

# BYUNGKYU LEE

*Curriculum Vitae*

March 2025

Department of Sociology  
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## ACADEMIC POSITIONS

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2023– Asisstant Professor, Department of Sociology, New York University  
2021– Co-Director, Networks in Context Lab  
2019–23 Assistant Professor, Department of Sociology, Indiana University  
2018–19 Visiting Assistant Professor, Network Science Institute, Indiana University

## EDUCATION

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2012–18 Ph.D., Sociology, Columbia University  
2009–12 M.A., Sociology, Yonsei University  
2002–09 B.A., Business Administration, Yonsei University

## FIELDS OF INTEREST

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Social Networks, Health, Political Sociology, Computational Social Science, Causal Inference

## PUBLICATIONS (\* : graduate student coauthor)

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### Book

2024 Kim, Yonghak, Youngjin Kim, and **Byungkyu Lee**. *Social Network Analysis*, 5th edition. Seoul: Parkyoungsa (in Korean).

### Peer-Reviewed Articles

2024 **Lee, Byungkyu** and Bernice Pescosolido. “Misery Needs Company: Contextualizing the Geographic and Temporal Link between Unemployment and Suicide.” *American Sociological Review* 89(6): 1104-1140.

2024 Jarman, Molly, Mengyuan Ruan, Masami Tabata-Kelly, Brea Perry, **Byungkyu Lee**, Malaz Boustani, and Zara Cooper. “Detecting Variation in Clinical Practice Patterns

- for Geriatric Trauma Care Using Social Network Analysis”. *Annals of Surgery* 279(2): 353-360.
- 2023 **Lee, Byungkyu**, Kangsan Lee, and Benjamin Hartmann\*. “Transformation of Social Relationships in COVID-19 America: Remote Communication May Amplify Political Echo Chambers.” *Science Advances* 9(51):eadi1540.
- 2022 Perry, Brea, Meltem Odabaş, Kai-Cheng Yang\*, **Byungkyu Lee**, Patrick Kaminski\*, Brian Aronson, Yong-Yeol Ahn, Carrie Oser, Patricia Freeman, and Jeffery Talbert. “New Means, New Measures: Assessing Prescription Drug Seeking Indicators over Ten Years of the Opioid Epidemic.” *Addiction*. 117(1): 195-204.
- 2021 **Lee, Byungkyu**. “Close Relationships in Close Elections.” *Social Forces*. 100(1): 400-425.
- 2021 **Lee, Byungkyu**, Kai-Cheng Yang\*, Patrick Kaminski\*, Peng Siyun, Meltem Odabas, Gupta Sumedha, Hank Green, Yong-Yeol Ahn, and Brea Perry. “Substitution of Non-Pharmacologic Therapy with Opioid Prescribing for Pain During the COVID-19 Pandemic.” *JAMA Network Open*. 4(12):e2138453.  
 • Featured in *Everyday Health*, *Pain Medicine*, and *HealthDay News*
- 2021 **Lee, Byungkyu**, Wanying Zhao\*, Kai-Cheng Yang\*, Yong-Yeol Ahn, and Brea L. Perry. “Systematic Evaluation of State Policy Interventions Targeting the US Opioid Epidemic, 2007-2018.” *JAMA Network Open*. 4(2): e2036687.
- 2021 Yang, Kai-Cheng\*, **Byungkyu Lee**, Yong-Yeol Ahn, and Brea Perry, “Use of and Comorbidities Associated With Diagnostic Codes for COVID-19 in US Health Insurance Claims.” *JAMA Network Open*. 4(9): e2124643.
- 2021 Gupta, Sumedha, Thuy Nguyen, Shyam Raman\*, **Byungkyu Lee**, Felipe Lozano Rojas\*, Ana Bento, Kosali I. Simon, and Coady Wing. “Tracking Public and Private Response to the COVID-19 Epidemic: Evidence from State and Local Government Actions.” *American Journal of Health Economics* 7(4): 361-404. (NBER Working Paper No.27027)
- 2021 Youm, Yoosik, **Byungkyu Lee** and Junsol Kim\*. “A Measure of Centrality in Cyclic Diffusion Processes: Walk-betweenness.” *PLOS ONE* 16(1): e0245476.
- 2020 Lee, Dohoon† and **Byungkyu Lee**†. “The Role of Multilayered Peer Groups in Adolescent Depression: A Distributional Approach.” *American Journal of Sociology* 125(6): 1513-1558. (†: equal contribution)  
 • Best Publication Award on the Sociology of Mental Health, Section on Sociology of Mental Health, American Sociological Association.

- 2020 Pescosolido, Bernice, **Byungkyu Lee**, and Karen Kafadar. "Cross-level Sociodemographic Homogeneity Alters Individual Risk for Completed Suicide." *Proceedings of the National Academy of Sciences*, 117(42): 26170-26175.  
 • Cozzarelli Prize Finalist (Class V), the Proceedings of the National Academy of Sciences Editorial Office.
- 2020 **Lee, Byungkyu** and Peter Bearman. "Political Isolation in America." *Network Science* 8(3): 333-355.  
 • Cited by the 2023 U.S. Surgeon General's Advisory on *Our Epidemic of Loneliness and Isolation*.
- 2017 **Lee, Byungkyu** and Peter Bearman. "Important Matters in Political Context." *Sociological Science* 4:1-30.
- 2016 **Lee, Byungkyu** and Dalton Conley. "Robust Null Findings on Offspring Sex and Political Orientation." *Social Forces* 95(2):899-908.
- 2016 **Lee, Byungkyu** and Dalton Conley. "Does the Gender of Offspring Affect Parental Political Orientation?" *Social Forces* 94(3):1103-1127. (NBER Working Paper No.20384)  
 • Featured in *The Washington Post* and *The Atlantic*.
- 2016 Youm, Yoosik and **Byungkyu Lee**. "A Network Approach to Economic Models of Fertility." *Rationality and Society* 28(4):386-409.
- 2011 **Lee, Byungkyu** and Yoosik Youm. "Social Network Effects on Post-Traumatic Stress Disorder (PTSD) in Female North Korean Immigrants." *Journal of Preventive Medicine and Public Health* 44(5):191-198.

### Other publication

- 2021 Pescosolido A. Bernice and **Byungkyu Lee**. "COVID-19 and Sociology's Mental Health Moment." *ASA Footnotes* 49(2).

### Peer-Reviewed Articles in Korean

- 2024 **Lee, Byungkyu**. "Generative Agent-Based Models Powered by Large Language Models." *Korean Journal of Sociology* 58(4): 151-188.
- 2012 **Lee, Byungkyu** and Yoosik Youm. "A Study on the Increase and Decrease of Occupying Bridging Position Based on the Sponsorship Network in the 17th Korean National Assembly." *Korean Journal of Sociology* 46(4):137-175.

- 2012 Cho, Jinman, Jeonghan Kang, and **Byungkyu Lee**. "Effects of Family Structure and Friendship Network on Korean Adolescents' Life Satisfaction." *Social Science Review* 43(1): 47-71.  
 • Best Paper Award, *The 2nd National Conference for Sociology Graduate Students*, Korean Sociological Association
- 2010 Jeon, Kiho, **Byungkyu Lee**, and Hun-joon Park. "Effects of Network Centrality on Cooperative Behavior: Mediating Role of Organizational Identification." *Korean Journal of Industrial and Organizational Psychology* 23(4): 635-666.
- 2009 **Lee, Byungkyu** and Yoosik Youm. "Identifying the Structure of Co-signing Networks among the 17th Korean Congressmen in the Standing Committee of Health and Welfare." *Journal of Contemporary Society and Culture* 29: 33-59.

#### WORKS IN PROGRESS (★ : graduate student coauthor)

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##### Under Review

- Lee, Byungkyu** and Barum Park. "The Contextual Activation in Belief Networks." *American Journal of Sociology*, Revise and Resubmit.
- Perry, Brea L., Siyun Peng, **Byungkyu Lee**, and Colter Mitchell. "Social network bridging and social isolation are associated with epigenetic aging in a state representative sample of adults."
- Ciciurkaite, Gabriel, **Byungkyu Lee**, Siyun Peng, Maleah Fakete, Colter Mitchell, and Brea L. Perry. "Psychosocial stressors across the life course, accelerated biological aging, and morbidities."
- Miao, Lili, Vincent Larivière, **Byungkyu Lee**, Yong-Yeol Ahn, and Cassidy R. Sugimoto. "Persistent Hierarchy in Contemporary International Collaboration."

##### Working Papers

- Kim, Junsol★ and **Byungkyu Lee**. "AI-Augmented Surveys: Leveraging Large Language Models and Surveys for Opinion Prediction."
- Chen, Zhaodi★ and **Byungkyu Lee**. "Gender Differences in Content Moderation."
- Ji, Shiyu★, Barum Park, Lilian Lee, and **Byungkyu Lee**. "When, Where, and With Whom We Polarize: Contextual Drivers of Ideological Signaling on Social Media."

**Lee, Byungkyu**, Simone Zhang, and Gil Eyal. “Generative AIs as Tools, Not Authorities: Why Hallucination Is an Essential Feature, Not a Flaw.”

**Lee, Byungkyu**, Gabriele Ciciurkaite, Siyun Peng, Colter Mitchell, and Brea L. Perry. “Negative Social Ties Accelerate Biological Aging.”

**Lee, Byungkyu** and James Chu. “COVID-19 Vaccination Rates Are Lowest among Political Outsiders in the United States.”

**Lee, Byungkyu**, Junsol Kim★, and Bernice Pescosolido. “A population-based study of suicide among gays and lesbians in the United States”

**Lee, Byungkyu**, Erica Hobby, Sarah Cowan, and Brea Perry. “Impacts of the Alaska Permanent Fund Dividend Program on Suicide.”

**Lee, Byungkyu**, Ramina Sotoudeh, and Dalton Conley. “Twin Trouble: Nature and Nurture in Adolescent Friendship Networks.”

**Lee, Byungkyu**, Eun Kyong Shin, and Peter Bearman. “The Structure of Terrorist Networks.”

Siyun Peng, **Byungkyu Lee**, Colter Mitchell, Gabriele Ciciurkaite, and Brea Perry . “Health consequences of financial dependency on personal networks: A novel relational indicator of financial insecurity.”

Lorant, Vincent, Brea Perry, and **Byungkyu Lee**. “Network Topology, Centrality and Group Norms: An international study of adolescents’ smoking in 76 networks”

Pickett, Robert, Ruby Steedle, Tasce Bongiovanni, Hailie Dono, **Byungkyu Lee**, Erica Hobby, Anne Zink, Sarah K Cowan. “Cash Transfers Do Not Increase Traumatic Injury and Mortality: Evidence from Alaska.”

## GRANTS

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### External grants

- 2024–27 CO-INVESTIGATOR (PI: June Jeon), “Exploring the Co-evolutionary Dynamics of Artificial Intelligence and Society: A Computational Social Science Approach”, National Research Foundation of Korea.
- 2024 INVESTIGATOR (with Jintae Bae and Delia Baldassarri), “Navigating Multiple Identities: Between Selective Disclosure and Social Isolation”, CHIP50 Social Network Competition.
- 2022–24 PRINCIPAL INVESTIGATOR, “Estimating the Population Prevalence and Risk of Suicide

- for the LGBTQ+ Population in the United States”, American Foundation for Suicide Prevention, Young Investigator Innovation Grant.
- 2022–27 CO-INVESTIGATOR (PI: Brea Perry), “Epigenetic Mechanisms Underlying the Direct and Moderating Effects of Social Connectedness on Complex Diseases in Aging”, National Institutes of Health, R01.
- 2021–24 PRINCIPAL INVESTIGATOR (with PIs Barum Park and Mark Hoffman), “Collaborative research: How Online Foci Shape Conversation”, National Science Foundation.
- 2021–22 PRINCIPAL INVESTIGATOR (with co-PI Brea Perry), “Impacts of Universal Cash Transfer on Health Outcomes using Mortality and Claims Data”, #StartSmall, Cash Transfer Lab Small Grant, New York University.
- 2021–23 CO-INVESTIGATOR (PI: Peter Bearman), “Trust and Distrust”, Facebook.
- 2020–21 INVESTIGATOR (with Kangsan Lee), “National Study of American Social Life and Social Networks During the COVID-19 Pandemic”, The American Assembly, Columbia University.
- 2016 INVESTIGATOR (with Peter Bearman), “Networks in Time: Testing Contextual Effects in the 2004 General Social Survey Network Items”, Time Sharing Experiment For the Social Sciences.

### Internal grants

- 2020–21 PRINCIPAL INVESTIGATOR, “The Effects of Extreme Language and Binary Classification on Political Sectarianism: A Survey Experiment”, Social Science Research Commons, Indiana University.
- 2020–21 PRINCIPAL INVESTIGATOR (with Barum Park and Mark Hoffman), “Political Polarization, Political Deliberation, and Hate Speech on Facebook”, Office of the Vice Provost for Research, Indiana University Social Sciences Research Funding Program.

### AWARDS, FELLOWSHIPS, AND HONORS

- 2022 BEST PUBLICATION AWARD, Section on Sociology of Mental Health, American Sociological Association.
- 2021 COZZARELLI PRIZE FINALIST (CLASS V), Proceedings of the National Academy of Sciences
- 2019 ROBERT K. MERTON BEST DISSERTATION AWARD, Department of Sociology, Columbia University
- 2015 NETWORK MODELING FOR EPIDEMICS FELLOWSHIP, University of Washington
- 2015 GENOECONOMICS SCHOLARSHIP, Tinbergen Institute, Netherlands
- 2012–17 PAUL F. LAZARSFELD FELLOWSHIP, Department of Sociology, Columbia University
- 2012 GRADUATE THESIS AWARD, Yonsei University
- 2011 GRADUATE STUDENT PAPER AWARD, *The 2nd National Conference for Sociology Graduate Students*, Korean Sociological Association

## PRESENTATIONS

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### Invited Talks

- 2025 Center for Social Media and Politics, New York University
- 2025 Methods Workshop, Seoul National University
- 2025 Artificially Intelligent Social Science Workshop, Nuffield College – University of Oxford, United Kingdom.
- 2025 AI & Disinformation Summit, Carnegie Mellon University
- 2024 Research Seminar, QMSS, Columbia University.
- 2024 Identities and Ideologies Project Speaker Series, New York University.
- 2024 Thought Summit on the Future of Survey Science, Cornell University.
- 2024 Invited Panel, Association of Korean Sociologists in America.
- 2024 Invited Panel, Decision-making, Social Networks, and Society Section, American Sociological Association.
- 2024 AI-Data Intersection for Social Good, Yonsei University.
- 2024 Department of Technology, Operations, and Statistics Seminar Series, NYU Stern School.
- 2024 Multidisciplinary Seminar Series, the Stone Center on Socio-Economic Inequality at the CUNY Graduate Center.
- 2024 Demography Seminar, the Center for Demography and Ecology, University of Wisconsin – Madison.
- 2023 Methodology Forum, Institute of Social Sciences, Seoul National University.
- 2023 Guest Lecture, The Summer Institute in Computational Social Science – Korea.
- 2023 Methodology Lecture, Korea Inequality Research Network Symposium.
- 2023 Department Colloquium, Department of Precision Public Health, Korea University.
- 2023 Networks Lunch Colloquium, Network Science Institute, Indiana University.
- 2023 CNS-NRT Special Speaker Series, Indiana University.
- 2020 Workshop in Methods, Indiana University.
- 2017 Social Research and Public Policy Seminar Series, NYU, Abu Dhabi, UAE.

**Selected Paper Presentations** (ASA: American Sociological Association, PAA: Population Association of America, INSNA: International Network of Analytical Sociologists, INAS: International Network of Analytical Sociologists, IC2S2: International Conference on Computational Social Science)

**Lee, Byungkyu** and Junsol Kim. “Leveraging Large Language Models for Analyzing Belief Space at Scale” • Sociological Science Conference 2024

**Lee, Byungkyu** and Kangsan Lee. “Ingroup Bias and Othering Process in Close Social Ties: How Americans Perceive The Infection Status of Others During the COVID-19 Pandemic.” • INSNA 2023 • IC2S2 2023 • Frontiers of Network Science, New York University, 2023

**Lee, Byungkyu**, Zhaodi Chen, and Peter Bearman. “The Role of Tie Activation in the Formation of Relational Trust.” • Experimental Design Workshop, INCITE, Columbia University

2022 • Meta 2022

**Lee, Byungkyu**, Erica Hobby, Sarah Cowan, and Brea Perry. “Impacts of the Alaska Permanent Fund Dividend Program on Suicide.” • Cash Transfer Lab, New York University 2022 • PAA 2023

**Lee, Byungkyu**, Kangsan Lee, and Benjamin Hartmann. “Americans Together but Politically Apart: Social Networks in COVID-19 America.” • PAA 2022 • INSNA 2022 • Politics and Computational Social Science conference 2022 • Polarization and Radicalization Working Group 2022 • ASA 2023

**Lee, Byungkyu** and Bernice Pescosolido. “Unemployment and Suicide in 21st Century America.” • PAA 2022, • National Violent Death Reporting System Conference 2023, • INSNA 2024

**Lee, Byungkyu**. “The Rise of Political Homophily in the Battleground States.” • ASA 2019 • Summer Conference on Economy and Society, 2017.

**Lee, Byungkyu** and Dalton Conley. “Twin Trouble: Fragility of Heritability Estimates for Adolescent Friendship Networks.” • ASA 2017 • PAA 2017 • Integrating Genetics and Social Science 2013

**Lee, Byungkyu** and Peter Bearman. “Important Matters in Political Context: The Role of Priming in Suppressing the Core Discussion Network Size.” • INAS 2016

**Lee, Byungkyu**, Eun Kyong Shin, and Peter Bearman. “Risk on the Margin: The Structure of Covert Social Network.” • INSNA 2016 • INAS 2015

## TEACHING AND MENTORING

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### Courses at New York University

Generative AI in Society: Opportunities, Challenges, and Risks. Fall 2023  
Research Methods. Fall 2024.

### Courses at Indiana University (†: graduate-level course)

Understanding Social Data. Fall 2019, Fall 2020  
Causal Inference†. Fall 2019, Fall 2021, Spring 2023  
Social Network Analysis†. Fall 2020, Spring 2022



**Dissertation Committee Member**

Helge Johannes Marahrens (2023), Samuel Donahue (2024–), Patrick Kaminski (2023–), Anne Kavalerchik (2022–), Zhaodi Chen (2022–).

**Master's Thesis Committee Member**

Patrick Kaminski (2021)

**Qualifying Exam Committee Member**

Patrick Kaminski (2023), Anne Kavalerchik (2022), Max Coleman (2020), Adam Braffman (2024)

**UNIVERSITY SERVICE**

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**Indiana University**

2021–22    Reviewer. Social Sciences Research Funding Program, Indiana University  
2020–21    Reviewer. Social Sciences Research Funding Program, Indiana University

**DEPARTMENT SERVICE**

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**New York University**

2024–25    Graduate Admission Committee  
2024–25    Social Data Science Committee  
2023–24    Graduate Admission Committee

**Indiana University**

2022–23    Graduate Fellowships Committee  
              Karl Schuessler Award Committee  
              Research Infrastructure Committee  
              Diversity, Equity and Inclusion Committee  
2021–22    Workshop and Colloquium Committee  
              Karl Schuessler Award Committee  
              Research Infrastructure Committee  
2020–21    Workshop and Colloquium Committee  
              Graduate Fellowships Committee  
2019–20    Karl Schuessler Award Committee  
              Library Coordinator

## Columbia University

- 2016 MODERATOR. Sociology Senior Thesis Presentations  
 2015–16 FACULTY ADVISOR. China High School Fellowship Program, *INCITE*  
 2014–18 CO-ORGANIZER. Networks and Time Seminar Series, *INCITE*

## ACTIVITIES, SERVICE, AND AFFILIATIONS

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- 2024–26 CONSULTING EDITOR. *American Journal of Sociology*  
 2023 ADVISORY PANEL. *National Science Foundation*

## Affiliations

- 2023– AFFILIATED FACULTY. *Identities and Ideologies Project*, New York University  
 2023– AFFILIATED FACULTY. *The Trust Laboratory*, Columbia University  
 2023– AFFILIATED FACULTY. *Center on Organizational Innovation*, Columbia University  
 2019– MEMBER. *Biosociology Research Group*, Princeton University  
 2018– RESEARCH AFFILIATE. *INCITE*, Columbia University  
 2014–18 GRADUATE FELLOW. *INCITE*, Columbia University  
 2014–18 GRADUATE FELLOW. *Center on Organizational Innovation*, Columbia University

## American Sociological Association (ASA)

- 2024–26 TREASURER. *Decision-making, Social Networks, and Society Section*  
 2023 MEMBER. Best Graduate Student Paper Award Committee, *Rationality and Society*  
 2023 SESSION ORGANIZER. *Section on Evolution, Biology, and Society*

## Association of Korean Sociologists in America (AKSA)

- 2023 DISCUSSANT. AKSA Research Roundtable  
 2021 MEMBER. Best Graduate Student Paper Award Committee  
 2018–20 TREASURER.

## Others

- 2025 REVIEWER. *IC2S2 Conference*, Norrköping, Sweden  
 2023 AD HOC REVIEWER. *Social Sciences and Humanities Research Council of Canada*  
 2023 GUEST EDITOR. *Proceedings of the National Academy of Sciences*  
 2022– AD HOC REVIEWER. *National Science Foundation: 2022, 2024.*  
 2022 AD HOC REVIEWER. *Columbia University Press*  
 2016– AD HOC REVIEWER. *American Journal of Sociology, American Sociological Review, American Journal of Preventive Medicine, Annals of Epidemiology, European Sociological Review, JAMA Network Open, Journal of Ethnic and Migration Studies, Jour-*

*nal of Experimental Political Science, Journal of Health and Social Behavior, Journal of Mathematical Sociology, Network Science, Nature Human Behavior, Nature Computer Science, Political Analysis, Proceedings of the National Academy of Sciences, PNAS-Nexus, Research in Social Stratification and Mobility, Science Advances, Scientific Reports, Social Currents, Social Forces, Social Networks, Social Science Research, Social Science and Medicine, Social Psychology Quarterly, Sociological Methods and Research, Sociological Methodology, Sociological Perspectives, Sociological Science, Socius*