Yun, Jinhyuk

Senior Research Scientist (Daita Scientist)
Future Technology Analysis Center
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Personal Information

Place and Date of Birth: Seoul, Republic of Korea, December 21,
Nationality: Republic of Korea
Language: Korean (native language), English (fluent in writing and speaking),
French (Intermediate), Japanese (Intermediate)

Professional Career

Data Scientist, Naver Corporation, Aug. 2016 – Dec. 2016.
Senior Research Scientist, KISTI, Dec. 2016 – Ongoing.

Education

Integrated Master's & Ph.D. Program in Physics, KAIST, Feb. 2010 – Aug. 2016

> *Proposal dissertation:* Theoretical study on a Spreading in Human Society.
> 사회에서의 전파현상에 관한 특성 연구 (Korean Title).
>
> *Ph. D. Supervisor:* Hawoong Jeong (http://stat.kaist.ac.kr/~hjeong/).
> Committee: Hawoong Jeong (chair), Soo Yong Kim, Juyong Park, Myung Joon Han, and Sang Hoon Lee.
> With government-sponsored scholarships.
> Date of dissertation defense evaluation: 2016. 05. 24. (passed)

Undergraduate Program in Physics, KAIST, Mar. 2005 – Jan. 2010

> Full government-sponsored scholarships.

Undergraduate Exchange Student Program, INSA Lyon, Aug. 2008 – Jul. 2009

> Génie Mécanique Conception (Mechanical Engineering)
> Government-sponsored scholarships.

Research Interests

Computational Social Science, Cultural Science, Network Science, Data Science, ScientometricsEconomic Systems, Econo-physics, Complex network, etc.

Publications

- **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 (2019).
- 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).
- **Jinhyuk Yun**, S. Ahn, and J.Y. Lee, *On the Heterogeneous Distributions in Paper Citations* (submitted).

In the Media

Jinhyuk Yun, P.-J Kim, and H. Jeong, *Anatomy of scientific evolution*, PLoS ONE 10(2): e0117388 (2015).

- Physics Today: "Dayside: The psychohistory of scientific evolution"

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).

- 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 männliche Schwarm" (in German)
- Der Standard.: "Wikipedia: Es droht das Ende der Schwarmintelligenz" (in German)
- Actualité Houssenia Writing: "Wikipedia, juste une énorme bureaucratie ?" (in French)
- Boa Informacão: "Como a Wikipédia se tornou uma comunidade mais fechada, e como resolver isto" (in Portuguese)
- ギズモード・ジャパン (Gizmodo Japan): "ウィキペディアは少数のスーパーエディターが支配する官僚社会" (in Japanese)
- SG: "Szomorú jövő várhat a Wikipédiára" (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)

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 (2019).
- 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: "'가짜뉴스'는 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 행진'인가" (in Korean)
- 뉴스웍스: "온라인 여론 소수가 쉽게 독점한다" (in Korean)
- UPI뉴스: "정보 가진 소수가 여론 독점하고 왜곡" (in Korean)
- 이웃집과학자: "위키백과 '집단지성'보다 '소수독점' 경향↑" (in Korean)
- The Korea Bizwire: "Study Shows a Monopolizing Few Can Control Collective Intelligence"

Awards
- Challenges in Data Science (2016): Young Investigator Training Award (in Italy)
- The 5th KIAS CAC Summer School on Parallel Computing (2014): Best project award (1st position)
- The 5th BK21 Yung Physicists Workshop (2012): Presentation award (Bronze).

Presentation (selected)
International
- *Anatomy of Scientific Evolution,* The Student Conference on Complexity Science (University Of Sussex, Brighton, UK, Aug. 19-22 2014; Oral).
- *Analysis of Science and Technology Trend Based on Word Usage in Digitized Books*, APS March Meeting 2013 (Baltimore Convention Center, Baltimore, Maryland, USA, Mar. 18-22, 2013;

Oral).
- *Early adhesion of structural inequality in the formation of collaborative knowledge, Wikipedia*, Data Science Challenges 2016 (Casa Cava, Matera, Italy Jul. 8-11, 2016; Oral).
- *Quantitative Analysis on the Editing History of Massive Online Open-editing Encyclopedia, Wikipedia*, STATPHYS 26 (Centre de Congres, Lyon, France Jul. 18-22, 2016; Oral).
- *Early adhesion of structural inequality in the formation of collaborative knowledge, Wikipedia*, The 5th International Workshop on Physics of Social Complexity (PoSCo), (POSTECH, Pohang, Korea, Nov. 1-2, 2017; Invited Oral).
- *Heterogeneous Distributions in Academic Citations Patterns,* BIFI2018, (PATIO DE LA INFANTA, Zaragoza, Spain, Feb. 6-8, 2018; Oral).
- *Journal- and Time-normalization of Fat-tailed Citations Distributions*, CCS 2018 (Vellidio Convention Center, Thessaloniki, Greece, Sep. 23-28, 2018; Oral).

- *Role of Experts in the Emergence of New Concepts*, STATPHYS 25 (Seoul National University, Seoul, Korea, Jul. 22-26, 2013; Poster).
- *Quantifying Wikipedia: Massive History of Online Open-Editing Encyclopedia, NetSci2016* (The K hotel, Seoul, Korea, May. 30-June. 3, 2016; Poster)
- *Journal- and Time-normalization of the Fat-tailed Citations Distributions*, NSPCS 2018 (KIAS, Seoul, Korea, Jul. 9-12, 2018; Poster).
- *Journal- and Time- normalization of Fat-tailed Citations*, STI 2018 (Stadsgehoorzaal, Leiden, Netherlands, Sep. 12-14, 2018; Poster).

Domestic
- *Science trend analysis via the statistics of the words In printed publications*, 2011 KPS Fall Meeting (BEXCO, Busan, Korea, Oct. 19-20, 2011; Oral)
- *Statistical Approach on Google N-gram in Search of Science and Technology Trend*, 2012 KPS Fall Meeting (Phoenix Resort, Pyeongchang, Gangwon-do, Oct. 24-26, 2012).
- *Understanding emergence of new scientific concepts in human society by the words in printed publications*, 17th Statistical Physics Workshop (Chungmu Marina Resort, Tongyeong, Korea, Oct. 31-Nov. 3, 2013)
- *Random and Ramdomness*, 2014 Workshop on Special Topics in Statistical Physics and Complex Systems (Marine Bio Research Center of Chosun University, Wando-gun, Jeollanam-do, Korea, Oct.10-11, 2014; Oral)
- *Quantitative analysis of intellectual interchanges in the history of massive online open-editing encyclopedia, Wikipedia*, 2015 KPS Spring Meeting (DCC, Daejeon, Korea, Apr. 22-24 2015; Oral).
- *Quantitative analysis of intellectual interchanges in the history of massive online open-editing encyclopedia, Wikipedia*, The 18th statistical physics workshop (Chonbuk National University, Jeonju, Korea, August 20-22, 2015; Oral).
- *Editing dynamics of Wikipedia based on real time series,* 2015 KPS Fall Meeting (HICO, Gyeongju, Gyeongsangbuk-do, 대한민국, Oct. 21-23 2015; Oral).
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Research Skill

Programing and data analysis: C, C++, Python, CUDA, MATLAB, etc.

Agent-based modeling and Monte Carlo simulation.

Statistical methods, Information theory, Game theory.

Analyzing tool of Complex Networks: Network X, Gephi, Cytoscape, etc.

UNIX/LINUX/Mac OS system: Installed and served as administrator of i) 400 cores network cluster, ii) 192 cores workstation, and iii) two 256GB large-memory workstations.

Automated web crawling

Short-term School

2015
- 12th KIAS-APCTP Winter School on Statistical Physics (Topic: Persistence and First Passage Properties in Nonequilibrium).
- FOSS4G Workshop (Topic: Research with Geographical Information).

2014
- 11th KIAS-APCTP Winter School on Statistical Physics (Topic: Physics of Information and Information Theory).
- The 5th KIAS CAC Summer School on Parallel Computing (Topic: Multiprocessor Parallel Computing and CUDA; *Project winner*).

2013
- Econo-Socio Physics Society Summer School (Topic: Multi Fractal and Game Theory).
- 10th KIAS-APCTP Winter School on Statistical Physics (Topic: Statistical Physics for Non-Equilibrium Systems).
- Game Theory and Machine Learning School 4th KIAS CAC Summer School on Parallel Computing (Topic: Multiprocessor Parallel Computing and CUDA).
- Econophysics Colloquium 2013 & Asia Pacific Econophysics Conference 2013 (Topic: Quantifying Economic Phenomenon)

2012
- 9th KIAS-APCTP Winter School on Statistical Physics (Topic: Computational Methods in Statistical Physics).

2011
- 8th KIAS-APCTP Winter School on Statistical Physics (Topic: Nonequilibrium statistical physics).
- MIT Social Network Analysis Workshop (Topic: Social Network Analysis).

Referee

- SCI(E): The European Physical Journal B (EPJ B); Journal of the Korean Physical Society (JKPS).

- SCOPUS: 새물리 (New Physics: Sae Mulli).

- Conference: THE 9TH INTERNATIONAL AAAI CONFERENCE ON WEB AND SOCIAL MEDIA (ICWSM-15); THE 10TH INTERNATIONAL AAAI CONFERENCE ON WEB AND SOCIAL MEDIA (ICWSM-16).