

Suho Shin

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

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RESEARCH INTEREST

I'm broadly interested in the intersection of computer science and economics. I aim to tackle mechanism design problems from algorithmic perspectives with applications to (i) classical economy, *e.g.*, auctions, exchange markets, and principal-agent problems, (ii) modern economy, *e.g.*, economic impact of recommender systems for online platforms and (iii) future economy, *e.g.*, the interplay between game theory and generative AI. I also work on theoretical computer science, in particular, online algorithm, online learning, approximation algorithm, and computational complexity.

EDUCATION

University of Maryland, College Park

Ph.D. in Computer Science

Maryland, USA

Sep. 2022 –

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

Korea Advanced Institute of Science and Technology

M.S. in Electrical Engineering

Daejeon, South Korea

Mar. 2016 – Jan. 2018

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

Korea Advanced Institute of Science and Technology

B.S. in Mathematical Sciences

Daejeon, South Korea

Mar. 2011 – Feb. 2016

PUBLICATION

(α, β) denotes alphabetical order of authorship.

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

Gains-from-Trade in Bilateral Trade with a Broker

α, β I. Hajiaghayi, M. Hajiaghayi, G. Peng, S. Shin

SODA'25

Ad Auctions for LLMs via Retrieval Augmented Generation

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

NeurIPS'24
EC'24 Workshop

Dueling Over Dessert, Mastering the Art of Repeated Cake Cutting

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

NeurIPS'24

Fairness and Efficiency in Online Class Matching

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

NeurIPS'24

A Regret Analysis of Repeated Delegated Choice

AAAI'24

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

An Improved Relaxation for Oracle-Efficient Adversarial Contextual Bandits

NeurIPS'23

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

Bandit Social Learning under Myopic Agents

NeurIPS'23,

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

EC'24 Workshop, AMLS'24 (best poster award)

Delegating to Multiple Agents

EC'23

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

Multi-armed Bandit Algorithm against Strategic Replication.

AISTATS'22

S. Shin, S. Lee, J. Ok

Power of Bonus in Pricing for Crowdsourcing.

SIGMETRICS'22

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

HONOR & AWARD

Outstanding Graduate Assistant Award AY 23-24

USA

University of Maryland

Dec 2023

Travel Award

USA

ACM SIGecom, EC 2023

Jul 2023

Graduate School Summer Research Fellowship

USA

University of Maryland (declined)

Summer 2023

Dean's Fellowship

USA

University of Maryland

Fall 2022 – Fall 2024

The National Scholarship for Science and Engineering

South Korea

Korea Student Aid Foundation

Spring 2011 – Fall 2017

Dean's Award for Entrance

South Korea

Korea Advanced Institute of Science and Technology

Spring 2011

Gold Medal, Korean Mathematical Olympiad

South Korea

Korean Mathematical Society

Fall 2008

VISIT & INTERNSHIP

Research Intern

University of Chicago

Host: Prof. Haifeng Xu

Summer 2024

Visiting Student

University of Liverpool

Host: Prof. Piotr Krysta

Jul. 2023

Visiting Student

SLMath, UC Berkeley

Topic: Mathematics and Computer Science of Market and Mechanism Design

Jun. 2023

Research Intern

Machine Learning Lab, Postech

Host: Prof. Jungseul Ok

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

Introduction to Computer Systems <i>Teaching Assistant</i>	Fall 2024 UMD
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

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