Professor Deyu Meng

Department of Engineering Science, Faculty of Innovation Engineering
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Xi'an Jiaotong University
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Academic Qualification:

Ph.D, Computer Science	2004.09 – 2008.09
Xi'an Jiaotong University (XJTU), China	
Master, Applied Mathematics	2001.09 – 2004.07
Xi'an Jiaotong University (XJTU), China	
Bachelor, Information Science	1997.09 – 2001.07
Xi'an Jiaotong University (XJTU), China	

Teaching Area

Machine Learning

Research Area

Machine learning, artificial intelligence, computer vision

Working Experience

Distinguished Guest Professor	Macau University of Science and Technology	2019.11 – current
Professor	Xi'an Jiaotong University	2017.01 – current
Research Associate	Carnegie Mellon University	2012.08 – 2014.07
Associate professor	Xi'an Jiaotong University	2011.11 – 2016.12
Postdoc Fellow	The Chinese University of Hong Kong	2009.01 – 2009.09
Assistant professor	Xi'an Jiaotong University	2008.10 – 2011.10

Research Grants

[1]   Ministry of Science and Technology, Key R&D Project, 2020YFA0713900, Fundamental Algorithms for Big Data Computing and Analysis, 2020-12 to 2025-11, PI

[2]   Ministry of Education, Strategic Research Project on Artificial Intelligence Algorithms, Fundamental Algorithms on AutoML, 2020-01 to 2021-1, PI.

[3]   Science and Technology Committee of the Military Commission, GF Science and Technology Innovation Special Zone Project, AutoML and its applications in remote sensing data, 2019-12 to 2021-12, PI.

[4]   The Science and Technology Development Fund of Macao, Self-constructing Technology of Optimization Model Driven by Meta-data, 2021.6-2024.6, PI.

Representative publications (Complete publication refer to my webpage)

Representative 10 publications in the recent year:

[1] Xin Luo, Hao Wu, Zhi Wang, Jianjun Wang, **Deyu Meng***. A novel approach to large-scale dynamically weighted directed network representation. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 2022. *(Impact factor: 24.314, Top-1 Journal on Artificial Intelligence Research)*

[2] Qi Xie, Qian Zhao, Zongben Xu and **Deyu Meng***. Fourier Series Expansion Based Filter Parametrization for Equivariant Convolutions. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 2022. *(Impact factor: 24.314, Top-1 Journal on Artificial Intelligence Research)*

[3] Jiangjun Peng, Yao Wang, Hongying Zhang, Jianjun Wang, **Deyu Meng***. Exact Decomposition of Joint Low Rankness and Local Smoothness Plus Sparse Matrices. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 2022. *(Impact factor: 24.314, Top-1 Journal on Artificial Intelligence Research)*

[4] Jun Shu, Yanwen Zhu, Qian Zhao, **Deyu Meng***, and Zongben Xu. MLR-SNet: Transferable LR Schedules for Heterogeneous Tasks. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 2022. *(Impact factor: 24.314, Top-1 Journal on Artificial Intelligence Research)*

[5] Shuang Xu , Xiangyong Cao , Jiangjun Peng , Qiao Ke , Cong Ma, and **Deyu Meng***. Hyperspectral Image Denoising by Asymmetric Noise Modeling. *IEEE Transactions on Geoscience and Remote Sensing*, 2022. *(Impact factor: 8.125, Top-1 Journal on Remote Sensing Research)*

[6] Jiangjun Peng, Hailin Wang, Xiangyong Cao, Xinlin Liu, Xiangyu Rui, and **Deyu Meng***. Fast Noise Removal in Hyperspectral Images via Representative Coefficient Total Variation. *IEEE Transactions on Geoscience and Remote Sensing*, 2022. *(Impact factor: 8.125, Top-1 Journal on Remote Sensing Research)*

[7] Zina Li, Yao Wang , Qian Zhao, Shijun Zhang, **Deyu Meng***. A Tensor-Based Online RPCA Model for Compressive Background Subtraction. *IEEE Transactions on Neural Networks and Learning Systems*, 2022. *(Impact factor: 14.255, Top Journal on Neural Network Research)*

[8] Hong Wang, Qi Xie, Qian Zhao, Yuexiang Li, Yong Liang, Yefeng Zheng, **Deyu Meng***. RCDNet: An Interpretable Rain Convolutional Dictionary Network for Single Image Deraining. *IEEE Transactions on Neural Networks and Learning Systems*, 2022. *(Impact factor: 14.255, Top Journal on Neural Network Research)*

[9] Junxiong Jia, Peijun Li, **Deyu Meng***. Stein variational gradient descent on infinite-dimensional space and applications to statistical inverse problems. *SIAM Journal on Numerical Analysis*. 2022. *(Impact factor: 3.309, Top Journal on Applied Mathematics Research)*

[10] Jiadong Lin, Songbo Wang, Peter A Audano, **Deyu Meng**, Jacob I Flores, Walter Kosters, Xiaofei Yang, Peng Jia, Tobias Marschall, Christine R Beck, Kai Ye, SVision: A deep learning approach to resolve complex structural variants, *Nature Methods*, 2022. *(Impact factor: 47.99, Top Journal on General Nature Research)*

Representative 10 publications in all years:

[1] Xuanyi Dong, Liang Zheng, Fan Ma, Yi Yang, **Deyu Meng***. Few-Example Object Detection with Model Communication. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 2018. *(ESI Highly Cited paper, 148 citations; Impact factor: 24.314, Top-1 Journal on Artificial Intelligence Research)*

[2] Qi Xie, Qian Zhao, **Deyu Meng***, Zongben Xu. Kronecker-Basis- Representation Based Tensor Sparsity and Its Applications to Tensor Recovery, *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 2018. *(ESI Highly Cited paper, 355 citations; Impact factor: 24.314, Top-1 Journal on Artificial Intelligence Research)*

[3] Qi Xie, Minghao Zhou, Qian Zhao, Zongben Xu, **Deyu Meng***. MHF-Net: An Interpretable Deep Network for Multispectral and Hyperspectral Image Fusion. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 2020. *(ESI Highly Cited paper, 212 citations;*

Impact factor: 24.314, Top-1 Journal on Artificial Intelligence Research)

[4] Hongwei Yong, **Deyu Meng***, Wangmeng Zuo, Lei Zhang. Robust Online Matrix Factorization for Dynamic Background Subtraction, *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 2018. *(160 citations; Impact factor: 24.314, Top-1 Journal on Artificial Intelligence Research)*

[5] Xiangyong Cao, Feng Zhou, Lin Xu, **Deyu Meng***, Zongben Xu, John Paisley. Hyperspectral Image Classification with Markov Random Fields and a Convolutional Neural Network. *IEEE Transactions on Image Processing*. 2018. *(ESI Highly Cited paper, 258 citations; Impact factor: 11.041, Top-1 Journal on Image Processing Research)*

[6] Xiangyong Cao, Jing Yao, Zongben Xu, **Deyu Meng***. Hyperspectral Image Classification with Convolutional Neural Network and Active Learning. *IEEE Transactions on Geoscience and Remote Sensing*, 2020. *(ESI Highly Cited paper, 163 citations; Impact factor: 8.125, Top-1 Journal on Remote Sensing Research)*

[7] Chenqiang Gao, **Deyu Meng***, Yi Yang, Yongtao Wang, Xiaofang Gao, Alexander G. Hauptmann. Infrared Patch-image Model for Small Target Detection in A Single Image. *IEEE Transactions on Image Processing*. 22(12): 4996-5009, 2013. *(ESI Highly Cited paper, 564 citations; Impact factor: 11.041, Top-1 Journal on Image Processing Research)*

[8] Jun Shu, Qi Xie, Lixuan Yi, Qian Zhao, Sanping Zhou, Zongben Xu, **Deyu Meng***. Meta-Weight-Net: Learning an Explicit Mapping For Sample Weighting. *NeurIPS*, 2019. *(465 citations; Top-1 Conference on Machine Learning Research)*

[9] Shuhang Gu, Qi Xie, **Deyu Meng**, Wangmeng Zuo, Xiangchu Feng, Lei Zhang, Weighted Nuclear Norm Minimization and Its Applications to Low Level Vision, *International Journal of Computer Vision*, 2016. *(ESI Highly Cited paper, 610 citations; Impact factor: 13.369, Top-1 Journal on Artificial Intelligence Research)*

[10] Kai Zhang, Wangmeng Zuo, Yunjin Chen, **Deyu Meng**, Lei Zhang, Beyond a Gaussian Denoiser: Residual Learning of Deep CNN for Image Denoising, *IEEE Transactions on Image Processing*, 2017. *(ESI Highly Cited paper, 5567 citations; Impact factor: 11.041, Top-1 Journal on Image Processing Research)*

Professional Certification and Awards

Ministry of Education, Changjiang Scholar Distinguished Professor	2022-2026
First Prize of Shaanxi Natural Science Award	2018
Excellent Teaching Award for Shaan'xi Young Mathematical Teachers	2011
Science and Technology Award for Shaan'xi Youth	2010
Excellent Doctorial Dissertations Award of Shaan'xi Province	2010

Journal Editorship

ASSOCIATE EDITOR of:

IEEE Transactions on Pattern Analysis and Machine Intelligence
Science China Information Sciences
Frontiers of Computer Science
National Science Review

Personal Website

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