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CyberGIS Center for Advanced Digital and Spatial Studies
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RESEARCH AND TEACHING INTERESTS

Geographic Information Science and Systems (GIS), Spatial Data Science, Urban Dynamics, Spatiotemporal Analysis, Dynamic (24-hour) Accessibility, CyberGIS.

EDUCATION

Postdoctoral Research Associate, CyberGIS Center for Advanced Digital and Spatial Studies, University of Illinois Urbana-Champaign, USA 2022–Present
 Supervisor: Dr. Shaowen Wang

Ph.D., Department of Geography, Texas A&M University, USA 2017–2021
 Advisor: Dr. Daniel W. Goldberg
 Dissertation Title: Advancing Spatial Accessibility Measurements to Urban Infrastructure: Uncovering Temporal Dynamics and Uncertainty

M.S., Department of Geography, Kyung Hee University, Republic of Korea 2014–2016
 Advisor: Dr. Jinmu Choi
 Thesis Title: Comparison of Address Coordinates with the Change in Korean Address System

B.S., Department of Geography, Kyung Hee University, Republic of Korea 2008–2013
 Advisor: Dr. Chulsue Hwang

PROFESSIONAL EXPERIENCE

University of Illinois Urbana-Champaign
 Instructor, Department of Geography and Geographic Information Science Spring 2022

Texas A&M University
 Graduate Assistant Non-Teaching, Division of Information Technology 2018–2021
 Graduate Assistant Teaching, Department of Geography 2017

Kyung Hee University
 Administrative Staff, Department of Geography 2016–2017
 Engineer & Student Assistant, Spatiotemporal Big Data Center 2014–2017
 Research Assistant, Spatial Analysis Lab 2014–2017
 Teaching Assistant, Department of Geography 2014–2015

IMU Korea (Intergraph Mapping & Utilities Korea Ltd.)
 Researcher & Software Engineer 2012–2014

AWARDS AND HONOR

Teachers Ranked as Excellent by Their Students, Center for Innovation in Teaching & Learning, University of Illinois Urbana-Champaign. 2022

Honorable Mention, 2021 Paper Awards, University Consortium for Geographic Information Science (UCGIS) Symposium 2021, Virtual. 2021

- Finalist, Student Honors Paper Competition, Geographic Information Science and Systems Specialty Group, The Annual Meeting of the American Association of Geographers, Virtual. 2021
- First place, Paper Award, Korean-American Association for Geospatial and Environmental Sciences. 2021
- First place, Graduate Student Research Competition, Texas GIS Day 2020, Virtual. 2020
- Second place, Research Competition for the Optimized Locations for Bicycle Sharing System in the City of Goyang, South Korea, Korea Land & Housing Corporation. 2020
- First place, Paper Competition, GIS Day 2019, Texas A&M University. 2019
- First place, Summer School Group Competition, American Association of Geographers - University Consortium for Geographic Information Science (AAG-UCGIS) Summer School 2019 at University of Illinois at Urbana-Champaign. 2019
- Student leadership award, Korean-American Association for Geospatial and Environmental Sciences. 2019
- Second place, Graduate Geoscience Oral Presentation, 22nd Annual Student Research Week, Texas A&M University. 2019
- First place, Outstanding Paper Awards, The 10th China-Japan-Korea Joint Conference & 1st Asian Conference on Geography. 2015
- Bronze medal, Seoul Institute Thesis Competition, The Seoul Institute. 2015
- First place, Student Poster Competition, Annual Meeting of Korean Geographers. 2014
- Bronze medal, Student Poster Competition, Annual Meeting of the Korean Geographical Society. 2010

TEACHING EXPERIENCE

- University of Illinois at Urbana-Champaign (Instructor)
GEOG489: Programming for GIS (Teachers Ranked as Excellent) Spring 2022
- Texas A&M University (Teaching Assistant)
GEOG361: Remote Sensing in Geoscience Fall 2017

PUBLICATIONS & PRESENTATIONS

Journal Articles

- [10] Lyu, F., Zhou, L., **Park, J.**, Baig, F. & Wang, S. (Under review). Mapping real-time heat exposure with location-based social media data. *Computers, Environment and Urban Systems*.
- [9] **Park, J.** & Goldberg, D. W. (2022). An examination of the stochastic distribution of spatial accessibility to intensive care unit beds during the COVID-19 pandemic: a case study of the Greater Houston area of Texas. *Geographical Analysis*. <https://doi.org/10.1111/gean.12340>
- [8] **Park, J.**, Kang, J.-Y., Goldberg, D. W. & Hammond, T. A. (2022). Leveraging temporal changes of spatial accessibility measurements for better policy implications: a case study of electric vehicle (EV) charging stations in Seoul, South Korea. *International Journal of Geographical Information Science*, 36(6), 1185–1204. <https://doi.org/10.1080/13658816.2021.1978450>
- [7] **Park, J.** & Goldberg, D. W. (2021). A review of recent spatial accessibility studies that benefitted from advanced geospatial information: Multimodal transportation and spatiotemporal disaggregation. *ISPRS International Journal of Geo-Information*, 10(8). <https://doi.org/10.3390/ijgi10080532>
- [6] Kang, J.-Y. & **Park, J.** (2021). Measuring spatial accessibility to COVID-19 testing sites: a case study of Seoul. *Journal of the Korean Geographical Society*, 56(2), 231–244. <https://doi.org/10.22776/kgs.2021.56.2.231>

- [5] **Park, J.**, Choi, M. & Kang, J.-Y. (2021). Spatial optimization of indoor sports stadium seats under social distancing practice during the COVID-19 pandemic. *Journal of the Korean Geographical Society*, 56(1), 53–66. <https://doi.org/10.22776/kgs.2021.56.1.53>
- [4] **Park, J.**, Goldberg, D. W. & Hammond, T. (2020). A comparison of network model creation algorithms based on the quality of wayfinding results. *Transactions in GIS*, 24(3), 602–622. <https://doi.org/10.1111/tgis.12632>
- [3] **Park, J.**, Park, J. & Choi, J. (2018). An air pollution exposure on floating population using air pollution dispersion model. *The Geographical Journal of Korea*, 52(2), 193–204.
- [2] Do, M. S., Lee, J., Jang, H., Kim, D., **Park, J.** & Yoo, J. (2017). Spatial distribution patterns and prediction of hotspot area for endangered herpetofauna species in Korea. *Korean Journal of Environment and Ecology*, 31(4), 381–396.
- [1] **Park, J.**, Choi, J. & Hong, S. Y. (2016). Comparison between the road-based and the parcel-based address coordinates for urban air pollution estimation - a case study of Yeongdeungpo-gu, Seoul, Korea. *Journal of Cadastre & Land InformatiX*, 46(2), 169–181.

Conference Proceedings

- [2] Lyu, F., Yang, Z., Xiao, Z., Diao, C., **Park, J.** & Wang, S. (2022). Cybergis for scalable remote sensing data fusion. *Practice and Experience in Advanced Research Computing*. <https://doi.org/10.1145/3491418.3535145>
- [1] Lee, K., **Park, J.** & Choi, J. (2015). A comparison of image aligning and correcting software with an unmanned aerial system. *Free and Open Source Software for Geospatial (FOSS4G) Conference Proceedings*, (1), 48.

Oral Presentations

- [13] **Park, J.** & Goldberg, D. W. (2021, June 7–9). *Measuring spatial accessibility to ICU beds under the uncertainty of supply and mobility*. University Consortium for Geographic Information Science (UCGIS) Symposium 2021, Virtual. Honorable mention in Paper Awards.
- [12] **Park, J.**, Kang, J.-Y. & Goldberg, D. W. (2021, April 7–11). *Examining 24-hour fluctuation of spatial accessibility from temporal dynamics in supply, demand, and mobility: a case study of electric vehicle (EV) charging stations in southeast Seoul, the Republic of Korea*. The Annual Meeting of the American Association of Geographers, Virtual. A finalist in AAG-GISS SG Student Honors Paper Competition.
- [11] **Park, J.** (2020, November 16–18). *Spatiotemporal dynamics of accessibility: a case study of electric vehicle (EV) charging stations in southeast Seoul, South Korea*. Texas GIS Day 2020, Virtual. Awarded 1st place in Paper Competition.
- [10] **Park, J.**, Kang, J.-Y. & Goldberg, D. W. (2020, November 13). *The importance of temporal dynamics for enhancing the accuracy of the spatial accessibility measurement: a case study of EV charging stations in Seoul, South Korea*. the Annual Meeting of the Korean Geographical Society, Virtual.
- [9] **Park, J.**, Goldberg, D. W. & Hammond, T. (2020, July 13–16). *Comparisons of network generation algorithms by automated extraction from BIMs*. Esri User Conference, Virtual.
- [8] **Park, J.** (2019, November 12). *Comparisons of network generation algorithms by automated extraction from Building Information Modeling*. Texas A&M University GIS Day 2019, College Station, Texas, USA. Awarded 1st place in Paper Competition.
- [7] **Park, J.**, Yin, Z. & Goldberg, D. W. (2019, April 2–7). *An automated indoor network extraction from Building Information Modeling*. The Annual Meeting of the American Association of Geographers, Washington, DC, USA.
- [6] **Park, J.** (2019, March 18–22). *An automated indoor network extraction from Building Information Modeling*. The 22nd Annual Student Research Week, Texas A&M University, College Station, TX, USA. Awarded 2nd place in the Graduate Geoscience Oral Presentation.
- [5] **Park, J.** & Goldberg, D. W. (2019, March 5–8). *An automated indoor network extraction from building information modeling*. 2019 Esri Developer Summit, Palm Springs, CA, USA.

- [4] **Park, J.** (2017, October 25–28). *Korea's environmental issues and the national atlas of Korea vol. II*. The Annual Meeting of the Southwest Division of the American Association of Geographers, Huntsville, TX, USA.
- [3] **Park, J.** & Choi, J. (2016, March 29–April 2). *Comparison of address locations during the address system transition in Korea*. The Annual Meeting of the American Association of Geographers, San Francisco, CA, USA.
- [2] **Park, J.**, Park, J. & Choi, J. (2015, October 9–12). *Estimation of actual exposure to air pollution for floating population*. The 10th China-Japan-Korea Joint Conference & 1st Asian Conference on Geography, Shanghai, China. Awarded the Winner of Outstanding Paper Award.
- [1] **Park, J.**, Choi, D., Na, Y. G., Lee, B. & Choi, J. (2014, July 6–9). *Comparison of road name address and parcel-based address for line source air pollution dispersion*. The 9th Korea-China-Japan Joint Conference on Geography, Busan, Korea.

Poster Presentations

- [5] **Park, J.**, Goldberg, D. W., Lybrand, B. & Meador, J. (2018, April 10–14). *3D visualization of CAD Data for an evacuation plan*. The Annual Meeting of the American Association of Geographers, New Orleans, LA, USA.
- [4] Choi, J. & **Park, J.** (2016, March 29–April 2). *Correlation between air pollution dispersion and floating population*. The Annual Meeting of the American Association of Geographers, San Francisco, CA, USA.
- [3] Choi, J., **Park, J.** & Lee, K. (2015, April 21–25). *Importance of road name address for line source air pollution dispersion*. The Annual Meeting of the American Association of Geographers, Chicago, IL, USA.
- [2] **Park, J.**, Choi, D. & Park, W. (2014, June 20–21). *The validity of new geocoding system using line source air pollution dispersion model*. The Annual Meeting of the Korean Geographers, Seoul, Korea.
- [1] **Park, J.** (2010, May 27–28). *A spatial analysis of the shopping district in front of Kyung Hee University*. The Annual Meeting of the Korean Geographers, Seoul, Korea.

Invited Talks

- [11] *Indispensable Temporal Dynamics: Enhancing Accuracy of Spatial Accessibility Measurements*. 2022 KHU-UWG Geo-Spatial Workshop. July 21, 2022. Carrollton, GA, USA.
- [10] *Introduction to Python Programming*. Guest Lecture for UIUC GEOG380 (GIS II Spatial Prob Solving). April 12, 2022. Urbana, IL, USA.
- [9] *Advancing Spatial Accessibility Measurements to Urban Infrastructure: Uncovering Temporal Dynamics and Uncertainty*. KAGES-KHU Bridging Network Seminar. April 1, 2022. Virtual.
- [8] *Campus Operations GIS*. Texas GIS Day 2021. November 16, 2021. Virtual.
- [7] *Measuring spatial accessibility to intensive care unit (ICU) beds under the uncertainty of supply and mobility*. AAG Geospatial Fellows Webinar Series. July 12, 2021. Virtual.
- [6] *The domain expansion of spatial accessibility*. Young Korean Geographers Forum II, Korean-American Association for Geospatial and Environmental Sciences. April 9, 2021. Virtual.
- [5] *Efficient infrastructure placements with spatial analysis*. Department of Geography Education, Kongju National University, South Korea. November 18, 2020. Virtual.
- [4] *Automated indoor network extraction from Building Information Modeling*. 2019 KHU-UWG Geo-Spatial Workshop. July 26, 2019. Carrollton, GA, USA.
- [3] *An approach about interoperability between Geographic Information Science and Building Information Modeling*. Young Korean Geographers Forum I, Korean-American Association for Geospatial and Environmental Sciences. April 4, 2019. Washington, DC, USA.
- [2] *3D Aggeland*. Texas A&M University GIS Day 2018. November 11, 2018. College Station, Texas, USA.
- [1] *Hands-on 3D mapping*. Texas A&M University GIS Day 2018. November 11, 2018. College Station, Texas, USA.

FUNDS & GRANTS

CO-PI , Geospatial Fellows for Advancing COVID-19 Research & Education, Geospatial Software Institute of University of Illinois Urbana-Champaign, with PI: Dr. Daniel W. Goldberg (Ph.D Advisor)	2020 USD 4,200
Texas A&M University, Department of Geography	
Travel Awards (2020)	USD 650
Travel Awards (2019)	USD 700
Travel Awards (2018)	USD 500
Korean-American Association for Geospatial and Environmental Sciences	2019
Sim Travel Award	USD 333
The Korean Geographical Society	2016
International Conference Travel Awards	KRW 500,000
Kyung Hee University	
Graduate Student Travel Awards (2015)	KRW 1,400,000
Graduate Student Travel Awards (2014)	KRW 1,400,000

PROFESSIONAL SERVICES

Cyber Infrastructure Specialty Group (CISG), American Association of Geographers	
Director	2021–2023
Student Director	2020–2021
Korean American Scientists and Engineers Association at Texas A&M University	2017–2019
Treasurer	
Korea-America Association for Geospatial and Environmental Sciences	2018–2019
Student Board Member	
Texas A&M University Association of Geography Graduate Student	2018–2019
Vice Chief Student Leader (Executive Committee)	
Association of the Korean Geographers	2015–2016
Annual Meeting Coordinator	

PROFESSIONAL SOCIETY MEMBERSHIPS

Association of American Geographers (AAG)
University Consortium for Geographic Information Science (UCGIS)
Asian Geographical Association (AGA)
Korean-American Scientists and Engineers Association (KSEA)
Korea-America Association for Geospatial and Environmental Sciences (KAGES)
The Korean Geographical Society (KGS)

CERTIFICATE & TECHNICAL SKILLS

Certification in Engineer Surveying Geo-Spatial Information
Strong Skill with GIS/RS Software: ArcMap, ArcGIS Pro, ArcGIS Enterprise, QGIS, ENVI, ERDAS
Strong Skill in Programming Languages: Python, R
Strong Skill in BIM Software: Autodesk Revit
Moderate Skill in Handling Database: MS SQL Server