Yunian Pan

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🌐 unionpan.github.io   **git** @github.com/UnionPan

Employment History

2020 – 2021	🔖	**Graduate Assistant.** Larx Lab, model-agnostic meta-reinforcement learning for Linear Quadratic Regulator. (`https://github.com/UnionPan/mamllqr.git`).
2020 – 2020	🔖	**Teaching Assistant,** ECE Department, Probability and Stochastic Process.
2018 – 2019	🔖	**Teaching Assistant,** ECE Department, System Optimization Methods.

Education

2021 – TBD	🔖	**Ph.D., NYU** in Applied Game Theory. Thesis topic: *The study of non-equilibrium in game theoretic learning systems.*
2018 – 2020	🔖	**M.Sc. E.E., NYU** in Reinforcement Learning. MS Projects: *Reproducing Trust Region Policy Optimization and Proximal Policy Optimization (PPO); urban vaccination site covering via semi-discrete Optimal Transport.*
2014 – 2018	🔖	**BEng. Comm. Eng., BUPT** in Natural Language Processing. Thesis title: *Text summarization system based on Determinantal Point Processes (DPPs)..*

Research Publications

Conference Proceedings

1. H. Li, T. Li, Y. Pan, T. Xu, Q. Zhu, and Z. Zheng, "Towards universal robust federated learning via meta stackelberg game," 2024. 🔗 URL: `https://openreview.net/forum?id=iStX5y0Ttg`.

2. Y. Pan, T. Li, H. Li, T. Xu, Z. Zheng, and Q. Zhu, "A first order meta stackelberg method for robust federated learning," 2023. arXiv: 2306.13800 `[cs.LG]`.

3. Y. Pan, T. Li, and Q. Zhu, "Is stochastic mirror descent vulnerable to adversarial delay attacks? a traffic assignment resilience study," in *2023 62nd IEEE Conference on Decision and Control (CDC)*, 2023, pp. 8328–8333. 🔗 DOI: `10.1109/CDC49753.2023.10384003`.

4. Y. Pan, T. Li, and Q. Zhu, "On the resilience of traffic networks under non-equilibrium learning," in *2023 American Control Conference (ACC)*, IEEE, 2023, pp. 3484–3489.

5. Y. Pan and Q. Zhu, "On poisoned wardrop equilibrium in congestion games," in *International Conference on Decision and Game Theory for Security*, Springer, 2022, pp. 191–211.

6. Y. Pan and Q. Zhu, "Efficient episodic learning of nonstationary and unknown zero-sum games using expert game ensembles," in *2021 60th IEEE Conference on Decision and Control (CDC)*, IEEE, 2021, pp. 1669–1676.

7. Y. Pan, G. Peng, J. Chen, and Q. Zhu, "Masage: Model-agnostic sequential and adaptive game estimation," in *International Conference on Decision and Game Theory for Security*, Springer, 2020, pp. 365–384.

Book Chapters and Technical Reports

1 H. Li, T. Xu, T. Li, Y. Pan, Q. Zhu, and Z. Zheng, *A First Order Meta Stackelberg Method for Robust Federated Learning (Technical Report)*. 2023. arXiv: 2306.13273 [cs.CR].

2 T. Li, Y. Pan, and Q. Zhu, *Decision-Dominant Strategic Defense Against Lateral Movement for 5G Zero-Trust Multi-Domain Networks*. 2023. arXiv: 2310.01675 [cs.CR].

Skills

Languages	Reading, writing, and speaking proficiency in English, Mandarin Chinese.
Coding Languages	Python, c++, java, R, sql, xml/xsl, LaTeX, …
Databases and Web Dev	Mysql, Html, css, JavaScript.
Platforms	Pytorch, SUMO, Aimsum, Matlab..
Misc.	Academic teaching, mathematical modeling, graphical works, basketball…

Miscellaneous Experience

Awards and Achievements

2020	**Merit Award**, Outstanding academic performance in ECE Department.
2022	**Best Paper Award**, the best paper award for *On Poisoned Wardrop Equilibrium in Congestion Games* in GameSec Conference 2022.
2023	**Research Excellence Award**, The Dante Youla Award for Graduate Research Excellence in Electrical Engineering.

Invited Workshop Sessions

2021	**INFORMS**, *Efficient Episodic Learning of Nonstationary and Unknown Zero-Sum Games Using Expert Game Ensembles.*
2023	**ACC**. *On the resilience of traffic networks under non-equilibrium learning.*