triangular Partition. 2019 7th International Conference on Information, Communication and Networks (ICICN2019).pp 191-195,2019.[EI]

JinXin Fan, KinTak U. A Novel Image Zero-Watermarking Scheme Based on Non-Uniform Triangular Partition. 16th International Conference on Wavelet Analysis and Pattern Recognition (ICWAPR2019). 2019. [EI]

Xinxin Hong, U KinTak. Multi-Focus Image Fusion Algorithm Based on Non-Uniform Rectangular Partition and Generative Adversarial Network. 16th International Conference on Wavelet Analysis and Pattern Recognition (ICWAPR2019). 2019. [EI]

Rujun LI, KinTak U. Haze Density Estimation and Dark Channel Prior based Image Defogging. 15th International Conference on Wavelet Analysis and Pattern Recognition (ICWAPR2018). pp 29-35. 2018 [EI]

Xiaoyu Liu, KinTak U. A Multi-focus image fusion algorithm based on non-uniform rectangular partition with morphology operation. 15th International Conference on Wavelet Analysis and Pattern Recognition. pp 238-243. 2018 [EI]

Song Ruixia, Li Da, U KinTak. Low-light image enhancement algorithm based on combination of DT-CWT and tone mapping. Journal of Computer-Aided Design and Graphics. 2018, Vol30(7), pp 1305-1312

Song Ruixia, Yao Lijun, Wang Xiaochun, U KinTak. A New Algorithm for Infrared and Visible Light Image Fusion Based on Frequency Domain. Laser and Infrared, Volume 47 (No. 9) 1174-1180, 2017 [Domestic Core]

Song Ruixia, Wang Meng, Wang Xiaochun, U KinTak. A medical image fusion algorithm based on multi-level and multi-directional decomposition. Computer Engineering, Volume 43 (Issue 10) 179-185, 2017 [Domestic Core]
ZhangLe Shen,KinTak U. A novel Image Zero-Watermarking Scheme based on Non-Uniform Rectangular Partition. 14th International Conference on Wavelet Analysis and Pattern Recognition(ICWAPR2017). 2017. pp 78-82 [EI]
Junyi Lu, KinTak U. Mobile Robot Navigation Based on Adaptive Neuro-Fuzzy Inference System with Virtual Target Strategy. 14th International Conference on Wavelet Analysis and Pattern Recognition (ICWAPR2017).2017. pp 132-136 [EI]
Xiaoyu Liu, KinTak U. A novel Multi-Focus Image-Fusion Scheme based on Non-Uniform Rectangular Partition. 14th International Conference on Wavelet Analysis and Pattern Recognition (ICWAPR2017).2017. pp 53-58 [EI]
Wu Fan, KinTak U. Low-Light Image Enhancement Algorithm Based on HSI Color Space. The 2017 10th International Congress on Image and Signal Processing, BioMedical Engineering and Informatics (CISP-BMEI2017).2017. pp 1-6 [EI]

Books

J. Huang, Z.C. Cai, **K.T. U**, Y.Y. Liang, Local Interpolation Explicit Algorithm and Its Application, Science Press, 2016, ISBN-13: 978-7030462947. (in Chinese)

Patents

N/A

Professional Certification and Awards

1. The team formed by Dongxu Qi, Zhanchuan Cai, YanYan Liang, Jian Li and **KinTak U** obtained the 3rd prize of 2012 "Natural Science Award" from Science and Technology Development Fund, MSAR (FDCT) with the topic of "Theory on Non-continuous Orthogonal Function and its application on the massive data processing".
2. Obtained the prize of 2012 "Post-graduate Science and Technology R&D Award" from FDCT.
3. Obtained the Best Instructor Award in the 2021 11th National-College-Student E-commerce Challenge Competition with Innovation, Creativity and Entrepreneurship
4. Obtained the Best Instructor Award in the 2023 13th National-College-Student E-commerce Challenge Competition with Innovation, Creativity and Entrepreneurship

Student Awards (Most Recently)

Bronze Award, the 13th "Challenge Cup" Chinese-College-Student Business plan Competition, 2023
Silver Award, the 13th "Challenge Cup" Chinese-College-Student Business plan Competition, 2023
Second prize, the 13th National-College-Student E-commerce challenge with Innovation, Creative and Entrepreneurship,2023
Second prize, the 13th National-College-Student E-commerce challenge with Innovation, Creative and Entrepreneurship,2023
Macau-Region Selected Award, the 7th IT Application-System Development Competition of Guangdong-Hong Kong-Macao Greater Bay Area, 2022

Project Innovation Award, the 11th “Win in Guangzhou" College Student Entrepreneurship Competition of Guangdong-Hong Kong-Macao Greater Bay Area, 2022

Merit Award, "Yangtze River Data Innovation Application Competition", 2022

Second Prize, the 12th National College Student E-commerce Challenge with Innovation, Creative and Entrepreneurship, 2022
Third Award, Chinese College Student Innovation and Creative Competition on Machinery Engineering and Intelligent System, 2022
Merit Prize, "Dali Cup" 9th Youth Innovation and Entrepreneurship Competition of Guangdong-Hong Kong-Macao Greater Bay Area, 2022

Professional Society Membership

1. Member of Macao Association for Promotion of Science and Technology