

Suho Shin

Ph.D. Student at University of Maryland, College Park

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RESEARCH INTEREST

I'm interested in the intersection of computer science and economics, including algorithmic mechanism design/game theory, social learning and social choice, and recently its interaction with generative AI. I also work on classic topics in theoretical computer science, in particular, online algorithm/learning, approximation algorithm, combinatorial optimization, and computational complexity.

EDUCATION

University of Maryland, College Park

Maryland, USA

Ph.D. in Computer Science

Sep. 2022 –

- Advisor: [Prof. MohammadTaghi Hajiaghayi](#)

Korea Advanced Institute of Science and Technology

Daejeon, South Korea

M.S. in Electrical Engineering

Mar. 2016 – Jan. 2018

- Advisor: [Prof. Yung Yi](#)

Korea Advanced Institute of Science and Technology

Daejeon, South Korea

B.S. in Mathematical Sciences

Mar. 2011 – Feb. 2016

PUBLICATION

(α, β) denotes alphabetical order of authorship, which is common in theoretical computer science/econ/math community.

Replication-proof Bandit Mechanism Design

α, β S. Esmaeili, M. Hajiaghayi, S. Shin

[Preprint](#)

Robust and Performance Incentivizing Algorithms for Bandits with Strategic Agents

α, β S. Esmaeili, S. Shin, A. Slivkins

[Preprint](#)

Online Advertisements with LLMs: Opportunities and Challenges

α, β S. Feizi, M. Hajiaghayi, K. Rezaei, S. Shin

[Preprint](#)

Ad Auctions for LLMs via Retrieval Augmented Generation

[EC'24 Workshop, NeurIPS'24](#)

α, β M. Hajiaghayi, S. Lahaie, K. Rezaei, S. Shin

Dueling Over Dessert, Mastering the Art of Repeated Cake Cutting

[NeurIPS'24](#)

α, β S. Branzei, M. Hajiaghayi, R. Phillips, S. Shin, K. Wang

Improved Online Class Fair Matching

[NeurIPS'24](#)

α, β M. Hajiaghayi, S. Jahan, M. Sharify, S. Shin, M. Springer

A Regret Analysis of Repeated Delegated Choice

α, β M. Hajiaghayi, M. Mahdavi, K. Rezaei, S. Shin

[AAAI'24](#)

An Improved Relaxation for Oracle-Efficient Adversarial Contextual Bandits

α, β K. Banihashem, M. Hajiaghayi, S. Shin, M. Springer

NeurIPS'23

Bandit Social Learning under Myopic Agents

α, β K. Banihashem, M. Hajiaghayi, S. Shin, A. Slivkins

NeurIPS'23

Delegating to Multiple Agents

α, β M. Hajiaghayi, K. Rezaei, S. Shin

EC'23

Multi-armed Bandit Algorithm against Strategic Replication.

S. Shin, S. Lee, J. Ok

AISTATS'22

Power of Bonus in Pricing for Crowdsourcing.

S. Shin, H. Choi, Y. Yi, J. Ok

SIGMETRICS'22

HONOR & AWARD

Outstanding Graduate Assistant Award AY 23-24

University of Maryland

USA
Dec 2023

Travel Award

ACM SIGecom, EC 2023

USA
Jul 2023

Graduate School Summer Research Fellowship

University of Maryland (declined)

USA
Summer 2023

Dean's Fellowship

University of Maryland

USA
Fall 2022 – Fall 2024

The National Scholarship for Science and Engineering

Korea Student Aid Foundation

South Korea
Spring 2011 – Fall 2017

Dean's Award for Entrance

Korea Advanced Institute of Science and Technology

South Korea
Spring 2011

Gold Medal, Korean Mathematical Olympiad

Korean Mathematical Society

South Korea
Fall 2008

VISIT & INTERNSHIP

Research Intern

Host: Prof. Haifeng Xu

University of Chicago
Summer 2024

Visiting Student

Host: Prof. Piotr Krysta

University of Liverpool
Jul. 2023

Visiting Student

Topic: *Mathematics and Computer Science of Market and Mechanism Design*

SLMath, UC Berkeley
Jun. 2023

Research Intern

Host: Prof. Jungseul Ok

Machine Learning Lab, Postech
Summer 2022

SERVICE

Program Committee

AAAI'25

Reviewer

NeurIPS'24, ICML'24, NeurIPS'23, AISTATS'22

Volunteer

EC'23

MENTORING/ADVISING

Mentoring

Chirag Jain (Undergrad at UMD)

Aug. 2024 - WIP

Mentoring

Gary Peng (Undergrad at UMD)

Dec. 2023 - WIP

Mentoring

Aya Sghiouar (High school student at Bouskoura High School) ([HSRI'24](#))

Summer 2024

TALK

Prophet Inequality, Posted Pricing, and Delegated Choice

Microecon Theory Seminar, Sungkyunkwan University

Seoul, South Korea

Sep. 2024

Combinatorial Delegated Choice

East Asia Game Theory Conference

Jeju, South Korea

Aug. 2024

Ad Auctions for LLMs via Retrieval Augmented Generation

EC'24 Workshop on Frontiers of Online Advertising: Autobidding, GenAI, and Beyond

New Haven, USA

Jul. 2024

Delegated Choice, Prophet Inequality, and Beyond

Sigma Lab, UChicago

Chicago, USA

Jun. 2024

Regret Analysis of Repeated Delegated Choice

Association for the Advancement of Artificial Intelligence (AAAI)

Vancouver, Canada

Feb. 2024

Topics in Economics and Computation

Machine Learning Lab, Postech

Pohang, South Korea

Jan. 2024

Delegating to Multiple Agents

ACM Conference on Economics and Computation (EC)

London, UK

Jul. 2023

Power of Bonus in Pricing for Crowdsourcing

Proceedings of the ACM on Measurement and Analysis of Computing Systems (POMACS)

Virtual

Jun. 2022

Multi-armed Bandit Algorithm against Strategic Replication

International Conference on Artificial Intelligence and Statistics (AISTATS)

Virtual

Mar. 2022

Mechanism Design and Multi-armed Bandit

Machine Learning Lab, Postech

Virtual

Feb. 2022

TEACHING

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|--|----------------------|
| Introduction to Computational Game Theory (CMSC474) <i>Teaching Assistant</i> | Fall 2023 UMD |
| Design and Analysis of Computer Algorithms (CMSC451) <i>Teaching Assistant</i> | Spring 2023 UMD |
| Introduction to Computational Game Theory (CMSC474) <i>Teaching Assistant</i> | Fall 2022 UMD |
| Data Structure and Algorithms for Electrical Engineering (EE205) <i>Teaching Assistant</i> | Fall 2017 KAIST |
| Computer Networks (EE323) <i>Teaching Assistant</i> | Spring 2017 KAIST |

INDUSTRY

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|--|--|
| LINE plus Corporation, LINE Advertisement Platform <i>Data Scientist</i> | Seongnam, South Korea Oct. 2020 – Apr. 2022 |
| Coupang, Product, Search and Discovery Platform <i>Software Engineer</i> | Jamsil, South Korea Aug. 2018 – Sep. 2020 |