

# EUNCHEOL SHIN

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Korea Advanced Institute of Science and Technology  
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## EDUCATION

Ph.D. in the Social Sciences, California Institute of Technology, 2016  
Advisor: Leeat Yariv

B.S. in Mathematics and B.A. in Economics, Yonsei University, 2009  
Graduated with *Highest Honors (Summa Cum Laude)*  
Ranked *1st* in the Department of Mathematics  
Completed *Advanced Program in Mathematics*  
Military Service (South Korea): 2004 – 2007

## ACADEMIC APPOINTMENTS

KAIST College of Business, Associate Professor of Economics, 2022 – Present

California Institute of Technology, Visiting Associate in Economics, August 2022 – August 2023

KAIST College of Business, Assistant Professor of Economics, 2018 – 2022

Kyung Hee University, Department of Economics, Assistant Professor, 2016 – 2018

## RESEARCH INTERESTS

Economics of Networks, Industrial Organization, and Political Economy

## PUBLICATIONS

1. “Optimal Influence Design in Networks,” joint with Daeyoung Jeong, 2024, *Journal of Economic Theory* Vol 220: 105877. – *KAIST College of Business S Journal*
2. “Who Are the Key Players? Listeners vs Spreaders vs Others,” 2023, joint with Sumin Kim and Kyu-Min Lee, *PLoS ONE* Vol 18(5): e0286369.
3. “Impact of Artificial Intelligence-based Adaptive Learning Program on Students’ Academic Performance: Evidence from a Randomized Controlled Trial in a Daegue Middle School,” joint with Booyuel Kim, Yoonsoo Park, and Ju-Ho Lee, 2022, *응용경제* Vol 24(4): 5–24.

4. “Collective Proofreading and the Optimal Voting Rule,” joint with Jinhyuk Lee and Duk Gyo Kim, 2022, *Global Economic Review* Vol 51(1): 1–17.
5. “Repairing a Cracked Mirror: The Heterogeneous Effect of Personalized Digital Nudges Driven by Misperception,” joint with Daegon Cho and Miyeon Jung, 2021, *Production and Operations Management* Vol 30(8): 2586–2607. – *KAIST College of Business S Journal*
6. “Social Value from Social Enterprise: An Incentive Design,” 2021, *Journal of Economic Theory and Econometrics* Vol 32(2): 54–73.
7. “Social Network Formation and Strategic Interaction in Large Networks,” 2021, *Mathematical Social Sciences* Vol 111: 34–54.
8. “A Model of Pre-Electoral Coalition Formation,” 2019, *Games and Economic Behavior* Vol 118: 463–485. – *KAIST College of Business S Journal*
9. “Guide to Effective Retirement Pension Choices: An Experimental Design,” joint with Seura Ha, Duk Gyo Kim, Sang-Hyun Kim, 2019, *Journal of Financial Regulation and Supervision* Vol 6(2): 79–141.
10. “An Economic Model of Friendship and Enmity for Measuring Social Balance on Networks,” joint with Kyu-Min Lee and Seungil You, 2017, *Physica A* Vol 488: 205–215.
11. “Monopoly Pricing and Diffusion of Social Network Goods,” 2017, *Games and Economic Behavior* Vol 102: 162–178. – *KAIST College of Business S Journal*
12. “How Food Controls Aggression in *Drosophila*,” joint with DJ Anderson, E Eyjólfsson, RS Lim, and P Perona, 2014, *PLoS ONE* 9(8): e105626.

### **WORKING PAPERS AND WORK IN PROGRESS**

1. Robust Intervention in Networks (joint with Daeyoung Jeong and Tongseok Lim).
2. Learning to be Homo Economicus: Can an LLM Learn Preferences from Choice Data? (joint with Jeongbin Kim, Matthew Kovach, Kyu-Min Lee, and Hector Tzavellas).
3. Cultural Variation in Focal Points for Coordination and Cooperation (joint with Matthew Chao).
4. Strategic Sophistication and Collective Action: Theory and Evidence (joint with Mimi Jeon, Seonghoon Kim, and Kanghyock Koh).
5. Teaching Practices and Friendship Networks (joint with Syngjoo Choi, Booyuel Kim, Eungik Lee, and Yoonsoo Park).
6. Adaptive Learning and Student Achievement: Experimental Evidence from Vietnam (joint with Seura Ha, Booyuel Kim, Yoon Soo Park, Hee-Seung Yang).
7. Pandemic Control in Networks: Three Principles (joint with Keumseok Kang, Yuncheol Kang, and Dae-Ki Min).

8. Retirement Pension Portfolio Choice with AI Assistance: An Experimental Study (joint with Hongseok Choi, Jeongbin Kim, Matthew Kovach, Kyu-Min Lee, and Hector Tzavellas).
9. Supply Network Resilience and Policy Implications in the Electric Vehicle Industry (joint with Lei He, Myongjin, Georgia Kosmopoulou, and Kyu-Min Lee).

### **CONSULTING**

Korea Institute for International Economic Policy (KIEP) – KRW 18,000,000

SK Hynix – KRW 122,000,000

### **TEACHING EXPERIENCE**

College of Business, Korea Advanced Institute of Science and Technology, 2018–Present

Advanced Business Analytics: linear algebra and statistical learning with STATA

Business Statistics: introductory statistical inference with STATA

Economics of Networks and Platform Business: social and economic networks

Energy and Environmental Economics: economics of externalities and electricity market design

Game Theory and Applications – graduate-level course

Mathematics for Business and Economics: basic real analysis and economic applications

Microeconomics and the Environment: principles of microeconomics, externalities, etc.

Microeconomic Analysis: graduate-level microeconomics

Probability and Statistics: graduate-level probability theory and statistical inference

Network Analytics: Special lecture for none-degree programs

Department of Economics, Kyung Hee University, 2016–2018

Microeconomics: consumer and producer theory, game theory, and social choice

Mathematical economics: linear algebra and revealed preference theory with experiments

Environmental economics: theoretical analysis, experiments, and politics (PBL class)

Labor economics: search and matching, bargaining, and difference-in-differences analysis

Introduction to statistics: probability theory and statistical inference

Mathematics for economics: calculus, ordinary differential equations, and applications

Kyung Hee High School, 2017 – 2018

Experimental economics, philosophy of science, and nudging in the real world (2018)

Basic game theory and experimental economics (2017)

HSS Graduate Student Math Camp Lecturer, California Institute of Technology, 2011–13, 2015

Teaching Assistant, California Institute of Technology, 2011–16

Organization Design, 2014

Game Theory, 2012, 2014, 2016

Law and Economics, 2015

Human Evolution, 2012

**STUDENT ADVISING**

## 1. Current students:

Ph.D. program: Minseo Choi and Seokho Hong  
 Master's problem: Abdullahi Issack Ali

## 2. Previous students:

Chanjin Choi (KAIST, 2023)  
 Minseo Choi (KAIST, 2023; KAIST, economics Ph.D. program)  
 Seura Ha (KHU, 2021; University of Michigan, information Ph.D. program)  
 Sumin Kim (KAIST, 2022; Samil PwC)  
 Yerim Lee (KAIST, 2021; KIEP)  
 Yuhan Lee (KHU, 2020; University of Washington, economics Ph.D. program)  
 Jinha Park (KAIST, graduation with thesis award, 2021; Korea Corporate Governance Service)  
 Jonghyun Park (KAIST, 2022; Virginia Tech, economics Ph.D. program)  
 Tara Patterson (KAIST, 2023; GCF)  
 Chaeyoon Shim (KAIST, 2022; Korea Investment & Securities Co., Ltd.)  
 Carine Valarché (KAIST, 2022; GCF)

## 3. Ph.D. dissertation committee member:

Mincheol Choi (KAIST, 2021; KIET)  
 Hyunji So (KAIST, 2020; McGill University)  
 Byeong-Seok Koo (KAIST, 2020; KIST)

**INSTITUTE SERVICE**

1. KAIST Jang Young Sil Fellowship Selection Committee (2024 – Present)
2. KAIST College of Business, Startup Empowerment Program committee (2024 – Present)
3. KAIST College of Business, education innovation committee (2021 – 2022)
4. KAIST College of Business, case competition committee (2021)
5. KAIST College of Business, online education TFT (2020)
6. KAIST College of Business, seminar organizer (2019 – present)
7. KAIST College of Business, student colloquium coordinator (2019 – 2020)

**PROFESSIONAL SERVICE**

## Editorial Board:

The Korean Journal of Economics (2018 – Present)  
 응용경제 (2022 – Present)

## Conference Organization Committee:

ESA Asian Meeting (2023)  
 Korea Economic Association International Conference (2024)

**REFEREES**

*Economic Journal, European Journal of Social Psychology, Games and Economic Behavior, Global Economic Review, International Economic Review, International Journal of Game Theory, Journal of Economic Behavior and Organization, Journal of Evolutionary Economics, Journal of Combinatorial Optimization, Korean Economic Review, Mathematical Social Sciences, Manufacturing & Service Operations Management, Physica A, RAND Journal of Economics, Southern Economic Journal, Theoretical Economics, Theory and Decision* (in alphabetical order)

**PAPER PRESENTATIONS**

In 2024: Seoul National University, NGBS Tutorial 2024, KISDI (economic experiments and AI), KISDI (economic experiments and education), Hanyang University, Konkuk University, Korea University, Sogang University, Korean Econometric Society: Microeconomics, The 99th WEAI (Seattle), East Asia Game Theory Conference 2024, Yonsei University (Department of Mathematics), Yonsei University (Department of Applied Statistics), Korean Labor Economic Association, The 94th Southern Economic Association (Washington DC).

In 2023: The 8th Annual Conference on Network Science and Economics (Virginia Tech), Midwest Economics Association Annual Meetings 2023 (OH), Florida State University (Microeconomics), Florida State University (Experimental Economics), University of California Riverside, 2023 Asia-Pacific ESA Meeting, Sungkyunkwan University.

In 2022: 2022 Asia Pacific ESA meeting, The 7th Conference on Network Science and Economics, The Virtual East Asia Experimental and Behavioral Economics Seminar Series, Korean Academic Society of Industrial Organization, Korea University, Yonsei University, The 2022 ESA Boston (withdrawn due to medical reason), The 2022 Asian Meeting of the Econometric Society, KBER Summer Workshop (SNU), Korea Empirical Applied Microeconomics Conference (Jeju), Korea Institute of Advanced Study (KIAS), The 92th Southern Economic Association (Florida).

In 2021: Korea's Allied Economic Associations Annual Meeting (Korean Academic Society of Industrial Organization), KDI, Korea University, Yonsei University, The 20th Annual SAET Conference, Sungkyunkwan University, Seoul National University, KEA & Ministry of Environment joint workshop, Virginia Tech, Yonsei University (Department of Mathematics), Korean Econometric Society: Microeconomics, Hanyang University.

In 2020: Korea University, Singapore Management University, Yonsei University, Korea Energy Economics Institute.

In 2019: Ewha Womans University, Korea Workshop: Experimental Economics and Development Economics (SNU), Korean Academic Society of Industrial Organization, 2019 Nanjing International Conference on Theory, Korean Econometric Society: Microeconomics, 한국재정학회 춘계학술대회, Yonsei University, 한국재정정책학회 춘계학술대회, CKJ Workshop.

In 2018: 경제학 교육위원회 심포지움, University of Seoul, KEA-KAEA Joint International Conference (SKKU), Korea Military Academy, Sogang University, Korean Academic Society of Industrial Organization, KAIST, Korea's Allied Economic Associations Annual Meeting (Korean

Econometric Society: Microeconomics), Yonsei University, Yonsei University (Department of Public Administration), Yonsei University (Joint Conference on Economics and Psychology).

In 2017: Korea University, Incheon National University (Department of Mathematics), SURE International Conference (SNU), Ewha Womans University, Korea's Allied Economic Associations Annual Meeting (Korean Academic Society of Industrial Organization), Western Economic Association International (WEAI, San Diego), Korean Academic Society of Industrial Organization, Korean Econometric Society: Microeconomics, International Conference on Recent Trends in Economics (SKKU), Kyung Hee University (Department of Political Science & International Relations), Korea's Allied Economic Associations Annual Meeting (Korean Academic Society of Industrial Organization & Korean Econometric Society: Microeconomics).

In 2016: Applying Game Theory to Humanities, Social Science and Natural Science (KIAS), Yonsei University, Applied Economics Conference (SNU), Korean Academic Society of Industrial Organization, The Korean Econometric Society, Microeconomics, Yonsei Young Economists Workshop, UC Riverside, KIRI, Kyung Hee University, Ulsan National Institute of Science and Technology, Sogang University, KIF, KERI, KDI, KIPF.

In 2015: SoCal NEGT Symposium (Lightning Talk, USC), Korea University (Department of Physics), Seoul National University, Yonsei University, Handong Global University, The 41st Annual Meeting of the EEA (New York).

In 2014: SoCal NEGT Symposium (Lightning Talk, Caltech), The 16th KEA-KAEA International Conference (Yonsei U), The KIET-KAEA Joint Conference, Yonsei University, SoCal NEGT Symposium (Poster, UCLA).

Before 2014: SoCal NEGT Symposium (USC), BK 21 Seminar (Yonsei), SISL Seminar (Caltech).

## **RESEARCH GRANTS, SCHOLARSHIPS, HONORS, AND AWARDS**

### External Research Grants

NRF of Korea (2020S1A5A8045042), KRW 20,000,000, 2020–2022

NRF of Korea (2019S1A5A8038003), KRW 8,500,000, 2019–2020

KAIST Internal Faculty Research Grants, KRW 4,000,000 per year, 2020–2024

### KAIST College of Business Research Grants, 2020–2024

2024: Economic Experiments on Strategic Human-AI Interactions, KRW 7,600,000

2023: The Effects of Hierarchy on Trust and Social Preferences, KRW 17,250,000

2022: Behavioral Economic Approach to Improving Health Behavior: Theory, Experiments, and Digital Nudges, KRW 19,000,000

2021: The Effects of AI-based Adaptive Learning and Project-based Learning on Academic Performance and Friendship Network, KRW 23,500,000

2020: On the Loss Leader Strategy in Two-Sided Markets, KRW 8,500,000

KAIST Initial Settlement Research Grant, KRW 35,000,000, 2020–2024

### President's Lists

Highest Honors Student of Yonsei University, 2007–08

High Honors Student of Yonsei University, 2004–07

Scholarships and Fellowships

Caltech Graduate Fellowship, 2010–16  
The Korean Methodist Church Scholarship, 2014–15  
Youngnak Scholarship, 2014  
The Korean Honor Scholarship, 2013  
Yonsei Alumni Scholarship, 2008  
National Science and Technology Scholarship, 2003–07

Awards

Award for Excellence in Research, KAIST College of Business, 2021  
The Hyung-Gyu Lim LINKGENESIS-Best Teacher Award, KAIST, 2021  
Financial Literacy Outreach Idea Challenge (JoongAng Ilbo and Hanmi Bank), 2015  
Yonsei International Foundation Award, 2011  
Travel Award to Visiting European Union Countries, 2009

**NON-ACADEMIC EXPERIENCE**

Legislative Assistant, National Assembly, Republic of Korea, 2007

Military Service (Sergeant), Republic of Korea Air Force, 2004–07