

## **Jinwoo Park, Ph.D.**

### **Curriculum Vitae**

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#### **EDUCATION**

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- Ph.D.**, Department of Geography, Texas A&M University, College Station, TX, USA 2021  
Dissertation Title: Advancing Spatial Accessibility Measurements to Urban Infrastructure:  
Uncovering Temporal Dynamics and Uncertainty
- M.S.**, Department of Geography, Kyung Hee University, Seoul, Korea 2016  
Thesis Title: Comparison of Address Coordinates with the Change in Korean Address System
- B.S.**, Department of Geography, Kyung Hee University, Seoul, Korea 2013

#### **PROFESSIONAL APPOINTMENTS AND EXPERIENCES**

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- Assistant Professor** Aug 2023–Present  
Department of Geography and GISc, University of North Dakota
- Postdoctoral Research Associate** 2022–2023  
CyberGIS Center for Advanced Digital and Spatial Studies,  
University of Illinois Urbana-Champaign
- Graduate Assistant** 2018–2021  
Division of Information Technology, Texas A&M University
- Teaching Assistant** 2017  
Department of Geography, Texas A&M University
- Administrative Staff** 2016–2017  
Department of Geography, Kyung Hee University, Seoul, Korea
- Software Engineer** 2014–2017  
Spatiotemporal Big Data Center, Kyung Hee University, Seoul, Korea
- Research Assistant** 2014–2016  
Spatial Analysis Lab, Kyung Hee University, Seoul, Korea
- Researcher & Software Engineer** 2012–2014  
IMU Korea (Intergraph Mapping & Utilities Korea Ltd.), Seongnam, Gyeonggi, Korea

#### **AWARDS AND HONORS**

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

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

## PEER-REVIEWED PUBLICATIONS

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Underline: Corresponding Author

### Journal Articles

- [14] Michels, A., **Park, J.**, Kang, J.-Y. & Wang, S. (In revision). SPACTS: a spatial partitioning algorithm for computing travel-time at scale. *International Journal of Geographical Information Science*.

- [13] Han, S., Kang, J.-Y., Lyu, F., Baig, F., Smilovsky, D., **Park, J.** & Wang, S. (In revision). A CyberGIS Approach to Exploring Neighborhood-level Social Vulnerability for Disaster Risk Management. *Transactions in GIS*.
- [12] Lyu, F., Zhou, L., **Park, J.**, Baig, F. & Wang, S. (In revision). Mapping real-time heat exposure with location-based social media data. *International Journal of Geographical Information Science*.
- [11] Kang, J.-Y., Wong, S., **Park, J.**, Lee, J. & Aldstadt, J. (2023). Exploring spatial mismatch between the primary care and the elderly populations in an aging country: a case study of South Korea. *ISPRS International Journal of Geo-Information*, 12(7). <https://doi.org/10.3390/ijgi12070255>
- [10] **Park, J.**, Michels, A., Lyu, F., Han, S. & Wang, S. (2023). Daily changes in spatial accessibility to ICU beds and their relationship with the case-fatality ratio of COVID-19 in the state of Texas, USA. *Applied Geography*, 154, 102929. <https://doi.org/10.1016/j.apgeog.2023.102929>
- [9] **Park, J.** & Goldberg, D. W. (2023). 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*, 55(3), 384–398. <https://doi.org/10.1111/gean.12340>
- [8] Choi, M., **Park, J.** & Ji, S. (2022). Risk assessments of crowds at bottlenecks through Agent Based Modelling. *Journal of the Korean Geographical Society*, 57(6), 595–609. <https://doi.org/10.22776/kgs.2022.57.6.595>
- [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

- [4] Haqiqi, I, Hu, W., Kumaran, R., Li, P.-C., Manning, N., Michels, A., Nassar, A., **Park, J.**, Shi, J., Tonks, A. & Wang, Z. (2023). I-GUIDE Climbers: a model for multidisciplinary academic labs for early career development. *I-GUIDE Forum*.
- [3] Michels, A., **Park, J.**, Li, B., Kang, J.-Y. & Wang, S. (2023). Impacts of catchments derived from fine-grained mobility data on spatial accessibility. *GIScience 2023*.
- [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.

## PRESENTATIONS

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### Oral Presentations

- [16] Lyu, F., Zhou, L., **Park, J.**, Baig, F. & Wang, S. (2023, March 23–27). *Mapping Real-time Heat Exposure with Social Media Data*. The Annual Meeting of the American Association of Geographers, Denver, CO, USA.
- [15] **Park, J.**, Lyu, F., Michels, A. & Wang, S. (2023, March 23–27). *Spatial delineation per longitudinal sequence in dynamic spatial accessibility: a case study of primary care in New York City*. The Annual Meeting of the American Association of Geographers, Denver, CO, USA.
- [14] Javanmard, R., Lee, J., **Park, J.** & Kim, K. (2023, March 1). *Leveraging 2SFCA to evaluate the impacts of new public transit services on accessibility considering supply-demand dynamics*. GIS in Education and Research Conference Esri Canada, Toronto, Canada.
- [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 1<sup>st</sup> 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 1<sup>st</sup> 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 22<sup>nd</sup> Annual Student Research Week, Texas A&M University, College Station, TX, USA. Awarded 2<sup>nd</sup> 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 populations*. The 10<sup>th</sup> 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 9<sup>th</sup> Korea-China-Japan Joint Conference on Geography, Busan, Korea.

## Poster Presentations

- [6] **Park, J.**, Lyu, F., Michels, A. & Wang, S. (2022, Sep 28). *Spatial disaggregation per temporal sequences in dynamic spatial accessibility*. Geo-Resolution 2022, St.Louis, MO, USA.
- [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 the 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 Presentations, Talks & Panelists

- [9] **Panelist.** *Supporting International Students to Thrive in Graduate School and Job Market*. The Annual Meeting of the American Association of Geographers. March 25, 2023. Denver, CO, USA.
- [8] **Presentation.** *Advancing Spatial Accessibility Measurements to Urban Infrastructure: Uncovering Temporal Dynamics and Uncertainty*. Department of Geography Education, Dongguk University. January 31, 2023. Virtual.
- [7] **Talk.** *Indispensable Temporal Dynamics: Enhancing Accuracy of Spatial Accessibility Measurements*. 2022 KHU-UWG Geo-Spatial Workshop. July 21, 2022. Carrollton, GA, USA.
- [6] **Presentation.** *Advancing Spatial Accessibility Measurements to Urban Infrastructure: Uncovering Temporal Dynamics and Uncertainty*. KAGES-KHU Bridging Network Seminar. April 1, 2022. Virtual.
- [5] **Presentation.** *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.
- [4] **Presentation.** *The domain expansion of spatial accessibility*. Young Korean Geographers Forum II, Korean-American Association for Geospatial and Environmental Sciences. April 9, 2021. Virtual.
- [3] **Presentation.** *Efficient infrastructure placements with spatial analysis*. Department of Geography Education, Kongju National University, South Korea. November 18, 2020. Virtual.
- [2] **Talk.** *Automated indoor network extraction from Building Information Modeling*. 2019 KHU-UWG Geo-Spatial Workshop. July 26, 2019. Carrollton, GA, USA.
- [1] **Presentation.** *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.

### Technical Workshops

- [4] *Workshop on Getting Started with CyberGISX*. The Annual Meeting of the American Association of Geographers. March 24, 2023. Denver, CO, USA.
- [3] *Campus Operations GIS*. Texas GIS Day 2021. November 16, 2021. Virtual.
- [2] *3D Aggeland*. Texas A&M University GIS Day 2018. November 11, 2018. College Station, TX, USA.
- [1] *Hands-on 3D mapping*. Texas A&M University GIS Day 2018. November 11, 2018. College Station, TX, USA.

### FUNDING ACTIVITY

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CO-PI, Geospatial Fellows for Advancing COVID-19 Research & Education, Geospatial Software Institute of University of Illinois Urbana-Champaign,	2020
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with PI: Dr. Daniel W. Goldberg (Ph.D. Advisor) USD 4,200

**Sim Travel Award** 2019

Korean-American Association for Geospatial and Environmental Sciences USD 333

**International Conference Travel Awards** 2016

The Korean Geographical Society KRW 500,000

## TEACHING EXPERIENCE

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**Instructor**, GEOG474/L:Introduction to Geographic Information System Fall 2023  
Department of Geography and Geographic Information Science,  
University of North Dakota

**Instructor**, GEOG489:Programming for GIS Spring 2022  
Department of Geography and Geographic Information Science,  
University of Illinois Urbana-Champaign  
Recognized in List of Teachers Ranked as Excellent by Their Students

**Teaching Assistant**, GEOG361:Remote Sensing in Geoscience Fall 2017  
Department of Geography, Texas A&M University

## ACADEMIC & COMMUNITY SERVICE

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### Service to Professional Organizations

AAG Cyber Infrastructure Specialty Group (CISG) 2020–2025  
President (2024–2025), Vice President (2023–2024),  
Director (2021–2023), and 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

Association of Geography Graduate Student, Texas A&M University 2018–2019  
Vice Chief Student Leader

### Conferences and Workshops

**Program Committee**, I-GUIDE Forum 2023, October 4–6, Columbia University, New York, USA.

**Co-Organizer**, Symposium on Harnessing the Geospatial Data Revolution for Sustainability Solutions, The Annual Meeting of the American Association of Geographers, March 23–27, Denver, CO, USA.

**Chair**, Computation and Uncertainty of Spatial Accessibility, The Annual Meeting of the American Association of Geographers, March 27, Denver, CO, USA.

**Co-Organizer**, The First All-Hands Meeting of the NSF Institute for Geospatial Understanding through an Integrative Discovery Environment (I-GUIDE), September 8–9, 2022, Chicago, IL, USA.

## **Journal Reviewer**

- Transactions in GIS, Wiley
- Cities, Elsevier
- The Professional Geographers, Taylor & Francis
- Annals of GIS, Taylor & Francis
- Transportation, Springer Nature
- Letters in Spatial and Resources Sciences, Springer Nature
- Journal of Asian Architecture and Building Engineering, Taylor & Francis
- Geocarto International, Taylor & Francis
- ISPRS International Journal of Geo-Information, MDPI
- Sustainability, MDPI
- International Journal of Environmental Research and Public Health, MDPI

## **PROFESSIONAL SOCIETY MEMBERSHIPS**

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- 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**

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Certification in Engineer Surveying Geo-Spatial Information

Strong Skill with GIS/RS Software: 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