

# Suho Shin

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

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## RESEARCH INTEREST

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

## EDUCATION

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**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

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*$(\alpha, \beta)$  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**

$\alpha, \beta$  S. Branzei, M. Hajiaghayi, R. Phillips, S. Shin, K. Wang

[Preprint](#)

**Replication-proof Bandit Mechanism Design**

$\alpha, \beta$  S. Esmaili, M. Hajiaghayi, S. Shin

[Preprint](#)

**Robust and Performance Incentivizing Algorithms for Bandits with Strategic Agents**

$\alpha, \beta$  S. Esmaili, S. Shin, A. Slivkins

[Preprint](#)

**Online Advertisements with LLMs: Opportunities and Challenges**

$\alpha, \beta$  S. Feizi, M. Hajiaghayi, K. Rezaei, S. Shin

[Preprint](#)

**A Regret Analysis of Repeated Delegated Choice**

$\alpha, \beta$  M. Hajiaghayi, M. Mahdavi, K. Rezaei, S. Shin

[AAAI'24](#)

**An Improved Relaxation for Oracle-Efficient Adversarial Contextual Bandits**

$\alpha, \beta$  K. Banihashem, M. Hajiaghayi, S. Shin, M. Springer

[NeurIPS'23](#)

**Bandit Social Learning under Myopic Agents**

$\alpha, \beta$  K. Banihashem, M. Hajiaghayi, S. Shin, A. Slivkins

[NeurIPS'23](#)

## Delegating to Multiple Agents

$\alpha, \beta$  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

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### Combinatorial Delegated Choice

$\alpha, \beta$  K. Banihashem, M. Hajiaghayi, P. Krysta, S. Shin

### Delegated Choice and Pandora's Box

$\alpha, \beta$  M. Hajiaghayi, P. Krysta, M. Mahdavi, S. Shin

### Improved Mechanism for Combinatorial Delegated Choice

$\alpha, \beta$  M. Hajiaghayi, P. Krysta, S. Shin

### Deciding Whom to Delegate

$\alpha, \beta$  M. Hajiaghayi, M. Mahdavi, S. Shin, M. Springer

### Improved Online Class Fair Matching

$\alpha, \beta$  M. Hajiaghayi, S. Jahan, M. Sharify, S. Shin, M. Springer

### Improved Online Nash Social Welfare Maximization

$\alpha, \beta$  K. Banihashem, M. Hajiaghayi, E. Martinez, S. Shin, M. Springer

## HONOR & AWARD

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### 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

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### 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

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### Reviewer

ICML '24, NeurIPS '23, AISTATS '22

### Volunteer

EC '23

### Mentoring

[Harvard Student Research Institute '24](#)

## TALK

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### 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)

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

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**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