

Hyunuk Kim

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<http://hkim07.github.io>

EDUCATION

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

- Ph.D. Candidate in Industrial and Management Engineering Sep 2016 – Present
 - Advisor: Prof. Woo-Sung Jung
 - Research Interests: Computational Social Science, Network Science, Innovation
- 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

EXPERIENCES

Northwestern Institute on Complex Systems, Northwestern University, Evanston, IL, USA
(affiliated with Kellogg School of Management)

- Visiting Pre-Doctoral Fellow Jan 2018 – Present
 - Advisor: Prof. Hyejin Youn

Santa Fe Institute, Santa Fe, NM, USA

- Visiting Student Researcher Feb 2016 – Mar 2016
 - Finding patterns in a high-dimensional sparse data of world mythology and folklore

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*, in press.
- 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 and Sang-Jin Ahn, 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

- [1] Hyunuk Kim, Inho Hong, and Woo-Sung Jung, “Measuring national capacity over big science’s multidisciplinary: A case of nuclear fusion research”, submitted to *PLoS One*
- [2] Hyunuk Kim, Marcus J. Hamilton, Woo-Sung Jung, and Hyejin Youn, “The deep structure of global mythologies”
- [3] Hyunuk Kim, Daniel Kim, Young-Ho Eom, Hawoong Jeong, Woo-Sung Jung, and Hyejin Youn, “Building technology space from microscopic behaviors to macro structure”

HONORS & AWARDS

HONORS

- 2017 Global PhD Fellow, Ministry of Education, Republic of Korea Mar 2017 – Feb 2019
 - Fellowship program for accepted research proposals
 - Project: “Evolutionary dynamics of technological innovation”
- Creative KISTEP Fellow, KISTEP, Republic of Korea Apr 2017 – Aug 2017
 - (KISTEP: Korea Institute of S&T Evaluation and Planning)
 - Project: “Analyzing S&T knowledge structure by community detection in multislice network”
- Asan Young Fellow, Asan Institute for Policy Studies, Republic of Korea Apr 2013 – Dec 2013
 - Education program for Philosophy, Politics, and Economics;
 - Internship at American Association for the Advancement of Science (AAAS), USA

AWARDS

- Nonprofit Startup Incubator Program, Seoul NPO Center Jun 2018 – Dec 2018
PRISMING: Blockchain for in-kind donation
- First Prize, Graduate Research Contest, Industrial and Management Engineering, POSTECH 2017
- Excellence Award, The 12th Master's Student Research Contest, KIIE Fall Conference 2016 2016
(KIIE: Korean Institute of Industrial Engineers)
- Encouraging Paper Award, SOItmC & Knowledge Cities World Summit 2015 2015

SELECTED PRESENTATIONS

- Building technology space from microscopic dynamics to macro structure
4th Annual International Conference on Computational Social Science, Evanston, USA 15 Jul 2018
Conference on Complex Systems 2017, Cancun, Mexico 20 Sep 2017
Growth Lab Seminar, Harvard Kennedy School, Harvard University, MA, USA 21 Jul 2017
- The structure of mythologies explains the human expansion out of Africa
4th Annual International Conference on Computational Social Science, Evanston, USA 13 Jul 2018
Conference on Complex Systems 2017, Cancun, Mexico 20 Sep 2017
- Measuring the impact of Tesla's open patents on electric vehicle market
Korean Institute of Industrial Engineers Fall Conference 2016, Seoul, Republic of Korea 19 Nov 2016
- Fusion of nations, fusion of disciplines: network evolution in nuclear fusion research
Conference on Complex Systems 2016, Amsterdam, Netherlands 20 Sep 2016
- Predicting future issues with keyword network of national policy research
SOItmC & Knowledge Cities World Summit 2015, Daegu, Republic of Korea 16 Jun 2015

RESEARCH TOOLS

- Computing Languages: R, Python, C, JavaScript
- Network Visualization Software: Gephi, Pajek, Cytoscape

REFERENCES

- Dr. Woo-Sung Jung, *Associate Professor*
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- Dr. Hyejin Youn, *Assistant Professor*
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- Dr. Marcus J. Hamilton, *Associate Professor of Data Analytics*
Department of Anthropology
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