Tao Li

Department of Electrical and Computer Engineering,
370 Jay Street, Brooklyn
Email: taoli@nyu.edu
Website: https://engineering.nyu.edu/student/tao-li-0

Education	**PhD student in Electrical Engineering**,	Sept. 2018-present
	Research on Multi-agnet Learning, Game Theory, Optimization	
	Supervisor: Dr. Quanyan Zhu	
	New York University, NY, US	
	Bachelor of Science in Mathematics,	Sept. 2014-June 2018
	Specialization in Applied Mathematics	
	Honors Thesis: Weighted Inequalities for Some Integral Operators with Rough Kernels in Weighted Morrey Space, advised by Dr. Huoxiong Wu	
	Xiamen University, Fujian, China	
Employment	**Research Assistant**	Sept. 2018-present
	Department of Electrical and Computer Engineering	
	New York University	
Visiting Position	**Visiting Researcher**	June 2017-Oct. 2017
	Department of Mathematical and Statistical Sciences,	
	University of Alberta	
	Applied Harmonic Analysis Group	
	Host: Dr. Bin Han	
	Visiting Student	Aug. 2016
	St John's College, Cambridge University	
	Host: Dr. Annis May Timpson	

Research Interests

- Learning theory for multi-agent systems
- Security of multi-agent systems
- Large scale distributed optimizaion

Publication (* : equal contribution)

- **Tao Li**, Guanze Peng, and Quanyan Zhu. "Blackwell Online Learning for Markov Decision Processes." arXiv preprint arXiv:2012.14043 (2020).
- Guanze Peng, **Tao Li**, Shutian Liu, Juntao Chen, and Quanyan Zhu. "Locally-Aware Constrained Games on Networks." arXiv preprint arXiv:2011.10095 (2020).
- Shutian Liu, **Tao Li**, and Quanyan Zhu. "Communication-Efficient Distributed Machine Learning over Strategic Networks: A Two-Layer Game Approach." arXiv preprint arXiv:2011.01455 (2020)
- Bannon James*, Brad Windsor*, Wenbo Song*, and **Tao Li***. "Causality and Batch Reinforcement Learning: Complementary Approaches To Planning In Unknown Domains." arXiv preprint arXiv:2006.02579 (2020).
- **Tao Li**, Quanyan Zhu, "On Convergence Rate of Adaptive Multiscale Value Function Approximation For Reinforcement Learning", *2019 IEEE 28th International Workshop on Machine Learning for Signal Processing (MLSP)*
- Bin Han*, **Tao Li***, Xiaosheng Zhuang*. "Directional compactly supported

box spline tight framelets with simple geometric structure." *Applied Mathematics Letters* 91 (2019): 213-219.

Invited Talks

• Directional Framelets and its Application in Medical Imaging, PIMS-AMI Workshop on Applied Harmonic Analysis, University of Alberta, Aug. 2017
• Solving PDE using Directional Tensor-Product Wavelets, Seminar series on Numerical PDE, High Performance Computing Center, Xiamen University, Mar. 2018

Honors and Awards

• Best Student Paper Finalist, IEEE Machine Learning for Signal Processing 2019
• Honor Degree of B.Sc in Mathematics, Xiamen University, 2018
• NSERC Mitacs-Globalink Research Award, University of Alberta, 2017
• Academic Excellence Scholarship-first class, Xiamen University, 2016
• First Prize in Undergraduate Mathematical Contest in Modeling, 2016
• First Prize in National Mathematical Competition, 2015
• National Scholarship, Ministry of Education of China, 2015
• The Elite Undergraduate Training Program of Math, Ministry of Education of China, 2015-2018