

# Dung (Daniel) Ngo

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## RESEARCH INTERESTS

Machine Learning theory, Algorithmic Game Theory, Incentive-Aware Machine Learning, Incentivized Exploration, Exploration-Exploitation tradeoff, Causal Inference, Bandits Algorithm, Differential Privacy, Strategic Learning, Federated Learning.

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## EDUCATION

**University of Minnesota**, Minneapolis, MN August 2019 — Present  
Computer Science Ph.D. Student  
Advisors: Steven Wu and Maria Gini

**Dickinson College**, Carlisle, PA August 2015 — May 2019  
Bachelor of Science: Computer Science (*summa cum laude*)  
Bachelor of Science: Mathematics (*summa cum laude*)

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## PUBLICATIONS

### Conference Proceedings:

1. Xinyan Hu\*, **Daniel Ngo\***, Zhiwei Steven Wu, and Aleksandrs Slivkins. *Incentivizing Combinatorial Bandit Exploration*. Neural Information Processing Systems (NeurIPS), 2022.
2. **Daniel Ngo\***, Giuseppe Vietri\*, and Zhiwei Steven Wu. *Improved Regret for Differentially Private Exploration in LinearMDP*. International Conference on Machine Learning (ICML), 2022.
3. Keegan Harris, **Daniel Ngo\***, Logan Stapleton\*, Hoda Heidari, and Zhiwei Steven Wu. *Strategic Instrumental Variable Regression: Recovering Causal Relationships From Strategic Responses*. International Conference on Machine Learning (ICML), 2022.
4. **Daniel Ngo\***, Logan Stapleton\*, Vasilis Syrgkanis, and Zhiwei Steven Wu. *Incentivizing Exploration with Algorithmic Instruments*. International Conference on Machine Learning (ICML), 2021.

### Working Papers:

1. **Daniel Ngo\***, Keegan Harris\*, Anish Agarwal, Vasilis Syrgkanis, and Zhiwei Steven Wu. *Incentive-Aware Synthetic Control: Accurate Counterfactual Estimation via Incentivized Exploration*. [https://dtngo.com/IE\\_in\\_Panel\\_Data.pdf](https://dtngo.com/IE_in_Panel_Data.pdf)
2. Shengyuan Hu\*, **Daniel Ngo\***, Shuran Zheng\*, Virginia Smith, and Zhiwei Steven Wu. *Federated Learning as a Network Effects Game*. <https://arxiv.org/pdf/2302.08533.pdf>
3. Jane Hsieh, Angie Zhang, Erik Chou, Mialy Rasetarinera, **Daniel Ngo**, Jason Carpenter, Min Kyung Lee, and Haiyi Zhu. *Supporting Worker Needs and Advancing Policy: Exploring Gig Worker-Centered Data-Sharing Alternatives*

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## AWARDS AND HONORS

**GAGE Fellowship** August 2019, May 2020  
University of Minnesota

**Alpha Lambda Delta** April 2018  
Math honors society, inducted as a junior

**Upsilon Pi Epsilon** April 2018  
Computer Science honors society, inducted as a junior

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## TALKS

1. "Incentive-Aware Synthetic Control: Accurate Counterfactual Estimation via Incentivized Exploration"  
INFORMS Annual Meeting (October 2023)
2. "Incentivizing Exploration with Algorithmic Instruments"  
IMCL 2021 (July 2021, Short Presentation)

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\*Denotes equal contribution and/or alphabetical ordering

## SERVICE

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Conference Reviewer:

- Causal Learning and Reasoning (CLearR) 2023
- International Conference on Learning Representations (ICLR) 2024
- International Conference on Machine Learning (ICML) 2023, 2022, 2021,
- Conference on Neural Information Processing Systems (NeurIPS) 2023, 2022, 2021

## TEACHING

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- Guest Lecturer: Human AI Interaction (Fall 2023). Instructor: Haiyi Zhu
- Teaching Assistant: Algorithms and Data Structures (Fall 2020). Instructor: Carl Sturivant