

Jinhyuk Yun

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ACADEMIC · INDUSTRIAL POSITIONS	Soongsil University , Seoul, South Korea Assistant Professor, School of AI Convergence KISTI , Seoul, South Korea Senior Research Scientist, Future Technology Analysis Center Naver Corporation , Seongnam, South Korea Data Scientist, Naver Search KAIST , Daejeon, South Korea Research Assistant Teaching Assistant	Mar 20 – present Dec 16 – Feb 20 Aug 16 – Dec 16 Feb 13 – Aug 16 Feb 11 – Dec 12
EDUCATION	Ph.D. Physics, KAIST (Daejeon, South Korea), August 2016 <ul style="list-style-type: none"> • Thesis topic: Theoretical study on a Spreading in Human Society • Advisor: Professor Hawoong Jeong B.S. Physics, KAIST (Daejeon, South Korea), February 2010 Exchange Student, INSA (Lyon, France), Aug. 2008 - Jul. 2009	
TEACHING AND ADVISING	Assistant Professor, Soongsil University Big Data Programming Engineering Mathematics Programming Basics 2 Probability and Statistics Big Data Programming Data Structure Probability and Statistics Data Structure Teaching Assistant, KAIST Statistical Physics Thermal Physics Advanced Physics II Advanced Physics I Student Training Program, KISTI Young Jin Kim (Ph.D.), Hanyang University Ph.D. thesis review Taekho You, POSTECH Taekho You, POSTECH	Spring 2022 Spring 2022 Fall 2021 Fall 2021 Spring 2021 Spring 2021 Fall 2020 Spring 2020 Fall 2012 Spring 2012 Fall 2011 Spring 2011 2018 – 2019 2020 Youngjai Park, Hanyang University 2020 2020

GRANT, AWARDS, AND FELLOWSHIPS

Grants

- PI, National Research Foundation of Korea (Mid-Career Researcher Program), A study on the hidden bias of artificial intelligence and big data from a complex system analysis, 09/2020 – 02/2022
- PI, National Research Foundation of Korea (Strategic Project on the Industrial Mathematics), Study on the Knowledge Ecosystem of 4th Industrial Revolution using Big Data, 09/2017 – 08/2020

Awards

- Outstanding Researcher Award (Best Paper), Korea Institute of Science and Technology Information (Daejeon, South Korea), 2019
- Outstanding Young Researcher Award, Korea Institute of Science and Technology Information (Daejeon, South Korea), 2018
- Young Investigator Training Award, Challenges in Data Science (Matera, Italy), 2016
- Best project award (1st prize), The 5th KIAS CAC Summer School on Parallel Computing (Seoul, South Korea), 2014
- Bronze award, The 5th BK21 Young Physicists Workshop (Daejeon, South Korea), 2012

Scholarship

- National Graduate Science & Technology Scholarship, 02/2010–12/2015
- National Undergraduate Science & Technology Scholarship, 03/2005–12/2009

RESEARCH INTERETS

Data Science, Network Science, Artificial Intelligence, Machine Learning, Modeling Human Behavior, Computational Social Science, Econophysics, Cultural Science, Science of Science, Scientometrics

PUBLICATIONS

Articles

- **Jinhyuk Yun**, Generalization of bibliographic coupling and co-citation using the node split network, *Journal of Informetrics*, 16(2), 101291 (2022).
- **Jinhyuk Yun**, S. Ahn, and J.Y. Lee, Return to basics: Clustering of scientific literature using structural information, *Journal of Informetrics* 14(4), 101099 (2020).
- **Jinhyuk Yun**, S.H. Lee, and H. Jeong, Early onset of structural inequality in the formation of collaborative knowledge in all Wikimedia projects, *Nature Human Behaviour* 3, 155-163 (2019) [Featured as the cover article]
- Jisung Yoon, **Jinhyuk Yun**, Woo-Sung Jung, Build Up of a Subject Classification System from Collective Intelligence, *New Phys.: Sae Mulli* 68, 647–654 (2018)
- **Jinhyuk Yun**, S.H. Lee, and H. Jeong, Intellectual interchanges in the history of massive online open-editing encyclopedia, Wikipedia, *Phys. Rev. E* 93, 012307 (2016)
- **Jinhyuk Yun**, P.-J. Kim, and H. Jeong, Anatomy of scientific evolution, *PLoS ONE* 10(2): e0117388 (2015)

Books and reports

- **Jinhyuk Yun** and Young Jin Kim, Future of the open innovation on the GitHub, KISTI Data Insight No.3 (2018)
- Jinseo Park, **Jinhyuk Yun**, and June Young Lee, Comparative study of the predatory journals by country and field, KISTI Data Insight No.3 (2019)

SELECTED TALKS

Invited conference talks and lectures

- AI, Data and Physics (Pohang, South Korea) 11/8/2019
- AI+X Forum: AI+Applied Science (Daejeon, South Korea) 6/21/2019
- AI Friends Forum (Daejeon, South Korea) 6/19/2019
- Econophysics Workshop (Gwangju, South Korea) 11/16/2018
- WikiConference Seoul (Seoul, South Korea) 10/6/2018
- The 5th International Workshop on Physics of Social Complexity (Pohang, South Korea) 2/11/2017

Invited colloquia and seminars

- School of Informatics, Computing & Engineering, Indiana University Bloomington (Bloomington, IN, United States) 5/8/2019
- Center for Complex Networks and Systems Research (CNetS), Indiana University Bloomington (Bloomington, IN, United States) 5/7/2019
- Northwestern Institute on Complex Systems (NICO), Northwestern University (Evanston, IL, United States) 5/3/2019
- Department of Physics Education, Chosun University (Gwangju, South Korea) 4/3/2019
- Department of Electrical Engineering, Postech (Pohang, South Korea) 5/4/2018
- Center of Bio and Basic Science R&D Coordination, KISTEP (Seoul, South Korea) 3/19/2018
- Department of Physics, University of Seoul (Seoul, South Korea) 2/20/2018
- Statistical Physics Lab, Department of Physics, Inha University (Incheon, South Korea) 12/01/2017

SERVICE

Academic Reviewer

- PC member: Conference on Complex Systems 2019
- Journals: Nature Human Behaviour; Scientific Reports; The European Physical Journal B (EPJB); Journal of the Korean Physical Society (JKPS); New Physics: Sae Mulli.
- Conferences: The 9th International AAAI Conference on Web And Social Media (ICWSM-15); The 10th International AAAI Conference on Web And Social Media (ICWSM-15).

RESEARCH TECHNIQUES

Languages: C, C++, Python, CUDA, MATLAB, *etc.*

Machine learning: Keras, Tensorflow, Scikit-learn, Gensim, *etc.*

Data visualization: Gephi, Cytoscape, Matplotlib, Gnuplot, *etc.*

Analysis tools: Network X, Pandas, Dask, OpenMP, numpy, scipy, *etc.*

System operation: Served as a system administrator for 8 years

1) 50 nodes network cluster (Hadoop, Spark, MPI, SGE, *etc.*)

2) 192 cores workstation

3) 128GB/256GB large-memory workstations

General: Agent-based modeling, Monte Carlo simulation, Statistical methods, Information theory, Game theory.

Human languages: Korean (Native), English (Advanced), French (Intermediate), Japanese (Basic)

Research highlights

- Early onset of structural inequality in the formation of collaborative knowledge in all Wikimedia projects
 - Nature Human Behaviour Editorial: Inequalities in crowdsourced knowledge
 - Behavioural and Social Sciences at Nature Research: How I met my collaborators
 - The Korea Bizwire: Study Shows a Monopolizing Few Can Control Collective Intelligence
 - NRC Handelsblad: Op Wikimedia is niet iedereen gelijk (in Dutch)
 - 한겨레: 집단지성의 성채 위키백과, 지식정보의 편향 넘을 수 있을까 (in Korean)
 - 과학동아: 숙제할 때 찾는 위키백과 서로 못 믿어서 내용이 정확해졌다? (in Korean)
 - 중앙일보: 인터넷, 정보 평등 세상 같지만, 실상은 소수가 여론 쉽게 독점 (in Korean)
 - 중앙일보: 인터넷 여론, 소수가 쉽게 독점 (in Korean)
 - 경향신문: 온라인 집단지성, 다수 아닌 소수가 독점 (in Korean)
 - 연합뉴스: 정보 틀어쥔 소수가 가짜뉴스를 집단지성으로 눈속임한다 (in Korean)
 - 동아사이언스: 인터넷 공간 알고 보니 소수가 독점한 세상 (in Korean)
 - 조선비즈: 인터넷서 집단지성 축적될수록 여론조작 쉬워져 (in Korean)
 - 디지털타임스: 가짜뉴스는 왜 증폭될까...소수에 의한 독점 현상 규명 (in Korean)
 - 금강일보: [사이언스톡톡] 왜 가짜뉴스가 판칠까 (in Korean)
 - 아시아경제: 인터넷 집단지성, 빅데이터로 보니 소수 독점 우려 (in Korean)
 - 서울경제: 집단지성 형성과정의 비밀, 빅데이터로 풀어내다 (in Korean)
 - 한국경제: 정보 틀어쥔 소수가 가짜뉴스를 집단지성으로 눈속임한다 (in Korean)
 - 파이낸셜뉴스: 가짜뉴스+여론조작 빅 마우스 찾아냈다 (in Korean)
 - 헬로디디: 집단지성 형성 비밀?...빅데이터로 풀다 (in Korean)
 - 내외뉴스통신: KISTI, 빅데이터로 집단지성 형성과정의 비밀 풀어 (in Korean)
 - e경제뉴스: 인터넷여론...집단지성인가 바보들의 행진인가 (in Korean)
 - 뉴스웍스: 온라인 여론 소수가 쉽게 독점한다 (in Korean)
 - UPI뉴스: 정보 가진 소수가 여론 독점하고 왜곡 (in Korean)
 - 이웃집과학자: 위키백과 집단지성보다 소수독점 경향 ↑ (in Korean)
 - IT NEWS: 정보 가진 소수가 여론 독점하고 왜곡 (in Korean)
- Intellectual interchanges in the history of the massive online open-editing encyclopedia, Wikipedia
 - APS Physics Focus: Wikipedia Articles Separate into Four Categories
 - The Washington Post: Wikipedia's social structures resemble a bureaucratic corporation, studies say
 - The Speaker: Wikipedia Vulnerabilities Explored In New Research
 - Asian Scientist: What The Editing History Of Wikipedia Reveals

- Gizmodo: Wikipedia Is Basically a Corporate Bureaucracy, According to a New Study
- Science Alert: Wikipedia is basically just another giant bureaucracy, study finds
- Fudzilla: Wikipedia has become 20th century bureaucracy
- Weekendavisen: Leksikalt kartel (in Danish)
- Die Tageszeitung: Der aussterbende mnnliche Schwarm (in German)
- Der Standard.: Wikipedia: Es droht das Ende der Schwarmintelligenz (in German)
- Actualite Houssenia Writing: Wikipedia, juste une norme bureaucratie ? (in French)
- Boa Informacao: Como a Wikipdia se tornou uma comunidade mais fechada, e como resolver isto (in Portuguese)
- ギズモドジャパン (Gizmodo Japan): ウィキペディアは少のスパエディタが支配する官僚社 (in Japanese)
- SG: Szomor jv vrhat a Wikipdira (in Hungarian)
- Hankyoreh ScienceOn (한겨레 사이언스온): 위키백과 15년 문서 편집의 빅데이터 분석해보니... (in Korean)
- Physics and High Technology (물리학과 첨단기술): 위키백과의 장기간 편집 기록 분석을 통한 위키백과 문서의 분류와 집단지성의 형성과정 (in Korean)
- Anatomy of Scientific Evolution
 - Physics Today: The Dayside : The psychohistory of scientific evolution