Hyunuk Kim

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ACADEMIC POSITIONS

Boston University, Boston, MA, USA
Postdoctoral Associate, Questrom School of Business   Aug 2019 – Current
(affiliated with Institute for Health System Innovation & Policy)
   Advisor: Prof. Dylan Walker

Northwestern University, Evanston, IL, USA
Visiting Predoctoral Fellow, Kellogg School of Management   Jan 2018 – Jul 2019
(affiliated with Northwestern Institute on Complex Systems)
   Advisor: Prof. Hyejin Youn

Santa Fe Institute, Santa Fe, NM, USA
Visiting Student Researcher   Feb 2016 – Mar 2016

EDUCATION

Pohang University of Science and Technology, Pohang, Republic of Korea
Ph.D. in Industrial and Management Engineering   Sep 2016 – Aug 2019
   Advisor: Prof. Woo-Sung Jung
   Dissertation: Collective patterns and dynamics of knowledge creation
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)
Innovation (foresight, technological change, evolutionary dynamics)
Misinformation (social media, healthcare, intervention)

PUBLICATIONS

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

Hyunuk Kim, Inho Hong, and Woo-Sung Jung, "Measuring national capability over big science's multidisciplinarity: A case study of nuclear fusion research," *PLoS One*, vol. 14, no. 2, e0211963, 2019.

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

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

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

Hyunuk Kim, 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*, vol. 40, no. 4, pp. 49–63, 2015.

WORKING PAPERS

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

Hyunuk Kim, Young-Ho Eom, Daniel Kim, Hawoong Jeong, Woo-Sung Jung, and Hyejin Youn, "Building knowledge space from microscopic behaviors to macroscopic structure"

Hyunuk Kim and Dylan Walker, "Identifying and correcting misinformation online on antibiotic use and antimicrobial resistance"

TALKS

Growing network model for knowledge space: micro to macro views   Jan 04, 2019
Dynamics Days 2019, Evanston, USA

Reconstructing technology space from a secret recipe of high impact innovation   Jul 15, 2018
4th Annual International Conference on Computational Social Science, Evanston, USA

The structure of mythologies explains early human migrations out of Africa   Jul 13, 2018
4th Annual International Conference on Computational Social Science, Evanston, USA

Building technology space from microscopic dynamics to macro structure   Sep 20, 2017
Conference on Complex Systems 2017, Cancun, Mexico

The structure of mythologies explains the human expansion out of Africa   Sep 20, 2017
Conference on Complex Systems 2017, Cancun, Mexico

Measuring the impact of Tesla's open patents on electric vehicle market   Nov 19, 2016
Korean Institute of Industrial Engineers Fall Conference 2016, Seoul, Republic of Korea

Fusion of nations, fusion of disciplines: network evolution in nuclear fusion research   Sep 20, 2016
Conference on Complex Systems 2016, Amsterdam, Netherlands

Predicting future issues with keyword network of national policy research   Jun 16, 2015
SOItmC & Knowledge Cities World Summit 2015, Daegu, Republic of Korea

HONORS & AWARDS

HONORS
- Global PhD Fellow, Ministry of Education, Republic of Korea — Mar 2017 – Aug 2019
- Creative KISTEP Fellow, KISTEP, Republic of Korea — Apr 2017 – Aug 2017
- Asan Young Fellow, Asan Institute for Policy Studies, Republic of Korea — Apr 2013 – Dec 2013

AWARDS
- Nonprofit Startup Incubator Program, Seoul NPO Center, Republic of Korea (Blockchain for in-kind donation) — Jun 2018 – Dec 2018
- 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

TEACHING & ADVISING

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

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

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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