

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)

Aug 2019 – Current

Advisor: Prof. Dylan Walker

Northwestern University, Evanston, IL, USA

Visiting Predoctoral Fellow, Kellogg School of Management
(affiliated with Northwestern Institute on Complex Systems)

Jan 2018 – Jul 2019

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 (fake news, intervention, randomized controlled trials)

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 multidisciplinary: 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,” *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
Dynamics Days 2019, Evanston, USA

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

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

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

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

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

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

Predicting future issues with keyword network of national policy research
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
(KISTEP: Korea Institute of S&T Evaluation and Planning)
- 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 Jun 2018 – Dec 2018
(Blockchain for in-kind donation)
- First Prize, Department Research Contest, POSTECH Jan 2017
- Excellence Award, The 12th Master's Student Research Contest, Nov 2016
KIIE Fall Conference 2016 (KIIE: Korean Institute of Industrial Engineers)
- Encouraging Paper, SOItmC & Knowledge Cities World Summit 2015 Jun 2015

TEACHING & ADVISING

COURSE DEVELOPMENT

Python and Neural Networks, Boston University, USA Fall 2019, Winter 2020

TEACHING ASSISTANT

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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Pohang University of Science and Technology, Pohang 37673, Republic of Korea

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Dr. Hyejin Youn, *Assistant Professor*

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Dr. Dylan Walker, *Assistant Professor*

Information Systems Department at Questrom School of Business

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