Hyunuk Kim

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(Updated on September 10, 2021)

ACADEMIC POSITIONS

Boston University, Boston, MA, USA

Assistant Professor of Administrative Sciences, Metropolitan College   Jul 2021 – Present
(Faculty in the Applied Business Analytics program)

Postdoctoral Associate, Information Systems, Questrom School of Business   Aug 2019 – Jun 2021
(Affiliated with the Institute for Health System Innovation & Policy)
   Advisor: Dylan Walker

Northwestern University, Evanston, IL, USA

Visiting Predoctoral Fellow, Management & Organizations, Kellogg School of Management   Jan 2018 – Jul 2019
(Affiliated with the Northwestern Institute on Complex Systems)
   Advisor: Hyejin Youn

EDUCATION

Pohang University of Science and Technology (POSTECH), Pohang, Republic of Korea

Ph.D. in Industrial and Management Engineering   Sep 2016 – Aug 2019
   Advisor: 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, 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." *Harvard Kennedy School 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 multidisciplinarity: 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, Yuri E. Berezkin, Woo-Sung Jung, and Hyejin Youn. "Deeply nested structure of mythological traditions worldwide."

Kim, Hyunuk, and Dylan Walker. "A method for mining personal traits in social media."

Yoon, Jisung, Woo-Sung Jung, and Hyunuk Kim. "COVID-19 confines social gathering to familiar, less crowded, and neighboring urban areas." (Submitted, https://arxiv.org/abs/2109.00902)

Kim, Munjung, Jisung Yoon, Hyunuk Kim, and Woo-Sung Jung. "Topic diversity of policy research institutes."

TALKS

Assessing the hierarchy of human urban dynamics and the effect of the external shock Networks 2021	Jul 5, 2021
Data-driven representations of scientific specialization and urban resilience *Research Seminar,* Department of Geography, University of Hong Kong, Hong Kong	Mar 18, 2021
Data science meets ancient narratives *IBS/POSTECH Joint Seminar on Data Science and Complexity in Social Systems,* Republic of Korea	Jul 15, 2020
Growing network model for knowledge space: micro to macro views *Dynamics Days 2019,* Evanston, USA	Jan 04, 2019
Reconstructing technology space from a secret recipe of high impact innovation *4th Annual International Conference on Computational Social Science,* Evanston, USA	Jul 15, 2018
The structure of mythologies explains early human migrations out of Africa *4th Annual International Conference on Computational Social Science,* Evanston, USA	Jul 13, 2018

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

GRANTS & HONORS

GRANTS

Global Ph.D. Fellow, National Research Foundation, Republic of Korea   Mar 2017 – Aug 2019
  ("Evolutionary dynamics of technological innovation." ca. $60,000)
Nonprofit Startup Incubator Program, Seoul NPO Center, Republic of Korea   Jun 2018 – Dec 2018
  ("Prisming: Blockchain for in-kind donation." ca. $4,000)
Creative KISTEP Fellow, KISTEP, Republic of Korea   Apr 2017 – Aug 2017
  ("Analyzing S&T knowledge structure by community detection in multislice network." ca. $1,500)

HONORS

First Prize, Ph.D. Student Research Competition, Department of IME, POSTECH   Jan 2017
Excellence Award, Master's Student Research Competition, KIIE Fall Conference 2016   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

TEACHING

Business Analytics Foundations (AD571)   Fall 2021
Enterprise Risk Analytics (AD616)   Fall 2021

COURSE DEVELOPMENT

Python and Neural Networks, Boston University, USA   Fall 2019, Spring 2020
  (with Dylan Walker, please visit https://github.com/dylanwalker/BA865)

ADVISING

Jisung Yoon, Ph.D. Candidate in Industrial and Management Engineering, POSTECH   2020 – 2021
Munjung Kim, Undergraduate in Physics, POSTECH   2021
Jungmin Kwon, Undergraduate in Physics, POSTECH   2016
Joo Hong Min, Undergraduate in Physics, POSTECH   2016

REFERENCES

Dr. Woo-Sung Jung, *Associate Professor*
Department of Industrial and Management Engineering / Physics
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Dr. Hyejin Youn, *Associate Professor*
Management & Organizations Department, Kellogg School of Management
Northwestern University, Evanston, IL 60208, USA
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Dr. Dylan Walker, *Associate Professor*
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