

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. This includes algorithmic mechanism design/game theory, social learning and social choice. Central theme of my research revolves around laying down a theoretical foundation of delegation mechanism, especially from learning, combinatorial and multi-agent perspective. Recently, I've got interested in constructing a theoretical foundation of LLM-based online advertisement. I'm also interested in classic topics in theoretical computer science, especially in online algorithm, online learning, approximation algorithm and combinatorial optimization.

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.

Dueling Over Dessert, Mastering the Art of Repeated Cake Cutting

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

[Preprint](#)

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](#)

Combinatorial Delegated Choice

α, β K. Banihashem, M. Hajiaghayi, P. Krysta, S. Shin

Available upon request

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](#)

WORKING PAPER

Delegated Choice and Pandora's Box

α, β M. Hajiaghayi, P. Krysta, M. Mahdavi, S. Shin

Improved Mechanism for Combinatorial Delegated Choice

α, β M. Hajiaghayi, P. Krysta, S. Shin

Deciding Whom to Delegate

α, β M. Hajiaghayi, M. Mahdavi, S. Shin, M. Springer

Improved Online Class Fair Matching

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

Improved Online Nash Social Welfare Maximization

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

HONOR & AWARD

Jacob K. Goldhaber Award, ICSSA Travel Grant

University of Maryland

USA

Mar 2024

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

Reviewer

ICML '24, NeurIPS '23, AISTATS '22

Volunteer

EC'23

TALK

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 Computational Game Theory (CMSC474)

Teaching Assistant

Fall 2023
UMD

Design and Analysis of Computer Algorithms (CMSC451)

Teaching Assistant

Spring 2023
UMD

Introduction to Computational Game Theory (CMSC474)

Teaching Assistant

Fall 2022
UMD

Data Structure and Algorithms for Electrical Engineering (EE205)

Teaching Assistant

Fall 2017

KAIST

Computer Networks (EE323)

Teaching Assistant

Spring 2017

KAIST

INDUSTRY

LINE plus Corporation, LINE Advertisement Platform

Data Scientist

Seongnam, South Korea

Oct. 2020 – Apr. 2022

Coupang, Product, Search and Discovery Platform

Software Engineer

Jamsil, South Korea

Aug. 2018 – Sep. 2020