

Kyubin Yim

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RESEARCH FIELDS

The Economics of Networks, Experimental and Behavioral Economics, Labor Economics, Finance

EDUCATION

- Ph.D. Candidate in Economics** 08/2018 – 05/2024 or Summer 2024 (expected)
Iowa State University Ames, US
- Dissertation: *Essays in the Economics of Networks: Network Analysis in Experimental Games, International Migration, and Finance*
 - Dissertation committee: Elizabeth Hoffman (advisor), Peter F. Orazem, Dermot J. Hayes, Jian Li, Otávio Bartalotti
- MS Program in Economics** 08/2017 – 05/2018
Iowa State University Ames, US
- Upgraded to Ph.D. Program in Economics
- Ph.D. in Physics** 03/2009 – 02/2015
Pohang University of Science and Technology (POSTECH) Pohang, South Korea
- Dissertation: *Understanding market microstructure of financial market using agent-based modeling*
 - Dissertation committee: Seunghwan Kim (advisor), Gabjin Oh, Beomjun Kim, Woo-Sung Jung, Sungsub Choi
- MS in Physics** 03/2006 – 02/2008
Sungkyunkwan University Suwon, South Korea
- Thesis: *Measurement of $\frac{B(B^+ \rightarrow X(3872)K^+) \times B(X(3872) \rightarrow J/\psi \pi^+ \pi^-)}{B(B^+ \rightarrow \psi(2S)K^+) \times B(\psi(2S) \rightarrow J/\psi \pi^+ \pi^-)}$ at the Collider Detector at Fermilab*
 - Thesis committee: Intae Yu (advisor), Suyong Choi, Yoonbai Kim
- BS in Physics** 03/2000 – 02/2006
Sungkyunkwan University Suwon, South Korea

JOB MARKET PAPER AND WORKING PAPERS

- The effect of networks on cooperation in the finitely repeated prisoner's dilemma (JMP)
(This paper will be submitted to *Journal of Economic Behavior and Organization*)
- Analysis of international migration using a network approach: How is it different from international tourism?
(This paper will be submitted to *Social Networks*)
- Measuring systemic risk in the US stock market using a network approach
(This paper will be submitted to *Journal of Economic Dynamics and Control*)

WORK IN PROGRESS

- Measuring social capital in the finitely repeated prisoner's dilemma games on networks experiments

PUBLICATIONS

- K. Yim, G. Oh, S. Kim, Understanding Financial Market States Using an Artificial Double Auction Market. PLoS ONE 11(3): e0152608. doi:10.1371/journal.pone.0152608 (2016)
- H. Kim, K. Yim, S. Kim, G. Oh, Nonlinear properties of the Korea fund market. Journal of the Korean Physical Society 67(12), 2039-2044 (2015)
- K. Yim, G. Oh, S. Kim, An analysis of the financial crisis in the KOSPI market using Hurst exponent. Physica A 410, 327-334 (2014)
- JG. Ha, K. Yim, S. Kim, & WS. Jung, Entropy analysis in foreign exchange markets and economic crisis. Journal of the Korean Physical Society, 61(4), 638-646 (2012)

OTHER WORKING PAPERS

- K. Yim, G. Oh, Technological Innovation, Inequality, and Financial Instability (February 16, 2016). Available at SSRN: <http://ssrn.com/abstract=2732048> or <http://dx.doi.org/10.2139/ssrn.2732048>
- K. Yim, G. Oh, S. Kim, The Effect of Fast Traders in Continuous Double Auction Market (December 10, 2015). Available at SSRN: <http://ssrn.com/abstract=2702014> or <http://dx.doi.org/10.2139/ssrn.2702014>
- K. Yim, G. Oh, S. Kim, The Effect of Heterogeneous Interactions Among Traders in an Artificial Stock Market (February 26, 2015). Available at SSRN: <http://ssrn.com/abstract=2574066> or <http://dx.doi.org/10.2139/ssrn.2574066>

TEACHING EXPERIENCE

Teaching Assistant in Economics	08/2018 – 07/2023
Department of Economics, Iowa State University	Ames, US
• Principles of Microeconomics: Econ 101	Fall 2018, Fall 2019, Spring 2020, Fall 2022, Summer 2023
• Principles of Macroeconomics: Econ 102	Spring 2019, Fall 2021, Spring 2022, Spring 2023, Summer 2023
• Applied economic optimization: Econ 207	(Lab Instructor) Course evaluation: 3.33/5.0, Spring 2022
• Intermediate Microeconomics: Econ 301	(Lab Instructor) Course evaluation: 4.0/5.0, Fall 2019, Fall 2022
• Economics of Discrimination: Econ 321	Spring 2021
• Introduction to Game Theory: Econ 418	Spring 2021
• Econometrics (Ph.D. Core): Econ 671	(Lab Instructor) Course evaluation: 4.6/5.0, 5.0/5.0, Fall 2020, Fall 2021
• Microeconometrics (Ph.D. Level): Econ 673	Fall 2020
Teaching Assistant in Physics	
Department of Physics, POSTECH	Pohang, South Korea
• Introduction to Classical Mechanics	Spring 2009
Department of Physics, Sungkyunkwan University	Suwon, South Korea
• General Physics Laboratory	Spring and Fall 2007
Instructor in Economics and Finance	
Division of Business Administration, Chosun University	Gwangju, South Korea
• Introduction to Investment Theory	Spring 2017
• Introduction to Corporate Finance	Fall 2012
Instructor and Advisor for Research and Education Program	03/2011 – 08/2012
Pocheol High School	Pohang, South Korea
• Taught nonlinear dynamics and complex system theory to Pocheol High School students	
• Taught Matlab to Pocheol High School students	
• Conducted research with Pocheol High School students	

RESEARCH EXPERIENCE

Postdoctoral Researcher

03/2015 – 05/2016

Nonlinear and Complex System Laboratory, POSTECH

Pohang, South Korea

- Developed agent-based financial markets
- Developed business cycle fluctuation models and systemic risk models
- Investigated the market microstructure of the London Stock Exchange

Research Assistant in Physics

03/2009 – 02/2015

Nonlinear and Complex System Laboratory, POSTECH

Pohang, South Korea

- Developed agent-based stock markets
- Analyzed the microstructure in the Korea Stock Exchange using a nonlinear and complex system approach
- Co-supervising and mentoring undergraduate researchers

CONFERENCES AND PRESENTATIONS

- K. Yim, Cooperation in the Finitely Repeated Prisoner's Dilemma on a Network. The Midwest Economics Association (MEA) Annual Conference, Chicago, Illinois, US, 2024
- K. Yim, The effect of networks on cooperation in the finitely repeated prisoner's dilemma. The 2023 North American Economic Science Association Conference, UNC Charlotte, US, 2023
- K. Yim, G. Oh, A. Park, The Effect of Heterogeneous Interactions among Traders in an Artificial Stock Market. Fourth International Symposium in Computational Economics and Finance in Paris, France, 2016
- K. Yim, G. Oh, Innovation of technology, inequality, and economic stability, International Conference "Large-scale crises:1929vs2008", Ancona, Italy, 2015
- K. Yim, G. Oh, S. Kim, Understanding systemic risk in the economy using credit network model. Econophysics Colloquium, Prague, The Czech Republic, 2015
- K. Yim, A. Park, G. Oh, S. Kim, Systemic risk in banking system. Asia Pacific Econophysics Conference in Singapore, 2015
- K. Yim, G. Oh, S. Kim, The effect of fast traders in continuous double auction market. 21'st Computing in Economics and Finance, Taipei, 2015
- K. Yim, G. Oh, S. Kim, Understanding financial market state using artificial double auction market. Spring conference of Korean Physical Society, Korea, 2015
- K. Yim, G. Oh, S. Kim, Understanding asset price under heterogeneous agents using artificial double auction market. Asia-Pacific Social Simulation Workshop, Jeju, Korea, 2015
- K. Yim, G. Oh, S. Kim, The various states of market microstructure in Artificial Double Auction Market. International Finance And Banking Society, Lisbon, Portugal, 2014
- K. Yim, G. Oh, S. Kim, The impact of interaction between heterogeneous traders in artificial stock market. 19th Annual Workshop on Economic Science with Heterogeneous Interacting Agents, China, 2014
- K. Yim, G. Oh, S. Kim, The impact of heterogeneous traders in artificial double auction market. International Conference on Econophysics & Asia Pacific Econophysics Conference, Beijing, China, 2014
- K. Yim, G. Oh, S. Kim, Statistical Properties of Market Microstructure of London Stock Exchange. Spring conference of Korean Physical Society, Korea, 2014
- K. Yim, G. Oh, S. Kim, The impact of heterogeneous trading and local interaction between traders in Artificial Double Auction Market. Fall conference of Korean Physical Society, Korea, 2013
- K. Yim, G. Oh, S. Kim, Bubble and Crash in Artificial Double Auction Market. Econophysics Colloquium & Asia Pacific Econophysics Conference, Pohang, Korea, 2013
- K. Yim, G. Oh, S. Kim, Study of interaction between traders in Artificial Double Auction Market. Spring conference of Korean Physical Society, Korea, 2013
- K. Yim, G. Oh, S. Kim, Characteristics of trading interval in KOSPI, Fall conference of Korea Physical Society, Korea, 2012

- K. Yim, G. Oh, S. Kim, Dynamical and statistical properties of microstructure in KOSPI market. Asia Pacific Econophysics Conference, Taipei, 2012
- K. Yim, G. Oh, S. Kim, Statistical properties of bid-ask spread in double auction market. International Conference on Econophysics, Beijing, China, 2011
- K. Yim, G. Oh, S. Kim, Characteristics of trading interval in double auction market. Econophysics Colloquium, Taipei, 2010
- K. Yim et al (Korea CDF Collaboration), Study of $B \rightarrow X(3872) K$ decays at CDF II, Fall conference of Korean Physical Society, Korea, 2007

GRANTS

- External Grant (Not Funded) - NSF - Doctoral Dissertation Research Improvement Grant in Economics. *The effect of networks as a channel of information on cooperative behavior in human groups* 2021 (resubmission) (PI: Elizabeth Hoffman; Co-PI: Kyubin Yim) (Total Award - \$38,226, Rating: Very Good (2), Good/Fair (1), Fair (2))
- External Grant (Not Funded) - Russel Sage Foundation - Small Grants in Behavioral Economics. *The effects of networks on cooperative actions in human groups in repeated prisoner's dilemma games: which is better to promote cooperation between networks and communication?* 2021 (PI: Kyubin Yim) (Total Award - \$8,412)
- External Grant (Not Funded) - NSF - Doctoral Dissertation Research Improvement Grant in Economics. *The effect of networks as a channel of information on cooperative behavior in human groups* 2020 (PI: Elizabeth Hoffman; Co-PI: Kyubin Yim) (Total Award - \$47,523), Rating: Very Good (1), Fair (4), Poor (2))

HONORS AND AWARDS

BK21 Scholarship, The Ministry of Education, Science and Technology Department of Physics, POSTECH	03/2009 – 02/2015 Pohang, South Korea
Excellent Teaching Assistant Award Department of Physics, POSTECH	09/2009 Pohang, South Korea
BK21 Scholarship, The Ministry of Education Department of Physics, Sungkyunkwan University	03/2006 – 02/2008 Suwon, South Korea
Excellent Study Group Award College of Science, Sungkyunkwan University	Suwon, South Korea
• Team Name: General Physics Laboratory Section 77	03/2008
• Team Name: Quantum Physics	03/2007
BK21 Honor Scholarship for Outstanding Students Department of Physics, Sungkyunkwan University	03/2007 Suwon, South Korea
Simsan Scholarship for Outstanding Students Department of Physics, Sungkyunkwan University	03/2006 Suwon, South Korea

SERVICE

- Session Chair in *Macro/Monetary and Micro*, The Midwest Economics Association (MEA) Annual Conference, Chicago, Illinois, US, 2024
- Session Chair in *Microeconomics I*, The Midwest Economics Association (MEA) Annual Conference, Chicago, Illinois, US, 2024

OTHER EXPERIENCE

Cultural Ambassador Program	09/2023 – 12/2023
International Students and Scholars Office, Iowa State University	Ames, US
Residential Dining Food Service Worker	08/2023 –
Iowa State University	Ames, US
Visiting Graduate Student	Summer 2006, Summer 2007, Winter 2007
Fermi National Accelerator Laboratory	Batavia, US
The Vice President of Physics Graduate Student Association	03/2007 – 02/2008
Department of Physics, Sungkyunkwan University	Suwon, South Korea
Military Service	03/2003 – 05/2005
Pyeongtaek Customs Service	Pyeongtaek, South Korea

SKILLS AND CERTIFICATES

Languages: Korean (Native), English (Fluent)

Object-oriented programming: C++, C#, Java, Python

Agent-based modeling frameworks: Netlogo, Repast

Data analysis frameworks: ROOT, Matlab, Octave, R, Stata

Frameworks for doing experiments: oTree

Document Creation: Microsoft Office Suite, LaTeX

Learning Management System: Canvas

Data Analytics Certificates: (1) Google Advanced Data Analytics (earned through Coursera on 02/09/2024), (2) Cluster Analysis in Data Mining (earned through Coursera on 12/14/2020), (3) Applied Machine Learning (earned through Coursera on 06/02/2020), (4) Machine Learning (earned through Coursera on 01/07/2019)

REFERENCES

Elizabeth Hoffman (Major Professor)

Professor, Department of Economics, Iowa State University

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- Phone: +1 (515) 450-1547
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Peter F. Orazem

University Professor, Department of Economics, Iowa State University

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Dermot J. Hayes

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