

# YIHAN DU

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## EDUCATION

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### **Tsinghua University**

*September 2018 - June 2023 (expected)*

Institute for Interdisciplinary Information Sciences (headed by Prof. Andrew Chi-Chih Yao)

Ph.D. candidate in Computer Science

Advisor: Prof. Longbo Huang

Research interests: machine learning, with emphases on online learning (multi-armed bandit), reinforcement learning, representation learning and meta learning

### **Xiamen University**

*September 2014 - June 2018*

B.E. in Computer Science

Rank: 3/93

## VISIT & INTERNSHIP

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### **Cornell University**

*September 2022 - December 2022*

Visiting Ph.D. student (in-person)

Research topic: reinforcement learning

Supervisor: Prof. Wen Sun

### **Microsoft Research (MSR) Asia**

*January 2020 - May 2020*

Research intern

Research topic: online learning

Supervisor: Dr. Wei Chen (IEEE Fellow, Director of MSR Asia Theory Center)

## PUBLICATIONS

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**Yihan Du**, Longbo Huang, Wen Sun, “Multi-task Representation Learning for Pure Exploration in Linear Bandits,” International Conference on Machine Learning (ICML), 2023.

**Yihan Du**, Siwei Wang, Longbo Huang, “Provably Efficient Risk-Sensitive Reinforcement Learning: Iterated CVaR and Worst Path,” International Conference on Learning Representations (ICLR), 2023.

**Yihan Du**, Wei Chen, Yuko Kuroki, Longbo Huang, “Collaborative Pure Exploration in Kernel Bandit,” International Conference on Learning Representations (ICLR), 2023.

**Yihan Du**, Wei Chen, “Branching Reinforcement Learning,” International Conference on Machine Learning (ICML), 2022.

**Yihan Du**, Siwei Wang, Zhixuan Fang, Longbo Huang, “Continuous Mean-Covariance Bandits,” Proceedings of the Conference on Neural Information Processing Systems (NeurIPS), 2021.

**Yihan Du**, Yuko Kuroki, Wei Chen, “Combinatorial Pure Exploration with Bottleneck Reward Function,” Proceedings of the Conference on Neural Information Processing Systems (NeurIPS), 2021.

**Yihan Du**, Siwei Wang, Longbo Huang, “A One-Size-Fits-All Solution to Conservative Bandit Problems,” Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), 2021.

**Yihan Du\***, Yuko Kuroki\*, Wei Chen, “Combinatorial Pure Exploration with Full-Bandit or Partial Linear Feedback,” Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), 2021 (\*equal contribution).

(\* $\alpha$ - $\beta$  ordering) Wei Chen, **Yihan Du**, Longbo Huang, Haoyu Zhao, “Combinatorial Pure Exploration for Dueling Bandit,” International Conference on Machine Learning (ICML), 2020.

**Yihan Du**, Siwei Wang, Longbo Huang, “Dueling Bandits: From Two-dueling to Multi-dueling,” Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2020.

**Yihan Du**, Yan Yan, Si Chen, Yang Hua, “Object-adaptive LSTM Network for Real-time Visual Tracking with Adversarial Data Augmentation,” Neurocomputing, 2019.

**Yihan Du**, Yan Yan, Si Chen, Yang Hua, Hanzi Wang, “Object-adaptive LSTM Network for Visual Tracking,” International Conference on Pattern Recognition (ICPR), 2018.

## INVITED TALKS & PRESENTATIONS

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### Invited Talks

“Risk-aware Online Decision Making,” The MLOPT Idea Seminar, University of Wisconsin-Madison  
*April 2023*

“Optimal Experimental Design in Linear Bandit,” Bandit Algorithm Seminar, Yau Mathematical Sciences Center (YMSC), Tsinghua University  
*November 2022*

“Combinatorial Pure Exploration for Dueling Bandit,” China Computer Federation (CCF) Doctoral Forum in Theoretical Computer Science (only 18 Ph.D. students in theoretical computer science are invited nationwide)  
*June 2021*

### Presentations

ICLR 2023, ICML 2022, NeurIPS 2021, AAAI 2021, ICML 2020, AAMAS 2020

## ACADEMIC SERVICE & ACTIVITIES

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### Program Committee Member/Reviewer

Conference: ICML 2021-2023, NeurIPS 2021-2023, ICLR 2022-2023

Journal: Transactions on Machine Learning Research (TMLR)

### Teaching Assistant

Stochastic Network Optimization, graduate course (IIIS, Tsinghua University)  
*Spring 2021*

Introduction to Computer Science, undergraduate course (Yao Class, Tsinghua University)  
*Fall 2019*

### Social Activity

President of Graduate Union at IIIS, Tsinghua University  
*June 2020 - June 2021*

## AWARDS & SCHOLARSHIPS

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China National Scholarship for Ph.D. Students, by Ministry of Education of China (the only recipient among CS students at IIIS, Tsinghua University in 2022)  
*October 2022*

Toyota Scholarship, by Toyota and Tsinghua University  
*October 2021*

Huawei Academic Excellence Scholarship, by Huawei and Tsinghua University  
*October 2020*

Wuqing Talent Scholarship, by Wuqing District Government and Tsinghua University  
*October 2020*

Outstanding Graduate, by Xiamen University  
*June 2018*

Academic Excellence Scholarship, by Xiamen University  
*October 2017, 2015*

Tan Chong International Scholarship, by Tan Chong International Limited and Xiamen University  
*April 2016*

Deans List in School of Informatics, by Xiamen University  
*October 2016 - 2018*