

Chao Zhou (周超)

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Citizenship: Chinese

Research interests machine learning, artificial intelligence, mathematics&physic inspired AI, generative model, image&signal processing

Education

University College London (UCL)	London, UK
PhD in Machine learning for hyperspectral imaging	Sep.2018 – Sep.2023
Supervisor: Professor Miguel Rodrigues	

University of Electronic S&T of China (UESTC)	Chengdu, China
Master in Communication and Information System	Sep 2015 – Jun 2018
Mentor: Professor Xuesong Jonathan Tan	

Wuhan University of Technology (WHUT)	Wuhan, China
Bachelor in Communication Engineering	Sep 2011 – Jun 2015
Mentor: Professor Kewen Liu	

Honors and scholarships

The First-class National Scholarship of Graduate Students (UESTC)	2017
The Seventh Place of College Fitness of Mianyang Fitness Bodybuilding Championships	2016
The Outstanding Graduate Student (UESTC)	2016
The First-class National Scholarship of Graduate Students (UESTC)	2016
The First-class National Scholarship of Graduate Students (UESTC)	2015
Advanced Individuals of Innovation and Entrepreneurship for work of Communist Youth League (WHUT)	2014
The National Endeavor Fellowship of Undergraduate Students, (WHUT)	2013
The First-Class Prize of National Undergraduate Electronics Design Contest (WHUT)	2013
The University Outstanding Student Leaders (WHUT)	2013
The Second-Class Prize of the Sixth Electric and Electronic Innovation Design Contest (WHUT)	2013
The School Outstanding Student (WHUT)	2012

Publications

1. **C. Zhou** and M. R. D. Rodrigues, "Hyperspectral Blind Unmixing Using a Double Deep Image Prior," in *IEEE Transactions on Neural Networks and Learning Systems*, doi: 10.1109/TNNLS.2023.3294714.
2. **C. Zhou**, Z. Lyu and M. R. D. Rodrigues, "BITS-Net: Blind Image Transparency Separation Network," 2023 IEEE International Conference on Image Processing (ICIP), Kuala Lumpur, Malaysia, 2023, pp. 375-379, doi: 10.1109/ICIP49359.2023.10222918.
3. W. Pu, B. Sober, N. Daly, **C. Zhou**, Z. Sabetsarvestani, C. Higgitt, I. Daubechies, and M. R. D. Rodrigues, "Image Separation with Side Information: A Connected Auto-Encoders Based Approach," in *IEEE Transactions on Image Processing*, vol. 32, pp. 2931-2946, 2023, doi: 10.1109/TIP.2023.3275872.
4. **C. Zhou** and M. R. D. Rodrigues, "Blind Unmixing Using A Double Deep Image Prior," ICASSP 2022 - 2022 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Singapore, Singapore, 2022, pp. 1665- 1669, doi: 10.1109/ICASSP43922.2022.9747545.
5. W. Pu, **C. Zhou**, Y. C. Eldar, and M. R. D. Rodrigues. "Robust lEarned Shrinkage-Thresholding (REST): Robust unrolling for sparse recover." arXiv preprint arXiv:2110.10391 (2021).
6. **C. Zhou** and M. R. D. Rodrigues, "ADMM-Based Hyperspectral Unmixing Networks for Abundance and Endmember Estimation," in *IEEE Transactions on Geoscience and Remote Sensing*, vol. 60, pp. 1-18, 2022, Art no. 5520018, doi: 10.1109/TGRS.2021.3136336.
7. W. Pu, **C. Zhou**, Y. C. Eldar and M. R. D. Rodrigues, "REST: Robust lEarned Shrinkage-Thresholding Network Taming Inverse Problems with Model Mismatch," ICASSP 2021 - 2021 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Toronto, ON, Canada, 2021, pp. 2885-2889, doi: 10.1109/ICASSP39728.2021.9414141.
8. **C. Zhou** and M. R. D. Rodrigues, "An ADMM Based Network for Hyperspectral Unmixing Tasks," ICASSP 2021 - 2021 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Toronto, ON, Canada, 2021, pp. 1870-1874, doi: 10.1109/ICASSP39728.2021.9414555.
9. X. J. Tan, **C. Zhou** and J. Chen, "Symmetric Channel Hopping for Blind Rendezvous in Cognitive Radio Networks Based on Union of Disjoint Difference Sets," in *IEEE Transactions on Vehicular Technology*, vol. 66, no. 11, pp. 10233-10248, Nov. 2017, doi: 10.1109/TVT.2017.2726352.

Research experience	<p>Information, Inference and Machine Learning (I2ML) lab, London Mentor: Professor Miguel Rodrigues (UCL) Sep.2018 – Sep.2023 develop machine learning algorithms for hyperspectral image unmixing.</p>
Teaching experience	<p>Teaching assistant, UCL Consultants Limited and Turing Innovations Ltd 2020-2023 Machine Learning Masterclass Duties: Mini-project; Answer questions re. mini-project; Weekly programming Assignment/Tasks; Answer questions re. weekly programming assignment/tasks; Answer moodle questions re above; Quizzes; Reading material; Maintain/Fill-in moodle pages.</p> <p>Post Graduate Teaching Assistant, Dept. of Electronic and Electrical Engineering at UCL Fall 2020 & Fall 2021 ELEC0134: Applied Machine Learning Systems Duties: Mini-project; Answer questions re. mini-project; Weekly programming Assignment/Tasks; Answer questions re. weekly programming assignment/tasks; Answer moodle questions re above; Quizzes; Reading material; Maintain/Fill-in moodle pages.</p> <p>Post Graduate Teaching Assistant, Dept. of Electronic and Electrical Engineering at UCL Fall 2019 ELEC0136: Data Acquisition and Processing Systems The module will cover aspects of data acquisition, data visualization, data cleaning, data analysis and processing.</p>
Industry experience	<p>Huawei Technologies Research & Development (UK) Ltd. London, UK Research Intern Jun 2022-Jan 2023</p>
Skills	<p>Programming Proficient in: python, pytorch, matlab. Familiar with: C, Java.</p> <p>Languages Chinese, English</p>
Other interests	<p>Bodybuilding.</p>