YaoZhang

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Education

2020–2023.12 🔖 **Ph.D., University of Chinese Academy of Sciences** in astronomical technology and methods.
Thesis title: *Applications of machine learning in solar force-free modeling.*
Thesis advisor: Long Xu

2016–2019 🔖 **MSc., Shenzhen University** in applied mathematics.
Thesis title: *Research on salient object detection via matrix decomposition algorithm based on non-convex low-rank.*
Thesis advisor: Min Li

2010–2014 🔖 **BSc., Shenzhen University** in information and computing science.
Thesis title: *The real numbers– a survey of constructions.*
Thesis advisor: Juan Deng

Visiting Scholar Experience

2018.5 – 2018.11 🔖 **Visiting Scholar,** The department of mathematics, Southern Illinois University Carbondale

Employment History

2014.5 –2016.6 🔖 **Assistant Engineer,** Wuxi Bishiden Technology Co., Ltd

2019.7 – 2020.8 🔖 **Research Assistant,** National Astronomical Observatories, Chinese Academy of Sciences

Research Publications

2017   Y. Zhang and M. Li, "Motion Segmentation Using Collaborative Low-Rank and Sparse Subspace Clustering", *2017 13th International Conference on Computational Intelligence and Security*, Hongkong, 2017

2019   Y. Yang, M. Li and Y. Zhang, "Saliency Detection Based On Non-convex Weighted Surrogates", *The 3rd International Symposium on Image Computing and Digital Medicine*, Xi'an, 2019

2019   M. Li, Y. Zhang, M. Xiao, C, Xu and W. Zhang, "On Schatten-q Quasi-Norm Induced Matrix Decomposition Model For Salient Object Detection", *Pattern Recognition*, 96: December 2019, 106975.

2023   M. Li, Y. Zhang, M. Xiao, W Zhang and X. Sun, "Unsupervised Learning for Salient Object Detection via Minimization of Bilinear Factor Matrix Norm", *IEEE Transactions on Neural Networks and Learning Systems*, 34(3): March 2023

2023   Y. Zhang, L. X and Y. Yan, "Low and Lou's Nonlinear Force-Free Field Equilibria: A Revisit and Its Numerical Solution"(under revision)

2023   Y. Zhang, L. X and Y. Yan, "A Deep Learning Approach to Reconstructing Magnetic Force-Free Fields"(under revision)

Skills

Languages 🔖 Mandarin, English

Skills (continued)

Coding	▉	Matlab, Python
Mathematics	▉	Matrix low-rank and sparse decomposition theory
		Optimization Theory in Machine Learning
		Finite Difference Methods and Physics-Informed Neural Network Methods in Numerical Solutions of Differential Equations