

**Curriculum Vitae
Hyun Kim**

Department of Geography and Sustainability
The University of Tennessee, Knoxville
311 Burchfiel Geography Building
1000 Phillip Fulmer Way
Knoxville, TN 37996-0925
hkim56@utk.edu; Voice: 1-(865)-236-1041
ORCID: 0000-0002-7637-678X
<https://hyunkimutk.wixsite.com/hyunkim>

EDUCATION

The Ohio State University, Columbus, Ohio	2002-2008
Ph.D. in Geography	
Seoul National University, Seoul, South Korea	1999-2001
Master of Arts in Geography	
Seoul National University, Seoul, South Korea	1993-1999
Bachelor of Arts in Geography	
Highest honors in the College of Social Science, <i>Summa Cum Laude</i>	

EMPLOYMENT & APPOINTMENT

2023-present	Professor, Department of Geography & Sustainability, University of Tennessee, Knoxville, TN.
2017-2023	Associate Professor, Department of Geography & Sustainability, University of Tennessee, Knoxville, TN.
2017-2020	Director of Graduate Studies, Department of Geography, University of Tennessee, Knoxville, TN.
2018-2019	Research Fellow, Center for Transportation Research (CTR), University of Tennessee, Knoxville, TN.
2016-2017 &2020-21	Associate Director of Graduate Studies, Department of Geography, University of Tennessee, Knoxville, TN.
2011-2017	Assistant Professor, Department of Geography, University of Tennessee, Knoxville, TN.
2008-2011	Program Director and full-time Instructor of GIS Certificate Program, Department of Geography, Environment, and Planning, University of South Florida, Tampa, FL.
2007-2008	Graduate Research Associate, Center for Urban and Regional Analysis (CURA), Institute for Population Research (IPR), The Ohio State University, Columbus, OH.
2004-2007	Graduate Teaching Associate, Department of Geography, The Ohio State University, Columbus, OH.
2003-2004	Graduate Research Associate, Department of Geography, The Ohio State University, Columbus, OH.

2001-2002	GIS Analyst and Research Scientist, Science & Technology Policy Institute (STEPI), Seoul, South Korea.
1999-2001	Graduate Research Associate, College of Social Science, Seoul National University, Seoul, South Korea.
1999-2000	Visiting Research Scientist, Korea Institute for Industrial Economics & Trade (KIET), Seoul, South Korea.
1997-1998	Assistant System Administrator, College of Social Science, Seoul National University, Seoul, South Korea.

RESEARCH INTERESTS

- **Transportation**
 - Transportation network analysis
 - Public transport
 - Transport policy
- **Spatial optimization**
 - Spatial optimization
 - Facility location modeling
 - Hazards, disasters, and critical infrastructure
- **Geographic Information Science (GIS)**
 - GIS for location problems
 - Socio-economic applications of GIS
 - GIS for data analytics
- **Health and Urban Geography**
 - Health disparity and accessibility
 - Urban/economic analysis

RESEARCH PUBLICATIONS

Refereed Journal articles

Norms for authorship statement: In the publication with multiple authors in the field of Geography, either 'First' or 'Principal author' is recognized as the major contributor who undertakes the research of the manuscript. 'Coauthor' indicates that the author contributes substantially to publish the manuscript. For the collaborative research publication in the field of Transportation or GIS, 'Corresponding author' is the major contributor as the author is responsible for handling the entire process of publication including the drafting research ideas, designing analysis, and correcting the manuscript.

Notes: The indicators below are used to clarify my contribution and the quality of journals.

† Corresponding author

*Graduate student coauthors (supervised by candidate)

**Undergraduate student

- **[IF, SJR]: Impact Factor** (Web of Science of Thomson ISI), **Scientific Journal Rankings (SJR)** in the fields that is classified by SJR [e.g., Q1: top 25%]
- **In press:** The manuscript is published on-line as early view with DOI, but page numbers are not yet determined.

- **Forthcoming:** The publisher is under the process of printing after acceptance.

- [1] 2001 Hwang, Y.S, J. Lee, and **H. Kim**, “A study on setting directions of R&D investment at the national level” Ministry of Science & Technology, Science and Technology Policy Institute, Seoul, Korea.
- [2] 2001 **Kim, H**, “A geographical perspective: innovative and knowledge cluster” *Science and Technology Policy*, Spring, Science and Technology Policy Institute, Seoul, Korea.
- [3] 2001 **Kim, H**, “OECD Cluster Focus Group: analysis on the innovative cluster” *Science and Technology Policy*, 11(4), 94-101, Seoul, Korea.
- [4] 2001 **Kim, H**, “The spatial structure and characteristics of Internet information flows in Korea” *Journal of Geography*, 37, 19-42, Seoul, Korea.
- [5] 2002 Lee, K, J. Lee, C, Lim, D, Han, and **H. Kim**, “Analysis on the knowledge clusters of Korea” Ministry of Science & Technology, Science and Technology Policy Institute, Seoul, South Korea.
- [6] 2002 Lee, K, D. Han, and **H. Kim**, “Circulative linkages of knowledge activities in innovative cluster” *Knowledge Management Research*, 3(1), 61-74. Seoul, South Korea.
- [7] 2003 Huh, W, and **H. Kim**, “Information flows on the Internet of Korea” *Journal of Urban Technology*, 10(1), 61-88. [IF: 5.465, Q1]
http://www.tandfonline.com/doi/abs/10.1080/10630730_32000086335
- [8] 2006 O’Kelly, M.E, **H. Kim**, and C. Kim, “Internet reliability with realistic peering” *Environment and Planning B: Urban Analytics and City Science*, 33(3), 325-343. [IF: 3.889, Q1]
<http://epb.sagepub.com/content/33/3/325.short>
- [9] 2008 Murray, A.T., and **H. Kim**, “Efficient identification of geographic restrictions in location modeling using GIS” *Letters in Spatial and Resource Sciences*, 1(2-3), 159-169. [IF: 0.800, Q2]
<http://link.springer.com/article/10.1007%2Fs12076-008-0015-3>
- [10] 2009 **Kim, H**, “Reliable network design and hub location problems” *Journal of the Economic Geographical Society of Korea*, 12(4), 540-556.
http://ocean.kisti.re.kr/IS_mvpopo210L.do?method=elist&poid=keg1&kojic=GJJRBH
- [11] 2009 **Kim, H**[†], and M. E. O’Kelly, “Reliable p -hub location problems in telecommunication networks” *Geographical Analysis*, 41(3), 283-306. [IF: 4.268, Q1].
<https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1538-4632.2009.00755.x>
- [12] 2009 **Kim, H**, “Geographical analysis on network reliability of public transportation systems: a case study of subway network system in Seoul” *Journal of the Korean Geographical Society*, 44(2), 187-205.
<https://www.dbpia.co.kr/Journal/ArticleDetail/NODE01215150>
- [13] 2012 Chun, Y, **H. Kim**, and C. Kim, “Modeling interregional commodity flows with incorporating network autocorrelation in spatial interaction models: An application of the US interstate commodity flows” *Computers, Environment and Urban Systems*, 36(6), 583-591. [IF: 5.324, Q1]
<http://www.sciencedirect.com/science/article/pii/S0198971512000373>

- [14] 2012 **Kim, H**, “*p*-Hub protection models for survivable hub network design” *Journal of Geographical Systems*, 14(4), 437-461. [IF: 2.337, Q1]
<http://link.springer.com/article/10.1007%2Fs10109-011-0157-5>
- [15] 2013 Ryerson, M. S, and **H. Kim**, “Integrating airline operational practices into passenger airline hub definition” *Journal of Transport Geography*, 31, 84-93. [IF: 4.986, Q1]
<http://www.sciencedirect.com/science/article/pii/S0966692313001099>
- [16] 2013 Kim, C, and **H. Kim**, “Spatial-temporal analysis of recent air passenger flows” *International Journal of Applied Geospatial Research*, 4(4), 37-57. [IF: 0.73, Q3]
<http://www.igi-global.com/article/spatial-temporal-analysis-of-recent-air-passenger-flows/95193>
- [17] 2014 Ryerson, M. S, and **H. Kim**, “The impact of airline mergers and hub reorganization on aviation fuel consumption” *Journal of Cleaner Production*, 85 December, 395-407 [IF: 9.297, Q1]
<http://www.sciencedirect.com/science/article/pii/S095965261300886X>
- [18] 2014 Downs, J, M. Horner, R. Loraamm*, J. Anderson*, and **H. Kim**, and D. Onorato, “Strategically locating wildlife crossing structures for Florida panthers using a maximal covering approach” *Transactions in GIS*, 18(1), 46-65. [IF: 2.406, Q1]
<http://onlinelibrary.wiley.com/doi/10.1111/tgis.12005/abstract>
- [19] 2014 Li, Y*, and **H. Kim**[†], “Assessing survivability of the Beijing subway system” *International Journal of Geospatial and Environmental Research*, 1(1): Article 3. [IF: 0.25, Q3]
<http://dc.uwm.edu/ijger/vol1/iss1/3/>
- [20] 2014 Ye, H* and **H. Kim**[†], “Measuring spatial health disparity using a network based accessibility index method in a GIS environment: a case study of Hillsborough County, Florida” *International Journal of Geospatial and Environmental Research*, 1(1): Article 2. [IF: 0.25, Q3] <http://dc.uwm.edu/ijger/vol1/iss1/2/>
- [21] 2015 Song, Y, and **H. Kim**[†], “Evolution of subway network systems, transport accessibility and change of urban landscape: a longitudinal approach” *International Journal of Applied Geospatial Research*, 6(2), 54-77. [IF: 0.73, Q3]
<http://www.irma-international.org/journal/international-journal-applied-geospatial-research/1138/>
- [22] 2015 **Kim, H**, Y. Chun, and K. Kim, “Delimitation of functional regions using a *p*-regions problem approach” *International Regional Science Review*, 38(3), 235-263. [IF: 2.531, Q1]
<http://irx.sagepub.com/content/38/3/235>
- [23] 2015 Ye, H*, and **H. Kim**[†], “Analyzing the spatial pattern of primary care physician locations in Hillsborough County, Florida” *Papers in Applied Geography*, 1(1), 79-85. [Q2]
<http://www.tandfonline.com/doi/full/10.1080/23754931.2015.1009324>
- [24] 2015 **Kim, H**, and Y. Song, “Examining accessibility and reliability in the evolution of subway systems” *Journal of Public Transportation*, 18(3), 89-106. [IF: 37.66, Q1]
<http://scholarcommons.usf.edu/jpt/vol18/iss3/6/>
- [25] 2016 Ayers, D**, and **H. Kim**, “Using GIS to assist in social impact assessments at military installations” *Pursuit*, 7(1), Article 4.

- [26] 2016 Kim, K, D. Dean, **H. Kim**, and Y. Chun, “Spatial optimization for regionalization problems with spatial interaction: a heuristic approach” *International Journal of Geographic Information Science*, 30(3), 451-473. [IF: 4.186, Q1]
<http://www.tandfonline.com/doi/full/10.1080/13658816.2015.1031671>
- [27] 2016 **Kim, H[†]**, C. Kim, and Y. Chun, “Network reliability and resilience of rapid transit systems” *The Professional Geographer*, 68(1), 53-65. [IF: 2.801, Q1]
<http://www.tandfonline.com/doi/abs/10.1080/00330124.2015.1028299>
- [28] 2016 Ye, H*, S. Lee, and **H. Kim**, “Effect of neighborhood characteristics on length of inpatient stay: Findings from the U.S. national data” *Social Work Research*, 40(2):117-126. [IF: 1.981, Q1]
<http://swr.oxfordjournals.org/content/early/2016/03/28/swr.svw004.full.pdf+html>
- [29] 2016 Ye, H*, and **H. Kim[†]**, “Locating health care facilities using a network-based covering location problem” *GeoJournal*, 81, 875–890. [Q1]
<http://link.springer.com/article/10.1007/s10708-016-9744-9>
- [30] 2017 Kim, K, Y. Chun, and **H. Kim[†]** “ p -Functional clusters location problem for detecting spatial clusters with covering approach” *Geographical Analysis*, 49(1), 101-121 [IF: 4.268, Q1]
[http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1538-4632](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1538-4632)
- [31] 2017 **Kim, H[†]**, and M. S. Ryerson, “The q -Ad hoc hub location problem for multi-modal networks” *Networks and Spatial Economics*, 17 (3), 1015-1041 [IF: 2.862, Q1]
<https://link.springer.com/article/10.1007/s11067-017-9357-y>
- [32] 2017 McManamaya, R, S. Nair, C. DeRolph, B. Ruddell, A. Morton, R. Stewart, M. Troia, L. Tran, **H. Kim**, and B. Bhaduri, “US cities can manage national hydrology and biodiversity using local infrastructure policy” *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*, September 114 (36), 9581-9586 [IF: 12.77, Q1] www.pnas.org/content/114/36/9581
- [33] 2018 Bae, B*, H. **H. Kim**, Liu, Y, L. Han, and P. Freeze “Missing data imputation for traffic flow speed using spatiotemporal cokriging” *Transportation Research Part C: Emerging Technologies*, 88, 124-139 [IF: 8.089, Q1]
<https://www.sciencedirect.com/science/article/pii/S0968090X18300469>
- [34] 2018 Han, L, and **H. Kim**, and Zhang, Y*, “Dijkstra-DBSCAN: Fast, accurate and routable density-based clustering of traffic incidents on large road network” *Transportation Research Record*, 2672 (45), 265-273 <https://doi.org/10.1177/0361198118796071> [IF: 1.686, Q2].
- [35] 2018 **Kim, H[†]**, and Y. Song, “An integrated measure of accessibility and reliability of mass transit systems” *Transportation*, 45(4), 1075-1100. [IF: 6.052, Q1]
<https://doi.org/10.1007/s11116-018-9866-7>
- [36] 2018 Han, L, **H. Kim**, and Zhang, Y*, “Energy-efficient infrastructure deployment on road network for connected and autonomous vehicle communications” *Transportation Research Record* [IF: 1.686, Q2].

- [37] 2018 **Kim. H[†]**, Lee, K., Park, J., and Y. Song, “Transit network expansion and accessibility implications: A case study of Gwangju metropolitan area, South Korea” *Research in Transportation Economics*, 69 544-553 [IF: 2.627, Q1].
<https://doi.org/10.1016/j.retrec.2018.07.013>
- [38] 2018 Song, Y, **H. Kim**, K-S. Lee, and K. Ahn, “Subway network expansion and transit equity: A case study of Gwangju metropolitan area, South Korea” *Transport Policy*, 72 148-158 [IF: 4.674, Q1].
<https://www.sciencedirect.com/science/article/pii/S0967070X17302664>
- [39] 2018 Yoon, H, Y. Jang, K. Choi, and **H. Kim**, “Preventive dental care utilization in Asian Americans: Does neighborhood matter?” *International Journal of Environmental Research and Public Health*, 15(10) 2261 [IF: 3.789, Q1]. doi: 10.3390/ijerph15102261
- [40] 2019 Tran, L., R. McManamaya, and **H. Kim**, “A non-parametric distance-based method using all available indicators for integrated environmental assessment – A case study of the Mid-Atlantic Region, USA” *Journal of Environmental Planning and Management*, 62(5), 766-778 [IF: 2.735, Q2] DOI: 10.1080/09640568.2018.1441812.
- [41] 2019 Ye, Q*, and **H. Kim[†]**, “Assessing network vulnerability of heavy rail systems with the impact of partial node failures” *Transportation*, 46, 1591-1614. [IF: 6.052, Q1]
<https://doi.org/10.1007/s11116-018-9859-6>
- [42] 2019 Ye, Q*, and **H. Kim[†]**, “Partial node failure in shortest path network problems” *Sustainability*, 11(22), 6275; doi:10.3390/su11226275 [IF: 3.251, Q2].
- [43] 2020 Chea, H*, and **H. Kim[†]**, “Spatial disparities of obesity–residential segregation: The urban-rural divide” *The Professional Geographer*, 72(2) 206-218. [IF: 2.801, Q1].
<https://doi.org/10.1080/00330124.2019.1676800>
- [44] 2021 Ye, Q*, and **H. Kim[†]**, “Assessing network vulnerability using shortest path network problems” *Journal of Transportation Safety & Security*, 13(1) 1-25 [IF: 3.00, Q1].
DOI:10.1080/19439962.2019.1600626.
- [45] 2021 **Kim. H.**, Y. Lee, and Y. Song, “Restaurants’ survival in the era of COVID-19 – A case study of Seoul” *Journal of the Korean Geographical Society*, 56 (1) 35-51.
- [46] 2021 Auerbach, J*, and **H. Kim[†]**, “Local network connectivity optimization: an evaluation of heuristics applied to complex spatial networks, a transportation case study, and a spatial social network” *PeerJ Computer Science*, 18, Article# 7:e605
<https://doi.org/10.7717/peerj-cs.605>. [IF: 6.30, Q1]
- [47] 2021 Hoseinzadeh, N, Y*. Gu, H. Zhang, H. Kim, and Han D, Lee, “Mobility Dynamics amid COVID-19 with a Case Study in Tennessee. *Transportation Research Record*. [IF: 1.686, Q2]. Online press, <https://doi.org/10.1177/03611981211063199>
- [48] 2022 Auerbach, J*, and **H. Kim[†]**, “Measuring robustness and coverage of transportation networks with multiple routes and hubs” *Annals of the American Association of Geographers*, 112(6), 1741-1760, DOI:10.1080/24694452.2021.2000357 [IF: 4.683, Q1]
- [49] 2022 Griffith, D., Y. Chun, and **H. Kim**, “Spatial autocorrelation informed approaches to solving location-allocation problems” *Spatial Statistics*, 50 (Article #:100612),
doi.org/10.1016/j.spasta.2022.100612 [IF: 2.06, Q1]

- [50] 2022 Chea, H*, **H. Kim**[†], Shaw, S, and Y. Chun “Assessing trauma center accessibility for healthcare equity using anti-covering approach” *International Journal of Environmental Research and Public Health*, 19(3), 1459, [IF: 3.39, Q1]. doi.org/10.3390/ijerph19031459.
- [51] 2022 Jung, P., Y. **H. Kim**, K. Lee, and Y. Song, “Examining day-to-day dynamic transit accessibility using functional data analysis approach” *The Professional Geographer*. 74(3). 503-515 [IF: 2.801, Q1]. DOI: 10.1080/00330124.2021.2007493.
- [52] 2023 Griffith, D, Y. Chun, and **H. Kim**. “The majority theorem for the single ($p=1$) median problem and local spatial autocorrelation” *Geographical Analysis*, 55. 107–124 doi.org/10.1111/gean.12321 [IF: 4.268, Q1]
- [53] 2023 **Kim, H**[†], W-K. Huh, K. Lee, and Y. Song, “Measuring the transit benefits of accessibility with the integration of transit systems” *Transportmetrica A: Transport Science* <https://doi.org/10.1080/23249935.2023.2192288> [IF: 3.496, Q1].

Peer-reviewed book chapters

- [1] 2007 O’Kelly, M.E, and **H. Kim**, “Survivability of commercial backbones with peering: a case study of Korean networks” Chapter 6 in (Eds) A.T. Murray and T.H. Grubestic (editors). *Critical Infrastructure: Reliability and Vulnerability*, Advances in Spatial Science Series, 107-128. Springer-Verlag: Berlin. http://link.springer.com/chapter/10.1007%2F978-3-540-68056-7_6
- [2] 2013 **Kim, H**, Y. Chun, and C. Anderson*, “Crime scene locations in cases of criminal homicide: spatial crime analysis in a GIS environment” Chapter 8 in (Eds) M. Leitner (editor). *Crime Modeling and Mapping Using Geospatial Technology, Geotechnologies and the Environment* Vol 8, 181-201. Springer-Verlag: Berlin. http://link.springer.com/chapter/10.1007%2F978-94-007-4997-9_8
- [3] 2015 **Kim, H**, and D. Han, “Network analysis” Chapter 2 in (Eds) W. Huh, J. Sohn, and B. Park (editors). *Geography of Networks*, 27-44. Purungil: Seoul (in Korean).
- [4] 2018 Kim, K, Y. Chun, and **H. Kim**[†], “A robust heuristic approach for regionalization problems” *GeoComputational Analysis and Modeling of Regional Systems*, (Eds) Dragicovic, S. and Thill J-C (editors) Advances in Geographic Information Science Series. Springer International Publishing. 305-324. https://link.springer.com/chapter/10.1007/978-3-319-59511-5_16
- [5] 2018 Chun, Y, and **H. Kim**, “Network defined” *The Geographic Information Science & Technology Body of Knowledge (GIS&T BoK)*, 4th Quarter 2018 Edition. John P. Wilson (Ed). DOI: 10.22224/gistbok/2018.4.3. <https://gistbok.ucgis.org/bok-topics/networks-defined>
- [6] 2020 **Kim, H**[†], and K. Kim, “Spatial optimization problem for locating polling facilities and stations and policy implications” Chapter 9 in (Eds) R. Z. Ríos (editor). *Optimal Districting and Territory Design: Models, Algorithms, and Applications, International Series in Operations Research & Management Science*, Springer-Verlag. 173-190.

Encyclopedia entries

- [1] 2016 **Kim, H**, “Mass rapid transit system (Bangkok)” (Eds) S. Sultana, and J. Weber (editors). *Minicars, Maglevs, and Mopeds: Modern Modes of Transportation around the World*, 186-187. ABC-CLIO/Greenwood Press.
- [2] 2016 **Kim, H**, “Mass rapid transit system (Singapore)” (Eds) S. Sultana, and J. Weber (editors). *Minicars, Maglevs, and Mopeds: Modern Modes of Transportation around the World*, 184-186. ABC-CLIO/Greenwood Press.
- [3] 2016 **Kim, H**, “Segway” (Eds) S. Sultana, and J. Weber (editors). *Minicars, Maglevs, and Mopeds: Modern Modes of Transportation around the World*, 268-270. ABC-CLIO/Greenwood Press.

Conference proceedings and extended abstract (peer-reviewed)

- [1] 2010 Zeng, B., Y. An, Y. Zhang and **H. Kim**, “A reliable hub-spoke model in transportation systems” The 4th International Symposium on Transportation Network Reliability (*INSTR*) Conference Proceedings.
- [2] 2013 **Kim, H[†]**, and M. S. Ryerson, “Ad-hoc port assignment due to a port outage” Proceedings of the 2nd *INFORMS* Transportation Science and Logistics (*TSL*) Society Workshop: Maritime Transportation and Port Logistics, 83-89. (One of 14 participants invited).
- [3] 2014 Ye, H*, and **H. Kim**, “Analyzing the effect of neighborhood characteristics on the spatial pattern of primary care physician locations in Hillsborough County, Florida, *Proceedings of Papers in Applied Geography* 37, 86-94.
- [4] 2015 **Kim, H[†]**, Y. Song, “An integrated measure of accessibility and reliability of transit systems” *NECTAR 2015 International Conference* on the cluster 6 session *Accessibility, resilience, and vulnerability*.
- [5] 2017 Song, Y, **H. Kim[†]**, and K-S. Lee, “Transit network expansion and accessibility implications: A case study of Gwangju metropolitan area, South Korea” Workshop 6. Wider impacts of public transport and successful implementation of desirable and beneficial projects, *Thredbo 15, International Conference Series on Competition and Ownership in Land Passenger Transport*. <http://hdl.handle.net/2123/17532>
- [6] 2017 Song, Y, **H. Kim**, K-S. Lee, and K. Ahn, “Change of transit equity following subway network expansions in a metropolitan area“ *The Proceedings of The Korean Geographical Society*, 5-6.
- [7] 2021 Courtney, C, **H. Kim**, M. Huslage, “Modeling eviction hot spots in communities with exacerbated eviction rates throughout the COVID-19 pandemic: Race remains a key determinant” *APHA 2021 Conference* (Peer-reviewed Abstract accepted).

Book translation

- [1] 2012 Chung, S, W. Lee, S. Back, **H. Kim**, J. Lee, K. Choi, and A. Cho, “The cultural landscape: an introduction to human geography” 10th Edition by James M. Rubenstein, Prentice Hall (translated in Korean).

Non-peer reviewed contribution

- [1] 2020 **Kim, H**, “Recent research trend of vulnerability of transportation networks” Special Contribution I, *Korean-American Association for Geospatial and Environmental Sciences (KAGES) Newsletter*, 17(1), 7-8. <http://www.kages.org/season2/kages-newsletter-2020-%eb%b4%84%ed%98%b8/>
- [2] 2020 **Kim, H**, “Some thoughts concerning network analysis approaches in Regional Science” Invited contribution, *North American Regional Science Conference (NARSC) Newsletter*, 8(1) June, 11-12.
http://www.narsc.org/newsite/wp-content/uploads/2020/06/NARSCNewsJune2020_final.pdf

ACADEMIC HONORS AND AWARDS

- 1999 Feb **The Presidential Award**, Seoul National University, Seoul, South Korea.
Note: *This award was presented for the highest honors at Seoul National University.*
- 2005 Summer **The PEGS Research Award**, The Ohio State University, Columbus, OH.
Note: *This research award was presented for selected graduate students to support the publication of their research.*
- 2010 Spring **The Dewey Stowers Memorial Faculty Award**, University of South Florida, Tampa, FL.
Note: *The award recognizes outstanding faculty for innovative teaching at University of South Florida with one semester teaching load reduction.*
- 2013 Summer **Grant Writing Institute (GWI) selected as Summer Boot Camp participant**, University of Tennessee.
Note: *This award supports my NSF research grant proposals to develop further by visiting the headquarter of NSF in Washington D.C.*
- 2014 Spring Nominee for **Chancellor’s Excellence Graduate Mentoring and Advising Award**, University of Tennessee.
- 2014 Fall **Quest Scholar of the Week** (<http://quest.utk.edu/2014/hyun-kim/>), University of Tennessee.
Note: *This award recognizes outstanding faculty for research at University of Tennessee.*
- 2016 Spring **ABCD Award (Service Above and Beyond the Call of Duty)**, Department of Geography, University of Tennessee.
- 2018 **2018-2019 Center for Transportation Research (CTR) Fellow Award**, Center for Transportation Research, University of Tennessee.
- 2021 **The 2021 Sustainability Science Award** (best paper), Ecological Society of America, “US cities can manage national hydrology and biodiversity using local infrastructure policy.” <https://www.esa.org/blog/2021/04/06/ecological-society-of-america-announces-2021-award-recipients/>
- 2023 **2023 INSTRA International Joint Research Award**, Inha University, BK 21 INSTRA Global Research Support Program. (Research proposal: *CELTA: A new approach for the space-time travel patterns and accessibility by geographic scales*)

GRANTS

A. Funded (Active)

External Grants

8/2020-1/2024 **National Science Foundation (NSF)**, Chun, Y (PI), and Griffith, D (Co-PI), **H. Kim** (role: PI at UTK), “Integrating spatial autocorrelation into location-allocation problems” \$460,000 (\$180,720 UTK side) funded by the National Science Foundation (NSF). Award number: 1951344. NSF Program: GSS
Project description: *This project develops a method and/or a strategy to produce a better solution quality and faster computational time for Location-Allocation problems, including median, covering, capacitated, and hub-network design. In addition, this research would contribute to the advancement of knowledge by interfacing spatial statistics and spatial optimization, a novel area of research that has not been investigated in the literature.*

Internal Grants

2/2021-12/2022 **Diversity Challenge Grant**, Cronley, C (PI), **H. Kim** (Co-PI). “Racial Disparities in Evictions: Building A Community Dashboard to Promote Transparency and Housing Justice”, The Division of Diversity and Engagement (DDE), \$2,000 funded by DDE, University of Tennessee.
Project description: *The project intends to examine potential racial disparities in eviction rates across East Tennessee, the potential exacerbating effects of COVID-19, and to compare the results to selected cities in the southeast. As deliverables, the team committed to constructing a dataset, analyzing the data, and making the resulting report publicly available. They also proposed to collaborate in hosting an open community forum to discuss the findings, and then maintain the dataset. Finally, the research team aims to make the dataset publicly available via the well-known website, Eviction Lab, which stores national city-level eviction data in an opensource format.*

B. Completed

External Grants

2011-2012 **The Lois and Samuel Silberman Fund, the Silberman Faculty Grant Program**, Choi, S (PI), and **H. Kim** (role: Consultant), “Contextual effects of community characteristics on health care behaviors among older foreign-born individuals”, \$20,000 funded by The FAHS-BECK fund for research and experimentation faculty research grant program. (\$4,000 allocated to candidate)
Project description: *This research fund supports our interdisciplinary research for public health and Geography. My role is to consult a customized geo-database design for health care research using GIS.*

2012-2014 **The Lois and Samuel Silberman Fund, the Silberman Faculty Grant Program**, Choi, S (PI), and **H. Kim** (role: Consultant), “Access to healthcare among Asian subgroups in the U.S.: examining the interaction between community- and individual-level characteristics using multilevel modeling”, \$20,000 funded by The FAHS-BECK fund for research and experimentation faculty research grant program. (\$424 allocated to candidate)
Project description: *This research fund supports our interdisciplinary research for public health and Geography. My role is to consult a customized geo-database design for health care research using GIS.*

2013-2014 **US Department of Transportation- Federal Highway Administration (TFHA)**, Shaw, S., A. Kohls, **H. Kim** (role: Co-PI), “Upgrading the Geographic Information System (GIS)”, \$360,950 funded by the US. TFHA (DTFH61-13-Q-00050). (\$8,792 allocated to candidate)

Project description: *The objective of this project is to conflate and transfer the National Highway System (NHS) designation from a legacy Geographic Information System Network (GIS-N) network to a more current, spatially accurate state GIS-N.*

2015-2016 **Asian American Quality of Life (AAQoL) Project**, Jang, Y (PI), **H. Kim** (role: Consultant), “Asian American Quality of Life (AAQoL) Survey”, \$139,758 funded by The City of Austin. (\$500 allocated to candidate)

Project description: *This project conducts surveys with Asian Americans (Chinese, Vietnamese, Asian Indian, Korean, and Filipino) in Austin, TX to explore their health and service needs. My role is to support geographical analysis using GIS to investigate the relationships between their mental health condition and other geo-spatial resources associated with their health such as dental service location and neighborhood characteristics.*

2015-2020 **Health and Health Disparities (NIA)**, Jang, Y (PI), M. Kim, C. Cubbin, D. Powers, N. Park, D.A. Chiriboga, K. Bernstein, **H. Kim** (role: Consultant), K. Kim, “Limited English proficiency, health, and healthcare in older immigrants”, \$1,360,300 funded by the National Institute on Aging (NIA). (total ~\$5,000 allocated to candidate)

Project description: *This NIA research project is to examine how the linguistic barriers of older immigrants affect their health and health care. I offer my expertise in Geographic Information Systems for health care research to this project, including complex geo-coding, data preparation, and locational analysis.*

Internal Grants

2011 **The USF Office of Community Engagement (OCE) STEM Service Learning Faculty Grant, Kim, H (role: PI)**, “GPS/GIS approach for sustainable community: Improving accessibility and safety for pedestrian, bicycle, and public transit mode in Temple Terrace”, \$1,500 funded by University of South Florida. (\$1,500 allocated to candidate)

Project description: *This research grant supports my community engagement research to improve students’ learning ability for sustainable transport system in the city of Temple Terrace. The final product was featured at the webpage of the Office of Community Engagement and Partnerships, University of South Florida (Published site: <http://engagementarchive.usf.edu/?p=2082>).*

2012-2013 **The Howard H. Baker Jr. Center for Public Policy Research Grant**, Ryerson, M.S (PI), and **H. Kim** (role: Co-PI), “Reducing transportation network vulnerability”, \$19,669 funded by University of Tennessee. (\$19,669 allocated to candidate)

Project description: *This research grant supports our interdisciplinary research for transportation science from civil engineering and transportation geography. My role is to develop location models to examine the vulnerabilities of air-transportation systems in the U.S. We have published a set of research articles to highly recognized journals and submitted two NSF grant proposals.*

2013-2014 **Professional Development Award, Kim, H (role: PI)**. “Network resilience through ad-hoc hubbing in critical infrastructure”, \$4,050 funded by University of Tennessee. (\$4,050 allocated to candidate)

Project description: *This project proposes a transformative hub network design approach for the protection of critical infrastructure, named ‘Ad-hoc Hub Protection Models for Critical Infrastructure (AD-PRO)’. As outcome, three research articles were published at Journal of Transport Geography and NETS, and NSF proposals were submitted two times.*

- 2016-2017 **Joint Directed Research and Development (JDRD-LDRD)**, Tran, L (PI), **H. Kim** (Co-PI): “Examining the energy-water nexus through the lens of the super network: combining water routing networks with energy production consumption networks”, \$49,962 funded by UT-ORNL Science Alliance. (\$49,962 allocated to candidates)
Project description: *This project integrates three different research approaches into a Super-Network-Process-based hydrologic modeling, geospatial statistics, and network analysis. My role is to develop a comprehensive network system for the integration of water, electricity, and space followed by the input-output analysis using spatial optimization.*
- 2016-2017 **Teaching for Impact Grants, Kim. H.** “Constructing interactive Geographic Information Systems using mobile GIS units”, \$496 funded by Tennessee Teaching and Learning Center (TENNTLC). (\$496 allocated to candidate)
Project description: *This teaching grant is used to redesign the courses of GIS (GEOG411) and Transportation (GEOG449). The courses introduce the concept of mobile GPS using smart phone-based apps and tablets to understand the role of participatory GIS.*
- 2018-2019 **Professional and Scholarly Development Awards (PSDA), Kim, H.** (PI), “Trauma center accessibility assessment for the improvement of healthcare equity: Geo-spatial approach”, \$4,804 funded by the College of Arts and Sciences, University of Tennessee.
- 2018-2019 **2018-9 CTR Fellow Award**, \$5,000 stipend funded by the Center for Transportation Research

FELLOWSHIPS

- 1996-1998&
1993-1994 **University Fellowship:** awarded for excellent academic achievement of undergraduate studies (full scholarship), Seoul National University, Seoul, South Korea.
- 1999-2001 **Woosan Foundation Fellowship:** awarded for excellent academic achievement in the field of Arts and Science, Woosan Foundation, Seoul, South Korea.
- 2002-2003 **The Ohio State University Fellowship:** awarded for excellent academic achievement among graduate students (full scholarship: one of 61 selected students entered in Graduate School), Graduate School, The Ohio State University.
- 2004 Summer **Summer Research Fellowship:** awarded to support for the dissertation research and publication, Department of Geography, The Ohio State University.
- 2006 Summer **Summer Research Fellowship:** awarded to support for the dissertation research and publication, Department of Geography, The Ohio State University.

RESEARCH AND TEACHING ASSISTANTSHIPS

- 1999-2001 **The Research Assistantship for Brain Korea 21 Projects:** awarded from the College of Social Science, Seoul National University, Seoul, South Korea.
Project title: “City networks in South Korea”, Faculty Researcher: Dr. Wookung Huh.

- 2003-2004 **The Research Assistantship for SBC Ameritech Faculty Fellowship Project:** awarded from SBC Ameritech Faculty Fellowship, The Ohio State University, Columbus, OH.
Project title: “Network reliability and resilience of hubs in the commercial Internet”, Faculty researcher: Dr. M.E. O’Kelly.
- 2004-2006 **Teaching Assistantship:** appointed as Teaching Associate, Department of geography, The Ohio State University, Columbus, OH.
- 2006-2008 **Research Assistantship:** appointed as Research Associate in the Center for Urban and Regional Analysis (CURA) and Institute for Population Research (IPR), The Ohio State University, Columbus, OH.

INVITED LECTURES/WORKSHOPS

International

- 2013 **Kim, H,** “*Vulnerability of critical infrastructure*”, The KOTI (The Korea Transport Institute) Seminar series, July 24, Ilsan, South Korea. (role: Invited guest speaker).
- 2015 **Kim, H,** “*A geographical perspective: risks, hazards, and transportation*”, Chonnam National University, Interdisciplinary studies colloquium series, May 29, 2015, Gwangju, South Korea. (role: Invited guest speaker).
- 2016 **Kim, H,** “*Disaster, risk, and reliable public transportation system*”, Seoul National University, Geography colloquium series, December 20, 2016, Seoul, South Korea. (role: Invited guest speaker).
- 2021 **Kim, H,** “*Resilient network design for transportation & logistics system*”, Inha University, Brain Korea (BK) 21 Global Scholar Colloquium series (4 weeks workshops), January 15, 2021 – February 5, 2021, Virtual workshop (role: Invited speaker).
- 2022 **Kim, H,** “*Infrastructures and social-economic policy factors in connecting rural and urban sustainability for the southern*”, US NSF SRS-RN Workshop, August 18-19, University of Tennessee. (role: Participant)
- 2023 **Kim, H,** “*Modeling Impact of Disruptions to Transport Networks with Spatial Equilibrium Concepts*”, by Dr. M. O’Kelly, Inha GSL BK21 Spring 2023 Lecture Series, May 24. Inha University, South Korea. (role: Invited participant).

Domestic

- 2008 **Kim, H,** “*Spatial modeling and GIS: location modeling, spatial analysis using GIS*”, July 19, Department of Geography, University of South Florida, FL. (role: Invited guest speaker).
- 2008 **Kim, H,** “*Spatial modeling using GIS for urban crime study*”, September, Community Engagement Colloquium, University of South Florida, FL. (role: Invited guest speaker).
- 2009 **Kim, H,** “*Network reliability of public transportation systems*”, March 30, CUTR Transportation Research Seminar, March 30, Center for Urban Transportation Center (CUTR), University of South Florida, FL. (role: Invited guest speaker).
- 2010 **Kim, H,** “*Crime scene, spatial analysis, and GIS*”, March 30, Geography Senior Colloquium Course Guest Speaker, Department of Geography, Environment, and Planning, University of South Florida, FL. (role: Invited guest speaker).

- 2010 **Kim, H**, “*GIS for transportation: coordinate system, database, and GPS*”, Jan 31, CUTR Guest Lecture, Center for Urban Transportation Center (CUTR), University of South Florida, FL. (role: Invited guest speaker).
- 2011 **Kim, H**, “*Toward more reliable transportation systems: Spatial analysis and network design*”, GIESN Brownbag Seminar Series, September, University of Cincinnati, OH. (role: Invited guest speaker).
- 2011 **Kim, H**, “*Network reliability of transportation systems: spatial analysis and network design*”, March, Department of Geography, University of Tennessee in Knoxville, TN. (role: Invited guest speaker).
- 2011 **Kim, H**, “*Survivable network design for telecommunication networks*”, March 7, INFORMS Lecture Series, University of South Florida, FL. (role: Invited guest speaker).
- 2012 **Kim, H**, “*Vulnerability of hub networks: Spatial analysis and modeling*”, CEE (Civil and Environmental Engineering) Transportation Seminar Series, November 29, University of Tennessee, TN. (role: Invited seminar speaker).
- 2012 **Kim, H**, “*Towards more reliable hub networks: Spatial analysis, modeling, and implication*”, Oak Ridge National Laboratory Seminar, October, Oak Ridge, TN. (role: Invited guest speaker).
- 2012 **Kim, H**, “*Geographic data, spatial analysis, and complexity*”, CISML (Center for Intelligent Systems and Machine Learning) Seminar Series, April, University of Tennessee, TN. (role: Invited guest speaker).
- 2014 **Kim, H**, “*Geographical view on transportation network security*”, Ted Cope (NGIA) visit talk, December 19, University of Tennessee, TN (role: Selective presenter).
- 2016 **Kim, H**, “*Towards reliable public transportation systems*”, The Haslam Scholars Program's Faculty Lecture Series, April 15, University of Tennessee, TN. (role: Invited seminar speaker).
- 2016 **Kim, H**, “*Transport analysis and GIS*”, CEE (Civil and Environmental Engineering) Transportation Seminar Series, April 14, University of Tennessee, TN. (role: Invited seminar speaker).
- 2018 **Kim, H**, “*Evolution of transit systems: Measures, equity, and policy implications*”, CEE (Civil and Environmental Engineering) Transportation Seminar Series, November 15, University of Tennessee, TN. (role: Invited seminar speaker).
- 2021 **Kim, H**, “*Spatial inequality and urban-rural divide of healthcare: A location modeling approach*”, Workshop: Social Inequality in Energy, Environment, and Technology, Center for the Study of Social Justice, August 14, University of Tennessee, Knoxville, TN. (role: Invited workshop presenter).
- 2021 **Kim, H**, “*Spatial autocorrelation for solving p-median problem: exploring an exact approach*”, Geography/GIS Colloquium, October 29, University of Cincinnati, OH. (role: Invited speaker).

PROFESSIONAL CONFERENCES AND MEETINGS

Note: *: graduate student coauthors, __: presenter.

- 2001 **Kim, H**, “Spatial structure and characteristics of information flows on the Internet” paper presented at *The Korean Geographical Society (KGS)*, May 2001, Kongju, South Korea.

- 2001 Huh, W, and **H. Kim**, “Information flows on the Internet of Korea” paper presented at *Digital Communities 2001: Cities in the Information Society Conference*, November 4-6, 2001, Chicago, IL.
- 2004 Kim, C, M. E. O’Kelly, and **H. Kim**, “Internet backbone network design”, *Annual meeting of Association of American Geographers (AAG)*, March 19, 2004, Philadelphia, PA.
- 2004 **Kim, H**, M.E. O’Kelly, and C. Kim, “Network reliability and resilience of hubs in the commercial Internet”, *Annual Meeting of Association of American Geographers (AAG)*, March 19, 2004, Philadelphia, PA.
- 2004 O’Kelly, M.E., **H. Kim**, and C. Kim, “Network analysis for resilience and survivability”, *Regional Science Association International British and Irish Section*, August 20, 2004, Cork, Ireland.
- 2004 **Kim, H**, and M E. O’Kelly, "Survivability of commercial backbones with peering: a case study of Korean networks", *Regional Science Association International (RSAI) 2004 Annual meeting*, Seattle, WA.
- 2005 **Kim, H**, and M. E. O’Kelly, “Enhancing the network performance of the commercial Internet”, *Annual Meeting of Association of American Geographers (AAG)*, April 5, 2005, Denver, CO.
- 2006 **Kim, H**, and M. E. O’Kelly, “ p -Hub dispersion models for reliable design in telecommunication network”, *Regional Science Association International (RSAI) 2006 Annual meeting*, November, 2006, Toronto, Canada.
- 2006 **Kim, H**, and M. E. O’Kelly, “ p -Hub dispersion model of telecommunication network”, *Annual Meeting of Association of American Geographers (AAG)*, March 11, 2006, Chicago, IL. (Chair of Session: Spatial Analysis of Human Dimensions).
- 2007 **Kim, H**, and M. E. O’Kelly, “ p -Hub protection models for survivable network design”, 2007, *Annual Meeting of Association of American Geographers (AAG)*, April 20, 2007, San Francisco, CA.
- 2008 **Kim, H**, “Multi-objective hub location models for reliable network design”, *Annual Meeting of Association of American Geographers (AAG)*, April 16, 2008, Boston, MA.
- 2009 **Kim, H**, “Network reliability of public transportation systems: a case study of Korean subway networks”, Special Session for Critical Infrastructure, *Annual Meeting of Association of American Geographers (AAG)*, March 16, 2009, Las Vegas, NV.
- 2009 Kim, C, Y. Chun, and **H. Kim**, “Modeling the spatio-temporal structure of traffic accident: link-based analysis”, *The 56th Regional Science Association International (RSAI) 2009 Annual meeting*, San Francisco, CA.
- 2010 **Kim, H**, C. Anderson*, and Y. Chun, “Crime scene locations in cases of criminal homicide: spatial crime analysis in a GIS environment”, *Special Session for Crime mapping and Modeling, Annual Meeting of Association of American Geographers (AAG)*, April 15, 2010, Washington D.C.
- 2010 Kim, C, Y. Chun, **H. Kim**, and S. Sang, “Network autocorrelation in modeling commodity flows of the U.S.”, *Annual Meeting of Association of American Geographers (AAG)*, April 16, 2010, Washington D.C.

- 2010 **Kim, H.**, C. Kim and Y. Chun, "Network reliability and resiliency of rapid transit systems: a case study of the transit system in the greater metropolitan area of Washington D.C.", *The 57th Regional Science Association International (RSAI) 2010 Annual meeting*, November 11, 2010, Denver. CO.
- 2011 **Kim, H.**, "*p*-Hub protection models: Survivable hub network design", *Special Session for Spatial Optimization and GIS, Annual Meeting of Association of American Geographers (AAG)*, April 13, 2011, Seattle, WA.
- 2011 **Kim, H.**, Panelist, "Establishing identity of geographic features: a special focus on controversies in naming the sea between Korea and Japan", *Special Panel Session, Annual Meeting of Association of American Geographers (AAG)*, April 14, 2011, Seattle, WA.
- 2011 **Kim, H.**, Y. Chun, and K. Kim, "Districting functional regions using geographical flows", *The 58th Regional Science Association International (RSAI) 2011 Annual meeting*, November 11, 2011, Miami. FL.
- 2012 **Kim, K.**, **H. Kim**, and Y. Chun, "Developing a heuristic algorithm for a *p*-functional regions problem", *Annual Meeting of Association of American Geographers (AAG)*, February 26, 2012, New York, NY.
- 2012 **Kim, H.** and Y. Song, "Evolution of an urban massive transit system: Seoul's experience", *Annual Meeting of Association of American Geographers (AAG)*, February 27, 2012, New York, NY.
- 2012 Kim, C, **H. Kim**, and J. Lee, "Toward a realistic hub network model: Examining differences between theoretical and practical hub locations using empirical air passenger data", *Annual Meeting of Association of American Geographers (AAG)*, February 27, 2012, New York, NY.
- 2012 **Kim, K.**, Y. Chun, and **H. Kim**, "A heuristic approach for delineating functional regions", *The 59th Regional Science Association International (RSAI) 2012 Annual meeting*, November 8, 2012, Ottawa. Canada.
- 2013 **Kim, C.**, Y. Chun, and **H. Kim**, "An examination of traffic accidents", *Annual Meeting of Association of American Geographers (AAG)*, April 9, 2013, Los Angeles, CA.
- 2013 **Kim, H.** and M. Ryerson, "Evolution of hub hierarchies of passenger airlines of U.S.", *Annual Meeting of Association of American Geographers (AAG)*, April 13, 2013, Los Angeles, CA. (Session Chair of Spatial Optimization and Analysis).
- 2013 **Kim, K.**, Y. Chun, and **H. Kim**, "Location optimization for detecting *p*-functional spatial clusters", *Annual Meeting of Association of American Geographers (AAG)*, April 13, 2013, Los Angeles, CA.
- 2013 **Kim, H.** and M. Ryerson, "q-Ad-hoc hub assignment due to hub outages", invited for the session Optimization, Spatial Analysis and GIS of the 2013 *INFORMS Annual meeting*, October 7, 2013, Minneapolis, MN.
- 2013 Kim, K, **H. Kim**, and Y. Chun, "Location optimization for detecting *p*-functional spatial clusters", *The 60th Regional Science Association International (RSAI) 2013 Annual meeting*, November 15, 2013, Atlanta. GA.
- 2013 **Kim, H.**, "Ad-hoc hub location problem for air transportation networks", *The 60th Regional Science Association International (RSAI) 2013 Annual meeting*, November 15, 2013, Atlanta. GA.

- 2013 **Kim, H.**, “Ad-hoc hub location problem for sea port outage”, *The 3rdKSEA Southeastern Regional Conference (SERC)*, Geospatial Technology for Our Vulnerable Society, February 23, Atlanta, GA.
- 2014 **Ye, H***, and **H. Kim**, “Measuring spatial health disparity in a GIS environment”, *UT Geography’s Inaugural Research Symposium*, February 21, Knoxville, TN.
- 2014 **Ye, H***, and **H. Kim**, “Measuring spatial health disparity in a GIS environment: A Case Study of Hillsborough County, FL”, *Annual Meeting of Association of American Geographers (AAG)*, April 12, 2014, Tampa, FL.
- 2014 **Kim, K.**, **H. Kim**, and Y. Chun, “A spatial optimization approach for districting housing market areas”, *Annual Meeting of Association of American Geographers (AAG)*, April 12, 2014, Tampa, FL.
- 2014 **Kim, H.**, and M. Vanderlan* “A Geographical perspective: Behavior of hub location in hub network design”, *Annual Meeting of Association of American Geographers (AAG)*, April 12, 2014, Tampa, FL.
- 2014 **Li, Y***, and **H. Kim**, “Survivability of the Beijing subway system with the completion of an additional subway line”, *Annual Meeting of Association of American Geographers (AAG)*, April 12, 2014, Tampa, FL.
- 2014 **Kim, H.**, Y. Song, and T. Ahn, “Examining accessibility and reliability with the evolution of subway system in Seoul Metropolitan Area”, *The 61th Regional Science Association International (RSAI) 2014 Annual meeting*, November 15, 2014, Washington D.C.
- 2015 **Song, Y.**, **H. Kim**, and K. Lee, “Equity implications of the subway network expansion in a Metropolitan Area”, *The 62nd Regional Science Association International (RSAI) 2015 Annual meeting*, November 13, 2015, Portland, OR.
- 2015 **Kim, H.**, “Assessing vulnerability of mass transit systems using reliable paths problems”, *The 62nd Regional Science Association International (RSAI) 2015 Annual meeting*, November 14, 2015, Portland, OR.
- 2015 **Song, Y.**, and **H. Kim**, "Network evolution and the change of its structural characteristics: the case of Seoul Subway System", *Annual Meeting of Korean Geographers*, November 16 2015, Seoul, South Korea.
- 2015 **Ye, Q***, and **H. Kim**, “Reducing hazards vulnerability of transportation network: A case study with the Amtrak rail system”, *Annual Meeting of Association of American Geographers (AAG)*, April 21, 2015, Chicago, IL.
- 2015 **Kim, H.**, and Q. Ye*, “Assessing vulnerability of public transit systems: A reliable paths optimization approach”, *Annual Meeting of Association of American Geographers (AAG)*, April 22, 2015, Chicago, IL.
- 2015 **Ye, H***, and **H. Kim**, “Locating health care facilities using an alternative covering location problem”, *Annual Meeting of American Association of Geographers (AAG)*, April 23, 2015, Chicago, IL.
- 2016 **Ye, H***, and **H. Kim**, “Locating healthcare facilities using a network-based covering location problem”, *Annual Meeting of American Association of Geographers (AAG)*, March 30, 2016, San Francisco, CA.

- 2016 **Kim, H.**, J. Auerbach*, Q. Ye*, and H. Ye*, “Resilience of heavy rail transit networks of United States”, *Annual Meeting of American Association of Geographers (AAG)*, March 31, 2016, San Francisco, CA.
- 2016 **Ye, Q*** and **H. Kim**, “Characteristics of air passenger transport networks: A comparative analysis between China and the United States”, *Annual Meeting of American Association of Geographers (AAG)*, April 1, 2016, San Francisco, CA.
- 2017 **Song, Y.**, **H. Kim**, K. Lee, and K. Ahn, “Change of transit equity following subway network expansions in a metropolitan area”, *Annual Meeting of Korean Geographers*, June 23 2017, Gwangju, South Korea.
- 2017 **Kim, H.**, L. Tran, and Q. Ye “Spatial optimization for spatial disaggregation of energy consumption using socio-economic data”. *Annual Meeting of American Association of Geographers (AAG)*, April 9, 2017. Boston, MA.
- 2018 **Zang, Y.**, Han, L., and **H. Kim**, “Dijkstra-DBSCAN: Fast, accurate and routable density based clustering of traffic incidents on large road network”, *The 2018 Transportation Research Board Annual Meeting*, Jan 7-11, Washington D.C.
- 2018 **Ye, Q***, and **H. Kim**, “Assessing network vulnerability of heavy rail systems with the impact of partial node failures”, *Annual Meeting of American Association of Geographers (AAG)*, April 11, 2018, New Orleans, LA.
- 2018 **Auerbach, J***, and **H. Kim**, and E. Fitzhugh. “Optimization of network connectivity: An evaluation of meta-heuristics and how small changes in street connectivity result in big gains for student walking”, *Annual Meeting of American Association of Geographers (AAG)*, April 14, 2018, New Orleans, LA.
- 2018 **Kim, H.**, Tran, L., and R. McManamaya, “Assessing the spatial disparity of energy production and consumption using multi-variates disaggregation models”, *Annual Meeting of American Association of Geographers (AAG)*, April 14, 2018, New Orleans, LA.
- 2018 **Kim, K.**, **H. Kim**, “A spatial optimization approach for simultaneously districting precincts and locating polling stations”, *The 65th Regional Science Association International (RSAI) 2018 Annual Meeting*, November 9, 2018, San Antonio, TX.
- 2019 **Kim, H.**, Chun, Y, D. Griffith, “Spatial autocorrelation for solving p-median problem”, *Annual Meeting of American Association of Geographers (AAG)*, April 5, 2019, Washington D.C.
- 2019 **Kim, H.**, Y. Song, “Geographic perspective for the assessment of transportation network vulnerability”, *2019 The Annual Conference of Korean Association of Regional Geographers*, June 14, 2019, Gwangju, South Korea.
- 2019 **Kim, H.**, Chun, Y, D. Griffith, “An efficient solution approach for solving p-median problem using spatial autocorrelation”, *The 66th Regional Science Association International (RSAI) 2019 Annual Meeting*, November 16, 2019, Pittsburgh, PA.
- 2020 **Kim, H.**, K, Lee., Y. Song, “Fair distribution of public transport benefits? A case study of Seoul’s public transit systems”, *2020 WRSA-PRSCO Joint Meeting in Hawaii, 2020 Annual Meeting*, March 18, 2020, Waikiki, HI, USA (the meeting was canceled due to Covid-19).
- 2021 **Kim, H.**, “Spatial disparity of housing markets during times of financial risk in the United States”, March 19, 2021. GeoSym2021. University of Tennessee.

- 2021 **Kim, H.**, “Assessing transit benefits of integrated public transit systems”, *Annual Meeting of American Association of Geographers (AAG)*, April 9, 2021, Denver (Virtual Session).
- 2021 **Che, H***, **H. Kim**, Y. Chun, “Assessing trauma center accessibility for the Improvement of healthcare equity using anti-covering approach” , *The 68th Regional Science Association International (RSAI) 2021 Annual Meeting*, November 10-13, 2021, Denver, CO.
- 2021 **Kim, H.**, J. Auerbach, “Evaluation of heuristics for local network connectivity optimization: A case study of complex spatial networks”, *The 68th Regional Science Association International (RSAI) 2021 Annual Meeting*, November 10-13, 2021, Denver, CO.
- 2021 **Lee, C***, **H. Kim**, Y. Chun, D. Griffith “Delineating police patrol areas using a p-median location problem”, *The 68th Regional Science Association International (RSAI) 2021 Annual Meeting*, November 10-13, 2021, Denver, CO.
- 2022 **Kim. H.**, J. Auerbach*, “Resilience of heavy rail networks with multiple routes and hubs”, *Annual Meeting of American Association of Geographers (AAG)*, February 24-28, 2022, New York (Virtual Session).
- 2022 **Oh. C***, **H. Kim**, “Assessing and planning of the location of emergency medical facilities using spatial optimization modeling approach”, *Annual Meeting of American Association of Geographers (AAG)*, February 24-28, 2022, New York (Virtual Session).
- 2022 **Lee, C***, **H. Kim**, Y. Chun, D. Griffith, “Time varying delineation of police patrol areas: A p-median problem approach for daytime and nighttime patrolling”, *Annual Meeting of American Association of Geographers (AAG)*, February 24-28, 2022, New York (Virtual Session).
- 2022 Chun. Y, D. Griffith, **H. Kim**, “Spatial autocorrelation informed approaches to solving location-allocation problems”, *Annual Meeting of American Association of Geographers (AAG)*, February 24, 2022, New York (Virtual Session).
- 2022 **Che. H***, **H. Kim**, “Improving trauma center accessibility from motor vehicle accidents using anti-covering approach”, *Annual Meeting of American Association of Geographers (AAG)*, February 24, 2022, New York (Virtual Session).

TEACHING

Department of Geography, Ohio State University (2005-2007)

- **Geography120:** Earth System II: Atmospheric Environment (Winter 2007, Fall 2006)
- **Geography200:** World Regional Geography (Spring 2005-6, Winter 2005-6, Fall 2004-5)
- **Geography645:** Geography of Transportation (Spring 2007)

Department of Geography, Environment, and Planning, University of South Florida (2008-2011)

- **GIS5049:** GIS for non-majors (Fall 2008-10, Spring 2009-11, Summer 2009-11)
- **GIS5075:** Global Positioning Systems (Fall 2008-10, Summer 2009-11)
- **GIS6307:** Socio-economic applications for GIS (Spring 2010-11)
- **CGN6933:** GIS in Transportation (2009 Spring, Guest lecture)

Department of Geography, University of Tennessee (2011-present)

- **GEOG311:** Geovisualization/Geographic Information Science (Spring 2022)
- **GEOG411:** Intermediate GIS (Fall 2012, Fall 2013, Spring 2014, Fall 2014, Fall 2016, Spring 2017, Fall 2019, Spring 2020, Fall 2020, Spring 2021, Fall 2021)
- **GEOG449:** Geography of Transportation (Fall 2012, Fall 2013, Spring 2015, Spring 2016, Spring 2017, Spring 2018, Spring 2019, Spring 2020, Spring 2021, Spring 2022, Spring 2023)
- **GEOG495:** Special Topics in Geography: Spatial analysis and GIS for urban issues (Spring 2012)
- **GEOG501:** Colloquium in Geography (Spring 2015)
- **GEOG506:** Direct Readings (Every semester since Summer 2012)
- **GEOG509:** Topics in Geography: Fundamentals of location analysis and modeling (Fall 2011)
- **GEOG509:** Topics in Geography: GIS for socio-economic problems (Spring 2014, Spring 2016, Fall 2017, Fall 2018)
- **GEOG515:** Advanced Quantitative Methods (Spring 2023)
- **GEOG517:** Geographic Information Management and Processing (Spring 2012, Spring 2013, Spring 2015)
- **GEOG549:** Topics in the Geography of Transportation (Fall 2015, Fall 2017, Fall 2020)
- **GEOG649:** Seminar in Transportation Geography (Fall 2014, Fall 2016, Fall 2018, Fall 2020)
- **GEOG515:** Special Topics in Quantitative Geography (Spring 2023)

PROFESSIONAL ACTIVITIES & SERVICES

A. International/National levels

- | | |
|--------------|---|
| 2009-2010 | Member, Scholarship Grant Review Committee, Pixoneer Scholarship Awards, <i>Korean-American Association for Geospatial and Environmental Sciences (KAGES)</i> . |
| 2011-2013 | SEDAAG Program Committee, <i>South East Division of AAG (SEDAAG)</i> . |
| 2014-2016 | Board Member (elected), Transportation Geography Specialty Group (TGSG) of <i>The American Association of Geographers (AAG)</i> . |
| 2014-2017 | Newsletter Editor (elected), <i>Korean-American Association for Geospatial and Environmental Sciences (KAGES)</i> . |
| 2014-2016 | Board Member (elected), <i>Korean-American Association for Geospatial and Environmental Sciences (KAGES)</i> . |
| 2002-present | Member, Spatial Analysis and Modeling (SAM) Specialty Group of <i>The American Association of Geographers (AAG)</i> . |
| 2013-present | Editorial Board Member (elected), <i>The Korean Association of Professional Geographers</i> . |
| 2017-present | Editorial Board Member (elected), <i>The Journal of the Economic Geographical Society of Korea</i> . |
| 2019-present | Editorial Board Member (elected), <i>The Korean Cartographic Association (KCA)</i> . |
| 2019-present | Board Member (elected), Spatial Analysis and Modeling Specialty (SAM) Group of <i>The American Association of Geographers (AAG)</i> . |
| 2019-2020 | Guest Editor of the Special Issue "Toward Sustainability: Reliable Transportation Network Design and Analysis", <i>Sustainability</i> . |
| 2019-present | Editorial Board Member, <i>The Professional Geographer</i> . |
| 2021-present | Review Editor on the Editorial Board of <i>Urban Economics (specialty section of Frontiers in Sustainable Cities)</i> . |

2022-present Vice Chair (elected), Spatial Analysis and Modeling Specialty (SAM) Group of *The American Association of Geographers (AAG)*.

B. University/College/Department levels

Ohio State University (2002-2008)

Departmental Service

2004-2005 Graduate Student Representative, Department of Geography
2006 May Professional Graphic Assistant, the Presidents Salute to Undergraduate Academic Achievement, Department of Geography
2008 April Presentation Assistant, Graduate Student Recruitment, Department of Geography

University of South Florida (2008-2011)

Departmental Service

2008 August Member, Faculty Search Committee for Urban Planning, Department of Geography
2009 February Member, Student Travel Grants Review Committee, Department of Geography
2008-2011 Chair, GIS Committee, Department of Geography
2011 July Faculty Search Committee for GIS, Department of Geography

University Service

2009 November Organizer, USF Graduate & Professionals Recruitment Fair, University of South Florida

University of Tennessee (2011-present)

Departmental Service

2013-present Member, Technology/Tech Fee Committee, Department of Geography
2014 Member (elected), Awards Committee, Department of Geography
2014-2020 Member, Graduate Admission Committee (GAC), Department of Geography
2016-2019 Elements Liaison, Department of Geography
2020-2021 Associate Director of Graduate Studies, Department of Geography
2016-2017 Associate Director of Graduate Studies, Department of Geography
2017-2020 Director of Graduate Studies, Department of Geography
2011-2017 Computer Labs Administrator, Department of Geography
2014-2017 Member (elected), Executive Committee, Department of Geography
2011-2014 Member, Undergraduate Program Committee, Department of Geography
2012-2014 Member, Web/Social Media Committee, Department of Geography
2015 Spring Visiting Speakers/Colloquium 501 Coordinator, Department of Geography
2016 Spring Member, GIS Coordinator Search Committee, Department of Geography
2016 Spring Member, GIS Faculty Search Committee, Department of Geography
2020-present Chair of the McCroskey Fund Committee, Department of Geography
2020-present Member, Special Event Coordinating Committee, Department of Geography
2021 Member, Ad-hoc Search Committee for GIS lecturer position, Department of Geography
2021-present Chair, Award and Honors Committee
2021-present Member, Teaching Review committee
2023 Spring Chair, Teaching Review committee

2021 Peer evaluator of Teaching for Dr. Qiusheng Wu

College Service

2015-2018 Faculty Senate (elected), College of Arts and Sciences, University of Tennessee
2016. April Big Orange Family Campaign Volunteers
2022-present Member, Committee of the College of Arts and Sciences Alumni Awards

University Service

2014-2018 Member, Baker Center Global Security Programming Committee, Howard H. Baker Center, University of Tennessee
2016-2018 Member, Review Committee, Chancellor's Awards of Excellence in Teaching, University of Tennessee
2018 Summer Panelist for the Recruitment Event of Prospective Students' Campus Visit from Concord University (6/1/2018)
2022- Member, AI TENNessee Initiative

Domestic Service

2022 Spring Mentor of MZ generation Korean young scholars, *Korean-American Association for Geospatial and Environmental Sciences (KAGES)* and *Korean Geographical Society (KGS)*: Academic Mentor for Dr. Junghwan Kim (Assistant Professor, Department of Geography, Virginia Tech)
2022 Spring Academic Mentor for Dr. Jeremy Auerbach (Assistant Professor, University College Dublin, Ireland)

C. Conferences Organization

2000 July-Aug Assistant coordinator for International Geographical Union (IGU) commission on Communication Networks and Telecommunication, Annul Conference and Pre-Congress Meeting, Kwangju, South Korea
2000. Aug Assistant session coordinator for International Geographical Union (IGU) Annul Conference, Seoul, South Korea

D. Continuing Education Activities

2011 Fall New Faculty Orientation for Research (3 sessions), University of Tennessee
2011 Summer Grant Writing and Proposal Development Certificate program, University of Tennessee (taken 5 courses), University of Tennessee
2014-2019 OIT Security Awareness Training, University of Tennessee

GRADUATE SUPERVISION

University of South Florida (2008-2011)

Committee Member (1 doctoral and 5 master students' committees)

Ph.D. (graduated)

- Sean Barbeau, Computer Science, University of South Florida (2012, CUTR senior researcher)

M. S. (graduated)

- Tyler Hoffmann, Geography, University of South Florida (2010)

- Casey C. Anderson, Anthropology, University of South Florida (2009)
- Geoffery Fouad, Geography, University of South Florida (2009)
- Ariana Tatum, Geography, University of South Florida (2009)
- Clay Smithers, Geography, University of South Florida (2009)

University of Tennessee (2011-present)

Major Advisor (8 doctoral and 2 master students)

Ph.D. (graduated)

- Huaiaren Ye, Ph.D. Geography, University of Tennessee (2016 Spring), Senior Geospatial Statistician, Location, Inc.
- Qian Ye, Geography, University of Tennessee (2018 Summer), GIS Analyst & Statistician, HighGrove Partners, Inc.
- Jeremy Auerbach, Geography, University of Tennessee (2018 Summer), Assistant Professor, University College Doblin, Ireland
- Pankaj Dahal, Civil and Environmental Engineering (Co-chair 2022 Spring), University of Tennessee
- Heewon Chea, Geography, University of Tennessee (2022 Summer), Planning scientist, Center for Transportation Research (CTR), Tennessee
- Mojdeh Azad Disfany, Civil and Environmental Engineering (Co-chair), University of Tennessee (2023 summer)

Ph.D. (in progress)

- Changwha Oh, Geography, University of Tennessee (2021-in progress)
- Wanhee Lee, Geography, University of Tennessee (2023- in progress)

M. S. (graduated)

- Robert Taylor, Geography, University of Tennessee (2016 Spring, GIS-T Researcher at University of Tennessee Transportation Center)
- Yan Li, Geography, University of Tennessee (2014 Summer, currently Ph.D program at Univ. of Minnesota)

Committee Member (10 doctoral and 5 master students' committees)

Ph.D. (graduated)

- Yang Xu, Geography, University of Tennessee (2015 Fall, Assistant Professor, Department of Land Surveying and Geo-Informatics, The Hong Kong Polytechnic University)
- Ziliang Zhao, Geography, University of Tennessee (2015 Fall, Amazon)
- Gengen He, Geography, University of Tennessee (2017 Spring, Assistant Professor in the School of Geographical Sciences at University of Nottingham Ningbo China)
- Jiaoli Chen, Geography, University of Tennessee (2017 Spring)
- Yang Zhang, Civil and Environmental Engineering, University of Tennessee (2017 Spring)
- Kevin Krivacsy, Geography (2018 Summer)

- Sandhya Nepal, Geography, University of Tennessee (2018 Fall)
- Donghee Koh, Geography, University of Tennessee (2020 Spring)
- Jimmy Feng, Geography & Sustainability, University of Tennessee (2022 Fall)
- Yangsong Gu, Civil and Environmental Engineering (2023 Summer)

Ph.D. (in progress)

- Connor Reed, Geography, University of Tennessee (2020 Fall)

M. S. (graduated)

- Kelly Sims, M.S. Geography, University of Tennessee (2014, Researcher at ORNL)
- Yicong Zhong, M.S. Geography, University of Tennessee (2014 Winter)
- Yuan Liu, M.S. Geography, University of Tennessee (2014 Winter, ESRI)
- Nirbesh Dhakal, Civil and Environmental Engineering, University of Tennessee (2017 Spring)

M. S. (in progress)

- None as of 2022

UNDERGRADUATE RESEARCH SUPERVISION (6 STUDENTS)

- Darcy Ayers, Anthropology, University of Tennessee. (2014-2016)
Note: Darcy Ayers was the winner of the 2015 Summer Undergraduate Internship from Office of Undergraduate Research (2015) under my supervision.
- Codi Drake, Urbanism and Transportation Planning, University of Tennessee. (2018-2020)
Note: Codi was selected as one of the recipients of the College Scholars Program. I work with him to develop his honor thesis, titled “Battery Electric Bus Operational Analysis and Policy Review”.
- Luke Lawley, and Sophie Stanley, Geography, University of Tennessee. (2022 Summer)
Note: Luke and Sophie were selected as the recipients of the McCroskey Awards in Geography. I advised them to develop their undergraduate research, titled “Comparative studies of high-speed rail systems”.
- Shree Kypa, and Paige Wenger, Biology and Biochemistry, University of Tennessee (2022 Fall)
Note: Shree and Paige are selected as student researchers of the Honors and Scholars Fellowship to support the research project lead by me, titled “Spatial and social disparity of health care access in Tennessee”.

PROFESSIONAL REVIEW SERVICES

A. Grant Peer Research Reviews

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|------|--|
| 2014 | NSF grant proposal review for the Methodology, Measurement, and Statistics (MMS) Program |
| 2015 | NSF grant proposal review for the Geography and Spatial Science (GSS) Program |
| 2018 | NSF grant proposal review for the OAC - Software Institutes Program |

2020 NSF grant proposal review for the Human-Envi & Geographical Scis (BCS) Program

B. Tenure & Promotion Review

2022 Summer Assistant Professor, Washington State University Health Sciences, Washington State University (R1)

C. Journal review services (*indicates SCI/SSCI journals: total 160 as of 2022)

*Annals of the Association of American Geographers** (2009, 2010, 2014)

*Applied Mathematical Modelling** (2011)

*Areas** (2013)

*Computers, Environment and Urban Systems** (2017, 2018 (4), 2019(3), 2020(3))

Computers & Industrial Engineering (2014)

Computers & Operations Research (2017, 2018, 2019, 2020)

Crime Modeling and Mapping Using Geospatial Technology (2011)

Concurrency and Computation: Practice and Experience (2020)

*European Journal of Operational Research** (2013, 2014, 2015)

Euro Working Group on Transportation EWGT 2019 (2019)

Frontiers In Sustainable Cities (2021)

*Geographical Analysis** (2008, 2009, 2012, 2013 (3), 2014(2), 2021)

GeoJournal (2010, 2014)

Health Services and Outcomes Research Methodology (2021)

ICCCT Telecommunications Systems (2012)

*International Journal of Applied Geospatial Research** (2011)

*International Journal of Geographic Information Science** (2016 (4), 2017)

*International Journal of Health Geographies** (2020)

International Journal of Management Science and Engineering Management (2019)

*International Journal of Sustainable Transportation** (2017, 2019)

*International Planning Studies** (2020)

*International Journal of Urban Sciences** (2018(2))

*International Regional Science Review** (2017, 2018, 2023)

*Journal of Advanced Transportation** (2015, 2016)

*Journal of Geographical Systems** (2010(2), 2016, 2020)

Journal of Health Care for the Poor and Underserved (2020, 2022)

*Journal of Public Transportation** (2021)

Journal of the Economic Geographical Society of Korea (2014)

Journal of the Korean Cartographic Association (2013, 2015)

Journal of the Korean Geographical Society (2014)

*Journal of Transport Economics and Policy** (2011, 2012)

*Journal of Transport Geography** (2014(3), 2015(3), 2019(4), 2020(4), 2022 (2), 2023 (2))

*Journal of Transportation Safety & Security** (2018)
*Multimedia Tools and Applications** (2013, 2014)
*Natural Hazards** (2017)
*Networks and Spatial Economics** (2016, 2017, 2019)
*Operations Research Perspectives** (2016, 2017)
Optimal Districting and Territory Design: Models, Algorithms, and Applications (2018)
*Papers in Regional Science** (2018, 2022)
*PLoS ONE** (2016, 2017, 2018, 2019(2))
*Proceedings of the National Academy of Sciences of the United States of America (PNAS)** (2018)
*Social Science & Medicine** (2014(2))
Socio-Economic Planning Sciences (2021, 2022)
Spatial and Spatio-Temporal Epidemiology (2009)
*Sustainability** (2019 (9))
*Sustainable Cities and Society** (2018)
Telematics and Informatics (2011)
The Korean Association of Professional Geographers (2013)
*The KSCE Journal of Civil Engineering** (2013(2))
*The Professional Geographer** (2019(3), 2020(2), 2021(3), 2022(3), 2023)
*Transactions in GIS** (2012, 2013(3), 2014, 2015, 2020, 2021)
*Transportation** (2016, 2017(4), 2018(3), 2020)
*Transportation Research Part-A** (2021(3))
*Transportation Research Part-D** (2019)
*Transportation Research Part-E** (2010, 2013)
*Transportation Science** (2014, 2015)
Transport policy (2021, 2022)
Travel behaviour and Society (2021(3))

PROFESSIONAL AFFILIATIONS AND MEMBERSHIPS

1999-present	The Korean Geographical Society (KGS)
2002-present	The American Association of Geographers (AAG)
2004-present	Regional Science Association International (RSAI)
2009-present	South Eastern Division of the American Association of Geographers (SEDAAG)
2009-present	Korean-American Association for Geospatial and Environmental Sciences (KAGES)
2011-present	Korean-American Scientists and Engineers Association (KSEA)
2013-present	Institute for Operations Research and the Management Science (INFORMS)
2021-present	American Public Health Association (APHA)
2021-present	Ecological Society of America (ESA)

SOFTWARE PROFICIENCIES

GIS Software: ArcGIS, QGIS, TRANSCAD, MAPTITUDE, SANET

GPS Units: GARMIN GPS device series, Trimble SE, TRACT-IT (Mobile GPS), ArcPad

Programming Languages: Visual Basic, ArcObject, FORTRAN, C, Pythons, NetworkX

Optimization Software: CPLEX, LINGO, LINDO, GAMS, GUROBI

Statistics Software: SPSS, R, GeoDa, Pythons