

Hyunuk Kim

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ACADEMIC POSITIONS

Boston University , Boston, MA, USA Postdoctoral Associate, Questrom School of Business (affiliated with Institute for Health System Innovation & Policy) Advisor: Prof. Dylan Walker	Aug 2019 – Current
Northwestern University , Evanston, IL, USA Visiting Predoctoral Fellow, Kellogg School of Management (affiliated with Northwestern Institute on Complex Systems) Advisor: Prof. Hyejin Youn	Jan 2018 – Jul 2019
Santa Fe Institute , Santa Fe, NM, USA Visiting Student Researcher	Feb 2016 – Mar 2016

EDUCATION

Pohang University of Science and Technology (POSTECH) , Pohang, Republic of Korea Ph.D. in Industrial and Management Engineering Advisor: Prof. Woo-Sung Jung Dissertation: Collective patterns and dynamics of knowledge creation	Sep 2016 – Aug 2019
M.S. in Industrial and Management Engineering	Sep 2014 – Aug 2016
B.S. in Mathematics (minor in Industrial and Management Engineering)	Mar 2007 – Feb 2013

RESEARCH INTERESTS

Computational Social Science (collective learning, collaboration)
Network Science (growth model, community detection, homophily)
Innovation (foresight, technological change, evolutionary dynamics)
Misinformation (social media, machine learning, healthcare, intervention)

PUBLICATIONS

Kim, Hyunuk, and Dylan Walker, "Leveraging volunteer fact checking to identify misinformation about COVID-19 in social media." *The Harvard Kennedy School (HKS) Misinformation Review* 1, no. 3 (2020).

Kim, Hyunuk, Sang-Jin Ahn, and Woo-Sung Jung. "Horizon scanning in policy research database with a probabilistic topic model." *Technological Forecasting and Social Change* 146 (2019): 588-594.

Kim, Hyunuk, Inho Hong, and Woo-Sung Jung. "Measuring national capability over big science's multidisciplinary: A case study of nuclear fusion research." *PLoS One* 14, no. 2 (2019).

Kim, Hyunuk, and Woo-Sung Jung. "Does pitch type-zone uncertainty matter to pitcher's performance?." *New Physics: Sae Mulli* 68, no. 6 (2018): 624-629.

Kim, Hyunuk, Taekho You, Sang-Jin Ahn, and Woo-Sung Jung. "Embracing networks of national policy research in future foresight." *International Journal of Knowledge-Based Development* 7, no. 2 (2016): 107-124.

Kim, Hyunuk, and Woo-Sung Jung. "Bibliometric analysis of collaboration network and the role of research station in Antarctic science." *Industrial Engineering & Management Systems* 15, no. 1 (2016): 92-98.

Kim, Hyunuk, Sang-Jin Ahn, and Woo-Sung Jung. "A study on technology forecasting based on co-occurrence network of keyword in multidisciplinary journals." *Journal of the Korean Operations Research and Management Science Society* 40, no. 4 (2015): 49-63. (in Korean)

WORKING PAPERS

Kim, Hyunuk, Young-Ho Eom, Daniel Kim, Hawoong Jeong, Woo-Sung Jung, and Hyejin Youn, "How exploitation and exploration shape the knowledge space"

Kim, Hyunuk, Marcus J. Hamilton, Woo-Sung Jung, and Hyejin Youn, "The global structure of myths and folktales."

Kim, Hyunuk, and Dylan Walker, "Personal traits publicly encoded in social media texts."

Kim, Hyunuk, and Dylan Walker, "Homophily and exposure to misinformation."

TALKS

Data science meets ancient narratives <i>IBS/POSTECH joint seminar on data science and complexity in social systems</i> , Republic of Korea	Jul 15, 2020
Growing network model for knowledge space: micro to macro views <i>Dynamics Days 2019</i> , Evanston, USA	Jan 04, 2019
Reconstructing technology space from a secret recipe of high impact innovation <i>4th Annual International Conference on Computational Social Science</i> , Evanston, USA	Jul 15, 2018
The structure of mythologies explains early human migrations out of Africa <i>4th Annual International Conference on Computational Social Science</i> , Evanston, USA	Jul 13, 2018
Building technology space from microscopic dynamics to macro structure <i>Conference on Complex Systems 2017</i> , Cancun, Mexico	Sep 20, 2017
The structure of mythologies explains the human expansion out of Africa <i>Conference on Complex Systems 2017</i> , Cancun, Mexico	Sep 20, 2017
Measuring the impact of Tesla's open patents on electric vehicle market <i>Korean Institute of Industrial Engineers Fall Conference 2016</i> , Seoul, Republic of Korea	Nov 19, 2016
Fusion of nations, fusion of disciplines: network evolution in nuclear fusion research <i>Conference on Complex Systems 2016</i> , Amsterdam, Netherlands	Sep 20, 2016
Predicting future issues with keyword network of national policy research <i>SOItnC & Knowledge Cities World Summit 2015</i> , Daegu, Republic of Korea	Jun 16, 2015

GRANTS & HONORS

GRANTS

- Global PhD Fellow, National Research Foundation, Republic of Korea
("Evolutionary dynamics of technological innovation." ca. \$50,000) Mar 2017 – Aug 2019
- Nonprofit Startup Incubator Program, Seoul NPO Center, Republic of Korea
("Prisming: Blockchain for in-kind donation." ca. \$4,200) Jun 2018 – Dec 2018
- Creative KISTEP Fellow, KISTEP, Republic of Korea
("Analyzing S&T knowledge structure by community detection in multislice network." ca. \$1,600) Apr 2017 – Aug 2017

HONORS

- First Prize, Department Research Contest, POSTECH Jan 2017
- Excellence Award, The 12th Master's Student Research Contest,
KIIE Fall Conference 2016 (KIIE: Korean Institute of Industrial Engineers) Nov 2016
- Encouraging Paper, SOItmC & Knowledge Cities World Summit 2015 Jun 2015
- Asan Young Fellow, Asan Institute for Policy Studies, Republic of Korea Apr 2013 – Dec 2013

TEACHING & ADVISING

COURSE DEVELOPMENT

- Python and Neural Networks, Boston University, USA Fall 2019, Winter 2020
(with Prof. Dylan Walker)

TEACHING ASSISTANT

- Python and Neural Networks, Boston University, USA Winter 2020
- Social Dynamics and Network Analysis – Genius Bar Spring 2018, Winter 2019
Northwestern University, USA

ADVISING

- Jungmin Kwon, Undergraduate in Physics, POSTECH 2016
- Joo Hong Min, Undergraduate in Physics, POSTECH 2016

REFERENCES

Dr. Woo-Sung Jung, *Associate Professor*
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