

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 theoretical computer science and microeconomics. This includes algorithmic mechanism design/game theory, social learning and social choice. I'm also interested in online algorithm, online learning, graph algorithm and combinatorial optimization. I've recently been focusing on laying down the theoretical foundations of delegation mechanism, especially from combinatorial, learning, and multi-agent perspective.

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

PUBLICATIONS

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

Online Advertisements with LLMs: Opportunities and Challenges

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

[Manuscript](#)

Combinatorial Delegated Choice

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

Under review

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 PAPERS

Delegated Choice with Inspection Cost

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

Optimal Mechanism for Combinatorial Delegated Choice

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

Learning in Repeated Cake Cutting

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

Deciding Whom to Delegate

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

Stackelberg Bandit: Repeated Delegated Choice with Learning Agent(s)

α, β M. Hajiaghayi, S. Shin

Price of Class Fairness in Online Matching

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

Incentivizing Performance in Bandits with Strategic Arms

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

Replication-proof Bandit Mechanism Design

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

Almost Tight Guarantees for Online Nash Social Welfare Maximization

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

HONORS & AWARDS

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

VISITS & INTERNSHIPS

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

ACADEMIC SERVICE

Reviewer

NeurIPS'23, AISTATS'22

TALKS

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