

Keungoui KIM

School of Applied Artificial Intelligence
Handong Global University
Pohang, South Korea
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EMPLOYMENT

Handong Global University , Korea	
School of Applied Artificial Intelligence	2021.09.01 ~
Assistant Professor (Tenure-track)	
University College Dublin , Ireland	
Spatial Dynamics Lab	2020.03.16 ~ 2021.08.31
Post-doc Researcher	
University Paris-Saclay (former University Paris-Sud), France	
RITM (Réseaux Innovation Territories Monodialibation)	2019.02.18 ~ 2020.03.13
Post-doc Researcher	
Asian Research Network , Korea	
Associate Research Fellow (Part-time)	2015.04.01 ~ 2016.02.29
Science and Technology Policy Institute , Korea	
Office of Global Policy	2014.07.01 ~ 2015.03.31
Associate Research Fellow (Part-time)	
Hyundai Motors Company , Korea	
Research and Development Center	2012.07.16 ~ 2014.02.28
Engineering Researcher	

EDUCATION

Seoul National University , Seoul, Korea	2019.02.26
Technology of Management, Economics, and Policy Program	(2016.03.01)
Ph.D. in Economics	
Dissertation Title: "Research on firm-level diversification framework with respect to measurements and activities: Focused on the empirical case of pharmaceutical industry"	
Seoul National University , Seoul, Korea	2016.02.26
Technology of Management, Economics, and Policy Program	(2014.03.01)
M.Sc. in Economics	
Dissertation Title: "A Study on Technology Standardization Method using Network Analysis: Focused on Wireless Communication Technology Layer of Internet of things"	
Handong Global University , Pohang, Korea	2012
B.Sc. in Mechanical Engineering	
B.Sc. in Electric Engineering	

RESEARCH INTERESTS

- *Topics*: Science-Technology Convergence, Smart Specialization, Regional Innovation, Socio-technology System Transition, Knowledge Spillover, Public Policy (Real-estate, IT governance, Health, Crime), Digital Technologies, Entrepreneurship, Industry Network

- *Methodologies*: Econometric Analysis, Text Mining & Natural Language Processing, Machine Learning, Network Analysis, Spatial Regression, Structural Equation Modelling, Meta Frontier Analysis, Index development, Policy (program) evaluation, Computational Simulation

TEACHING INTERESTS

- Subject courses: (1) AI & Social Change, (2) Computational Social Science, (3) Socio-technical System Transition, (4) Science and Technology Policy, (5) Strategic Management of Intellectual Property Right, (6) Regional Innovation, (7) Economics of Technology Innovation, (8) Applied Econometrics, (9) Knowledge Management, (10) International Development and STI policy
- Method courses: (1) Data Science (R, SQL, Python), (2) Advanced Statistics, (3) Python, R, HTML Programming, (4) Text Mining & Natural Language Processing, (5) AI Project Management, (6) Data Visualization, (7) Computational Social Science Analytics, (8) Network analysis and Social Change

LANGUAGE

Korean (Mother-tongue)

English

Fluent in speaking, listening, writing, and working

Bahasa Indonesia

Intermediate level of speaking and listening
(10 years of living in 1995-2005).

INTERNATIONAL PUBLICATIONS (SSCI)¹

1. (in press) **Kim, K.**, Chiara, F., Kogler, D. 2024. Smart Specialisation Strategies and Regional Knowledge Spaces: How to Bridge Vision and Reality. *Regional Studies* [SSCI, JCR Q1, IF: 5.1]
2. (in press) **Kim, K.**, Shin, D., Maliphol, S., Lee, C. 2024. How does the enhanced social distancing influence the privacy concern in innovation policy aspect?: Focused on the case of COVID-19. *Science and Public Policy* [SSCI JCR Q2, IF: 2.087]
3. **Kim, K.**, Kogler, D., Maliphol, S. 2024. What are the key topics in the future interdisciplinary science?: Combination of Network Analysis and BERTopic. *Humanities and Social Sciences Communications* [SSCI, JCR Q1, IF: 3.5]. 2024/5. 11(603): 1- 15 (<https://doi.org/10.1057/s41599-024-03044-y>)
4. Hur, J., Chun, Y., Hwang, J., **Kim, K.*** 2024. The moderating role of design innovation in the relationship between technology complexity and firm performance. *Technology Analysis and Strategic Management* [SSCI, JCR Q3, IF: 2.975]. 2024/3. (<https://doi.org/10.1080/09537325.2024.2336555>)
5. Hur, J., Hwang, J., **Kim, K.*** 2024. The role of design engineers: Evidence from intra-firm knowledge and collaboration networks. *Plos One* [SCIE, JCR Q2, IF: 3.24] 2024/2. 19(2): e0298089 (<https://doi.org/10.1371/journal.pone.0298089>)
6. **Kim, K.**, Kogler, D., Zabetta, M. 2023. New Cooperation and Novel Innovations: The Role of Regional Brokerage and Collaboration Intensity. *European Planning Studies* [SSCI JCR Q1. IF: 3.777]. (<https://doi.org/10.1080/09654313.2023.2291087>)

¹ Research specifics in ORCID: <https://orcid.org/0000-0002-0839-8813> / *(Corresponding)

7. Kogler, D., Whittle, A., **Kim, K.**, Lengyel, B. 2023. Understanding Regional Branching: Knowledge Diversification via Inventor and Firm Collaboration Networks. *Economic Geography* [SSCI JCR Q1, IF:14.921] 2023/11. 99(5): 471-498 (<https://doi.org/10.1080/00130095.2023.2242551>)
8. Shin, H., **Kim, K.**, Lee, J., Kogler, D. 2023. Inventors, firms and localities: insights into the nexus that forms and alters the evolution of regional knowledge spaces. *Cambridge Journal of Regions, Economy, and Society* [SSCI Q1, IF: 6.2] 2023/11. 16 (3): 511-528 (<https://doi.org/10.1093/cjres/rsad019>)
9. Lee, C., Na, C., **Kim, K.***. 2023. The effect of watching OTT late at night on sleep. *Sleep and Biological Rhythms* [SCIE, JCR Q3, IF:1.390] 2023/05. 21: 395-407 (<https://doi.org/10.1007/s41105-023-00459-z>)
10. **Kim, K.**, Nonnis, A., Özyaygen, A., Kogler, D. 2023. Green-tech knowledge capacity/diversity and entrepreneurship in German regional economies. *International Entrepreneurship and Management Journal* [SSCI, JCR Q1, IF: 6.704] 2023/03. 19:97-120 (<https://doi.org/10.1007/s11365-022-00808-3>)
11. **Kim, K.**, Lee, J., Lee, C. 2023. Which innovation type is better for productivity efficiency? Comparison between product, process, organisational and marketing innovations using stochastic frontier and meta-frontier analysis. *Technology Analysis and Strategic Management* [SSCI, JCR Q3, IF: 2.975] 2023/01. 35(1): 59-72 (<https://doi.org/10.1080/09537325.2021.1965979>)
12. Nonnis, A., Bounfour, A., **Kim, K.** 2023. Knowledge spillovers and intangible complementarities: Empirical case of European countries. *Research Policy* [SSCI, JCR Q1, IF: 9.473] 2023/01. 52(1): 104611 (<https://doi.org/10.1016/j.respol.2022.104611>)
13. Shin, H., **Kim, K.**, Kogler, D. 2022. Scientific Collaboration, Research Funding, and Novelty in Scientific Knowledge². *Plos One* [SCIE, JCR Q2, IF: 3.24] 2022/07. 17(7) (<https://doi.org/10.1371/journal.pone.0271678>)
14. Lee, C., Shin, H., **Kim, K.**, Kogler, D. 2022. The effects of regional capacity in knowledge recombination on productivity gains. *Technological Forecasting and Social Change* [SSCI, JCR Q1, IF: 9.01] 2022/07. 180 July: 121669 (<https://doi.org/10.1016/j.techfore.2022.121669>)
15. **Kim, K.**, Kogler, D., Lee, C., Kang, T. 2022. Changes in the knowledge effect on local labor market in the midst of regime transition: Evidence from France over 1986-2015. *Applied Spatial Analysis and Policy* [SSCI, JCR Q2, IF: 1.59] 2022/05. (<https://doi.org/10.1007/s12061-022-09444-4>)
16. Kang, T., Maliphol, S., Kogler, D., **Kim, K.*** 2022. Regional knowledge capabilities, entrepreneurial activity, and productivity growth: Evidence from Italian NUTS-3 regions. *International Regional Science Review* [SSCI, JCR Q3, IF:2.477] 2022/05. 45(3): 293-320 (<https://doi.org/10.1177/01600176211034134>)
17. Lee, J., Park, K., **Kim, K.*** 2022. Transition failure strengthening regime stability in socio-technical systems: A case study of shared mobility market in South Korea. *Telematics and Informatics* [SSCI, JCR Q1, IF: 6.182] 2022/05. 70(May): 101814 (<https://doi.org/10.1016/j.tele.2022.101814>)
18. Kogler, D., Davies, R., Lee, C., **Kim, K.*** 2022. Regional Knowledge Spaces: The Interplay of Entry-Relatedness and Entry-Potential for Technological Change and Growth. *Journal of Technology Transfer* [SSCI, JCR Q2. 5.783, IF: 6.320] 2022/03. (<https://doi.org/10.1007/s10961-022-09924-2>)
19. **Kim, K.**, Lee, J., Kim, E. & Hwang, J. 2022. Related and unrelated product diversification and collaboration strategies: Comparison between the pharmaceutical and biopharmaceutical industries. *Journal of Product Innovation Management* [SSCI, JCR Q1, IF 6.987] 2022/02. (<https://doi.org/10.1111/jpim.12620>)
20. Lee, J., **Kim, K.***, Kim, J., Hwang, J. 2022. The relationship between shared mobility and regulation in South Korea: A system dynamics approach from the socio-technical transitions perspective. *Technovation* [SSCI, JCR Q1, IF: 6.606] 2022/01. 109: 102327 (<https://doi.org/10.1016/j.technovation.2021.102327>)

² Posted in LSE blog: <https://blogs.lse.ac.uk/impactofsocialsciences/2022/11/01/two-minds-better-than-one-does-research-funding-and-support-for-collaboration-lead-to-more-innovative-research/>

21. Lee, J., **Kim, K.***, Park, G., Cha, N. 2021. The role of online news and social media in preventive action in times of infodemic from a social capital perspective: The case of the COVID-19 pandemic in South Korea. *Telematics and Informatics* [SSCI, JCR Q1, IF: 6.182] 2021/11. 64 (11): 101691 (<https://doi.org/10.1016/j.tele.2021.101691>)
22. Jung, S., **Kim, K.**, Lee, C. 2021. The Nature of ICT in Technology Convergence: A Knowledge-based Network Analysis. *Plos One* [SCIE, JCR Q2, IF: 3.24] 2021/07. 16 (7): 1-20 (<https://doi.org/10.1371/journal.pone.0254424>)
23. **Kim, K.**, Jung, S., Hwang, J., Kim, E. 2021. The optimal diversification strategy in pharmaceutical industry: balance-centered or hetero-centered? *Science, Technology and Society* [SSCI, JCR Q4, IF: 1.173] 2021/05. 26 (2): 1-24 (<https://doi.org/10.1177/09717218211005616>)
24. **Kim, K.**, Bounfour, A., Nonnis, A., Özaygen, A. 2021. Measuring ICT externalities and their contribution to productivity: A bilateral trade based approach. *Telecommunications Policy* [SSCI, JCR Q2, IF: 3.036]. 2021/03. 45 (2): 102085 (<http://doi.org/10.1016/j.telpol.2020.102085>)
25. **Kim, K.**, Jung, S. & Hwang, J. 2019. Technology Convergence Capability and Firm Innovation in the Manufacturing Sector: An Approach based on Patent Network Analysis. *R&D Management* [SSCI, , JCR Q2, IF: 4.272]. 2019/09. 49(4): 595-606 (<https://doi.org/10.1111/radm.12350>)
26. Lee, J., **Kim, K.**, Shin, H., Hwang, J. 2018. Acceptance Factors of Appropriate Technology: Case of Water Purification Systems in Binh Dinh, Vietnam. *Sustainability* [SSCI, JCR Q2, IF: 3.245]. 2018/07. 10(7): 1-20 (<http://doi.org/10.3390/su10072255>)
27. **Kim, K.**, Jung, S., Hwang, J., Hong, A. 2018. A dynamic framework for analyzing technology standardization using network analysis and game theory. 2018/05. *Technology Analysis and Strategic Management* [SSCI, JCR Q3, IF:2.975]. 30(5): 540-555 (<http://dx.doi.org/10.1080/09537325.2017.1340639>)
28. Lee, C., Jung, S., **Kim, K.***. 2017. Effect of a Policy Intervention on Handset Subsidies on the Intention to Change Handsets and Households' expenses in Mobile Telecommunications. *Telematics and Informatics* [SSCI, JCR Q1, IF: 6.182]. 2017/12. 34(8): 1524-1531 (<https://doi.org/10.1016/j.tele.2017.06.017>)

INTERNATIONAL PUBLICATIONS (SCOPUS)

1. Shin, H., Kogler, D., **Kim, K. *** 2023. The Relevance of Scientific Knowledge Externalities for Technological Change and Resulting Innovation Citation Impact Across European Metropolitan Areas. *Review of Regional Research* [SCOPUS] 2023/06. (<https://doi.org/10.1007/s10037-023-00190-9>)
2. Kogler, D. & **Kim, K.** 2021. Following the paper trail : the UK scientific and technological knowledge space and its reliance on international knowledge spillovers. *Regional Studies, Regional Science* [SCOPUS]. 2021/12/17. 8 (1): 447-459. (<https://doi.org/10.1080/21681376.2021.2009907>)
3. Nonnis, A., Bounfour, A., Ozaygen, A., **Kim, K.**, Beliaeva, T. 2021. The combined contribution of intangible capital and global value chain participation to productivity. *International Journal of Intellectual Property Management* [SCOPUS]. 2021/02/19. 11 (1) (<http://doi.org/10.1504/IJIPM.2020.10032445>)
4. **Kim, K.**, Jung, S., Kim, E., Hwang, J. 2019. Which technology diversification index should be selected?: Insights for diversification perspectives. *Cogent Business & Management* [SCOPUS]. 2019/07. 6 (1): 1-18 (<https://doi.org/10.1080/23311975.2019.1643519>)

DOMESTIC PUBLICATIONS

1. Ahn, D., Kim, J., Sohn, J., **Kim, K.*** 2024. MLB's on-base and out prediction model by pitcher and batter type using machine learning (머신러닝을 활용한 미국 프로야구의 투수 및 타자의 유형별 출루 및 아웃 예측 모델). *The Korean Society of Sports Science*, 33(1): 655-665.
2. **Kim, K.**, Lee, J., Lee, C. 2021. Exploratory Analysis of Knowledge Structure and Evolutionary Trajectory in Korean Artificial Intelligence for Effective Technology Policy (효율적인 기술 정책

- 제안을 위한 한국 인공지능 지식 구조와 진화 궤적의 탐색적 분석). *Innovation Studies*, 16(3): 139-172.
3. Park, C., Kim, D., Yoon, J., **Kim, K.**, Lee, J., & Hwang, J. 2018. A Study on Cooperation Model for Promoting Overseas Volunteering Program Based on Appropriate Technology Orienting University Students Participation: Focused on Institute for Global Social Responsibility in SNU (대학생 참여 중심의 적정기술 활동 활성화를 위한 산학단 협력모델 연구: 서울대학교 글로벌사회공헌단 사례를 중심으로). *Journal of Appropriate Technology*, 4(1): 1-8.
 4. Shin, H., Kim, J., Lee, J., **Kim, K.**, & Hwang, J. 2016. A Convergence Innovation System Approach for Sustainable Appropriate Technology: Identifying the innovation factors (지속가능한 적정기술을 위한 혁신 시스템: 혁신 요소의 탐색). *Journal of Appropriate Technology*, 2(1): 68-75.
 5. **Kim, K.**, & Jung, S. 2017. A Study on Apartment Transaction Price Index Using Cluster Analysis: Focused on the case of Seoul (군집 분석을 활용한 아파트 실거래가격지수 연구: 서울시 사례를 중심으로). *Journal of Real Estate Analysis*, 3(1): 35-58 (<https://doi.org/10.30902/jrea.2017.3.1.35>).
 6. **Kim, K.**, & Kim, Y. 2015. A Study on Forecasting Model for Apartment Housing Price Index Reflecting Model Uncertainty: Focused on BMS, BMA (모델의 불확실성을 반영한 아파트가격지수 예측 모형 연구: BMS, BMA 를 중심으로). *Journal of Real Estate Analysis*, 1(1): 27-52 (<https://doi.org/10.30902/jrea.2015.1.1e.27>).
 7. **Kim, K.**, Jung, S., & Hwang, J. 2015. A Study on Technology Standardization Method Using Network Analysis: Focused on Wireless Communication Technology Layer of Internet of Things (네트워크 분석을 이용한 기술 표준화 방법론 연구: 사물인터넷 무선 통신 기술 계층을 중심으로). *Journal of Technology Innovation [KCI]*. 25 (3): 43-65 (<http://dx.doi.org/10.14383/SIME.2015.23.3.43>).

BOOK

- (Book Chapter) **Keungoui Kim**, Ahmed Bounfour, Nonnis Alberto, Altay Özyaygen, 2024, “ICT Externalities”, *Intangible Assets, Productivity and Economic Growth: Micro, Meso and Macro Perspective*.
- (Book Chapter) Ahmed Bounfour, **Keungoui Kim**, Tran Ngoc Phung, 2022, “Digital Platform Modelling: Delineating the Foundations of Their Business Models”, In book of *Platforms and Artificial Intelligence, The Next Generation of Competences*. (https://doi.org/10.1007/978-3-030-90192-9_1)
- Jeong Hyop Lee, Sira Maliphol, **Keungoui Kim**, 2015, “STI Strategies and Action Planning in ASEAN”, *Science and Technology Policy Institute (STEPI) Policy Report*.
- (Book Chapter) Korea Standard Association, 2015, “Next Standards 2016”: Insight 04. The Value and Future of Technology Standard (written by **Keungoui Kim**, Sungdo Jung, and Junseok Hwang).

WORKING PAPERS

Knowledge Evolution and Innovation

- Kim, K.**, Kogler, D., Lee, J., Lee, C. The Spatial Diffusion and Adoption of Business Methods: Leading and Dominant Technologies in Knowledge Recombination. *Technology Analysis and Strategic Management* (under review)
- Kogler, D., Shin, H., **Kim, K.*** The Geography of Knowledge Externalities: Spillovers from Science to Technology. (Preparing submission)
- Kim, K.**, Shin, H., Kogler, D. Relatedness and science change in region: The evolution of science space in EU regions. (Preparing submission to *Economic Geography*)
- “Evolution of Japanese Knowledge Space with Relation to National Economic Transformation” (with Kogler, D. from UCD, Lee, C. from Sungkyunkwan University, Kang, B. from Hitotsubashi University, Shin, H. from National Institute of Green Technology)
- “Regional Structural Transformation: Jump or YoYo?” (with Changjun Lee from Sungkyunkwan University and Dieter Kogler from UCD)

“Scientific Knowledge Complexity of Chinese Knowledge Space” (with Junmin Lee, Chiara Ferrente, Dieter Kogler from University College Dublin)

Industry Network and Collaboration

Wanzenböck, I., Rochetta, S., Kogler, D., **Kim, K.** Explaining the emergence of new regional technological specialisations: the role of organisations’ network structure. *Industry and Innovation* (2nd round review)

Kim, K., Özaygen, A. Analysis of the network position and the innovative capacity of national manufacturing industries in world production.³ (Preparing for submission)

Lee, J., Wu, S., **Kim, K.**, Kogler, D. Regional cooperation in science and technology innovation: Evidence from the Greater Bay Area, China. (Submitted to *Research Policy*)

“Innovation and the Technological Content of Imports.” (with Ron Davies, Igor Bagayev and Dieter Kogler from UCD)

Computational Social Science

Kim, K., Kim, Y. “Examining the Spatial and Temporal Patterns of Crime in Block Groups in New York City: A Machine Learning Approach” *Justice Quarterly* (1st round revision)

Choi, J., Oh, K., Jang, S., **Kim, K.*** “Predicting bicycle demand at the station level by incorporating station-specific spatial features in graph convolutional network model” (Submitted to *Computers, Environment and Urbans Systems*)

Kim, K., Hynes, R., Kogler, D. Identification of Specialized Science Fields Employing BERTopic Model. (Preparing for submission to *Nature Communications*)

Kim, K., Lee, L. “Individual’s selective exposure on media usage diversity and political polarization” *Technology in Society* (Submitted)

“Identification of Quantum Technology Science Development” (with Jisoo Hur and Seukhee Lee from Seoul National University)

“Who to collaborate? Exploring knowledge complementarity in collaborative invention: Comparing patent performance of engineers and design engineers” (with Jisoo Hur from Seoul National University)

“Criminology research overview: Application of Top2Vec model” (with Youngan Kim from Florida State University)

“Integration of Qualitative and Quantitative Methods for Politics” (with Jaewon Joo from Handong Global University)

Innovation Management Strategy

Hur, J., Kim, G., Hwang, J., **Kim, K.*** The moderating effect of design-engineering capability on the relationship between firms’ innovation activity and performance. *R&D Management* (Under review)

Jung, S., **Kim, K.**, Oh, D. An influence of firm’s technological features on innovation and performance: A case of Korean manufacturing industry. (Preparing for submission)

Kim, K., Lee, J., Kim, E. & Hwang, J. Effects of open innovation on firm-level diversification: The moderating role of alliance portfolio management capability. (Preparing for submission to *Strategic Management Journal*)

Business Model Innovation and System Transition

Lee, J., **Kim, K.**, Park, G. Niche–regime interaction through the business model in socio-technical transition: Focused on shared mobility services in China and South Korea. *Asia Pacific Business Review* (2nd round review)

Lee, J., Lee, J., **Kim, K.**, Park, G. What happens after niche failed becoming regime? An agent-based model of socio-technical transitions. (Preparing for submission to *Technovation*)

³ All codes and functions used in this research is provided at https://github.com/awekim/wiod_manufacturing and R package for downloading WIOD data and creating data for network calculation is provided at <https://github.com/awekim/wiodNET>

INTERNATIONAL CONFERENCE PARTICIPATION

- (Planned) **Kim, K.**, Kim, Y. 2024. Examining the Spatial and Temporal Patterns of Crime in Block Groups in New York City: A Machine Learning Approach. American Society of Criminology at San Francisco. November 14th.
- Kim, K.**, Hynes, R., Kogler, D. 2024. Identification of Specialized Science Fields Employing BERTopic Model⁴. GEOINNO 2024 at Manchester, UK. January 12th.
- Hur, J., Hwang, J., Kim, G., **Kim, K.*** 2023. The Moderating Effect of Design-engineering Capability on the Relationship between Firms' Innovation Activity and Performance. IEEE ICTMOD 2023. November 24th.
- Hur, J., **Kim, K.*** 2023. Technology Complexity and Firm Performance: the Moderating Effect of Design Innovation. 18th European Conference on Innovation & Entrepreneurship. September 21st.
- Hur, J., Hwang, J., **Kim, K.*** 2023. Exploring the Role of Design-engineers in a Firm's Collaborative and Knowledge Network. Society of Interdisciplinary Business Research. June 2nd.
- Borja, S., **Kim, K.**, Yoon, H. Hwang, J. 2022. Mechanisms that Influence IT Governance Effectiveness: Empirical Analysis in Private and Public Sector in Colombia. PICMET 2022 at Portland, USA.
- Wanzenböck, I., Rocchetta, S., Kogler, D., **Kim, K.** 2022. Explaining the emergence of new regional technological specialisations: the role of organisations' network structure. DRUID 2022. DRUID. June 14th.
- Lee, J., **Kim, K.**, Kogler, D. 2022. Regional cooperation between Hong Kong and Shenzhen for synergies and complementarities: Focused on the scientific and technological knowledge space. DRUID 2022. DRUID. June 14th.
- Kim, K.**, Kogler, D., Zabetta, M. 2021. Knowledge Specialization and Novel Innovations: The Role of Regional Brokerage and Collaboration Intensity. DRUID 2021. DRUID. October 19th.
- Kim, K.**, Shin, H., Kogler, D. 2021. Relatedness and science change in region: The evolution of science space in EU regions. DRUID 2021. DRUID. October 19th.
- Shin, H., **Kim, K.**, Kogler, D. 2021. Science Collaboration, Research Funding, and Novelty in Scientific Knowledge. DRUID 2021. DRUID. October 20th.
- Kim, K.**, Kogler, D., Zabetta, M. 2021. New Cooperation and Novel Innovations: The Role of Regional Brokerage and Collaboration Intensity. 4th International Conference on Cluster Research. Rethinking Clusters. September 23rd.
- Wanzenböck, I., Rochetta, S., Kogler, D., **Kim, K.** 2021. Actors, networks and regional technological change. A network portfolio approach to explain the emergence of new technological specializations. 4th International Conference on Cluster Research. Rethinking Clusters. September 23rd.
- Kim, K.**, Kogler, D., Maliphol, S. 2021. What are the key topics in the future interdisciplinary science?: Combination of network analysis and topic modelling method based on LDA mallet model. Research Policy 50th Anniversary Conference. Research Policy. September 10th.
- Kim, K.**, Shin, H., Koger, D. 2021. Relatedness and science change in region: The evolution of science space in EU regions. Research Policy 50th Anniversary Conference. Research Policy. September 10th.
- Kim, K.**, Shin, H., Koger, D. 2021. Relatedness and science change in region: The evolution of science space in EU regions. Regions in Recovery. Regional Studies Association.
(https://www.youtube.com/watch?v=VLo698aT_Lg)
- Shin, H., **Kim, K.**, Koger, D. 2021. Moderating role of funding for science collaboration and novelty. Regions in Recovery. Regional Studies Association.
(https://www.youtube.com/watch?v=VLo698aT_Lg)
- Kim, K.**, Lee, C., Kogler, D. 2020. A new dimension of regional knowledge space: entry relatedness and entry potential. 5th edition of Summer School on Data & Algorithms for ST&I studies at Leuven, Belgium.

⁴ https://awekim.shinyapps.io/ss_bertopic/

- Kim, K.**, Bounfour, A., Özyaygen, A., Nonnis, A., Beliaeva, T. 2019. The contribution of ICT to productivity focusing on intangibles and interior/exterior ICT externalities. The World Conference on Intellectual Capital for Communities at Paris, France. European Chair on Intellectual Capital. July 11th.
- Nonnis, A., Özyaygen, A., Bounfour, A., **Kim, K.**, Beliaeva, T. 2019. Analyzing the productivity contribution of intangible assets and participation in global value chains. The World Conference on Intellectual Capital for Communities at Paris, France. European Chair on Intellectual Capital. July 11th.
- Borja, S., **Kim, K.**, Yoon, H. Hwang, J. 2018. IT Governance Effectiveness and Its Influence on Innovation Product and Process. PICMET 2018 at Hawaii, USA.
- Hong, A., **Kim, K.**, Jung, S. & Kim, K. 2018. The effect of the patent convergence on global competitiveness index for cross country analysis. The Asia-Pacific Productivity Conference (APPC) 2018 “Productivity, Innovation, and Sustainable Economic Growth with Changing Technological Paradigm” at Seoul, South Korea.

DOMESTIC CONFERENCE PARTICIPATION

- (Planned) Park, Y., Kim, D., Yoo, S., Bae, Y., **Kim, K.*** 2024. Research on Prompt Engineering for Generating Business Data Analysis Reports Using Generative AI Models: Focusing on Performance Marketing Cases 한국정보기술학회 하계학술대회. 2024/5/23
- Choi, J., Oh, K., Jang, S., **Kim, K.*** 2023. Predicting Bicycle Demand by Incorporating Station-Specific Spatial Features in a Graph Convolution Networks Model. 한국인공지능학회 추계학술대회. 2023/11/24
- Ahn, D., Son, J., Kim, J. **Kim, K.*** 2023. 머신러닝을 활용한 미국프로야구의 투수-타자 유형별 출루 및 아웃 예측 모델. 한국정보기술학회 추계종합학술대회. 2023/11/24
- Lee, J., Park, K., **Kim, K.*** Haunted by the ghost: Strengthen the regime stability by niche failure. 2021. 정보통신정책학회 2021 년 정기학술대회. 2021/11/19.
- Lee, J., Lee, J., **Kim, K.**, Park, K. What happens after niche failed becoming regime? An agent-based model of socio-technical transitions. 2022. 미디어경영학회 2022 년 정기학술대회. 2022/5/13.

RESEARCH GRANT PARTICIPATION

- WeGO (World e-Governments Organization of Cities and Local Governments) Open Data Project. Open Data: An Introductory, Practical Guide for Solutions. Participation as a *Researcher*. 2014.07.01 ~ 2014.12.31.⁵
- Communications Policy Research Center (CPRC). Internet of Things Policy Project. Participation as a *Researcher*. 2016.04.01 ~ 2017.03.31.
- National Research Foundation of Korea (NRF). Common Research Project: “Theory Building of Appropriate Technology and Sharing Economy Application for Social Problem Resolution”. Participation as a *Researcher*. 2016.11.01 ~ 2018.12.31.
- Sun Dae In Economic Research Institute. “Real-estate price index development project” Participation as *Data Analyst*. 2016.09 ~ 2017.02.⁶
- Graduate School of Health Science Business Convergence, College of Medicine, Chungbuk National University. Pharmaceutical data preprocessing and integration project. Participation as *Data Analyst*. 2017.09 ~ 2018.02.
- GLOBALINTO (H2020 project). European Research Commission. Participation as Post-doc Researcher. 2019.02 ~ 2020.03.
- Northern Powerhouse Research and Innovation. Cambridge Econometrics. Participation as a Post-doctoral Researcher & Data Analyst. 2020.03 ~ 06.
- SciTech Space (SFI Science Policy Research Programme). Science Foundation Ireland. Participation as a Post-doctoral Researcher. 2020.03 ~ 2021.08.

⁵ Research outcome, <http://we-gov.org/portfolio/open-data-an-introductory-practical-guide-for-solutions/>

⁶ Research outcome, Kim, K. & Jung, S. 2017. A Study on Apartment Transaction Price Index Using Cluster Analysis: Focused on the case of Seoul. *Journal of Real Estate Analysis*, 3(1): 35-58. <https://doi.org/10.30902/jrea.2017.3.1.35>

Culture & Art Education Project. 2023.07 ~ 2023.12.
Developing a Psychological Counseling Chatbot: Bridging Communication and Ergonomics for Promoting Self-disclosure and Efficient Counseling. National Research Foundation. 2023.04 ~ .
Research on Quantum Science and Technology Korea-Europe International Cooperation R&D Network. Korea-Europe Quantum Science Technology Cooperation Center. 2024.01 ~ .
Exploring Methodologies for Enhancing International Cooperation Strategies. KISTEP. 2024.02 ~ .
Analysis of Korean Securities Trading Data for Optimizing AI Interface Learning. Lean Commerce. 2024.05 ~

COMMITTEES

한동대학교 빅데이터 혁신공유대학사업 운영위원. 2021.09. ~
빅데이터 혁신공유대학사업 성과평가관리위원회 운영위원. 2022.07 ~
LINC 3.0 재직자교육센터장. 2022.07. ~
한동대학교 입학전형관리위원. 2023.03.~

AWARDS & HONORS

2015. Best Paper Award. Real Estate Policy and Market Analysis Papers Competition. Korea Appraisal Board.⁷
2015. Best Paper Award. The 5th International Symposia Green, Smart, Development and Vision 2015.
2013. Excellence Award. 2013 Idea Festival. Hyundai Motors R&D Center. “A vehicle for dwarfism, GLOVE”.

TEACHING EXPERIENCE (All taught in English)

Handong Global University, Pohang, South Korea

Introduction to Big Data; Text Mining; Data Science; Big Data Capstone Design; AI-DS Capstone
Python Programming; App Programming; Introduction to Software

University College Dublin, Dublin, Ireland

Regional Innovation. 2021-Spring semester

Institut Mines-Télécom Business School (IMT BS), Evry, France

Strategic Management of Intellectual Property Right. 2020-Spring semester

POSCO, Pohang, Korea

Bahasa Indonesia lecture. 2012.03~06

INVITED LECTURE

“Applied Engineering Statistics” at Kyung Hee University. 2017-October.
“NLP & Data Science” at Hyundai Motors Group. 2022-August.
“Understanding and Application of Public Data” at Youngchun-si. 2023-April.
“Smart AI Utilization” at Pohang City Hall. 2023-May.
“Social Science in AI Era” at Uiduk University. 2023-May.
“ChatGPT and Future Education” at Jakarta International University. 2023-June.
“Invited Lecture on Vision” at Youngdong High School. 2023-June.
“Big Data Analysis Introduction using Python⁸” at Co-Week Academy. 2023-July.
“ChatGPT Competition” at Hyundai Motors Company. 2023-July.

⁷ Kim, K., & Kim, Y. 2015. A Study on Forecasting Model for Apartment Housing Price Index Reflecting Model Uncertainty: Focused on BMS, BMA. *Journal of Real Estate Analysis*, 1(1), 27–52.

⁸ https://github.com/awekim/LEC_CoWeekBigData_2023

“AI and Future Education” at Daegu University. 2023-July.
“Education Practices using ChatGPT” at Daegu University. 2023-October.
“Managing My Own AI Personal Assistant: ChatGPT & Bard” at Hyundai Motors Company. 2023-October.
“Using My Own Conversational Artificial Intelligence: LLaMA-2 WEB UI” at Hyundai Motors Company. 2023-October.
“Artificial Intelligence & Virtual Reality” at Culture Factory. 2023-October.
“Smart Specialisation Strategies and Regional Knowledge Spaces: How to Bridge Vision and Reality” at ChungNam Institute. 2023-December.
“Understanding and Application of Data Visualization” at Youngchun-si. 2024-April.
“Service Planning and Strategy Using Generative AI” at Korea Hydro & Nuclear Power. 2024-April.
“Technological Sovereignty and Strategic Dependence in the AI Era from a Fair-Trade Perspective” at Nepal Word Fair Trade Day. 2024-May.

SOFTWARE / PROGRAMMING SKILLS

Fluent usage at big data handling, econometric analysis and data visualization using R & Python

Languages: R, Python, SQL

Statistics & Econometric analysis: R, STATA, MATLAB, SPSS, AMOS, Eviews

Network analysis: R, Gephi / Database: SAS, PostgreSQL, MySQL, Neo4j

Web-crawling: R, Python / Text analysis (Natural Language Processing): R, Python

Visualization: R, R Shiny¹⁰

Intermediate level of engineering modeling and simulation using CATIA V5

Additional software skills: MS-office literacy, Adobe Audition

ACADEMIC SERVICE

Ad-hoc Reviewer in

Entrepreneurship & Regional Development, Scientific Reports, Technological Forecasting and Social Change, Journal of Technology Transfer, Science and Public Policy, Regional Studies, Scientometrics, Technology Analysis and Strategic Management, International Regional Science Review, Policy Sciences, Industry: Organization & Management, R&D Management, Telematics and Informatics, Information Technology and Management, Plos One, Journal of Intercultural Communication Research, Entrepreneurship & Regional Development, Information Processing and Management, Journal of Intellectual Capital, Cogent Business & Management

⁹ https://github.com/awekim/LEC_MyAI_LLaMA

¹⁰ R Shiny applications: https://awekim.shinyapps.io/WoS_REG_shiny_R/, https://awekim.shinyapps.io/WoS_shiny/, https://awekim.shinyapps.io/SS_shiny_R/, https://awekim.shinyapps.io/Manuf_shiny_R/

REFERENCES

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Professor. Jörn Altmann / Chair of Doctoral Thesis Examination
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