

Yoo Min Park

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East Carolina University

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EDUCATION

- 2014-2019 **PhD in Geography and Geographic Information Science (GIS)**
University of Illinois at Urbana-Champaign (UIUC), Illinois, USA.
NSF-Funded Dissertation: "Spatiotemporal Approaches to Understanding Environmental Justice and Multi-Contextual Segregation"
Committee: Mei-Po Kwan (chair), Sara McLafferty, Julie Cidell, and Bo Li
Minor: Statistics, Community Health
- 2011-2013 **MA in Geography** (Specialization: **Spatial Statistics**)
Korea University, Seoul, South Korea.
- 2007-2011 **BA in Geography Education**
Korea University, Seoul, South Korea.

POSITIONS & EMPLOYMENT

- 2019-present **Assistant Professor**, Department of Geography, Planning & Environment, East Carolina University.
- 2018-2019 **Block Grant Fellow**, University of Illinois at Urbana-Champaign.
- 2017-2018 **Research Associate**, Space-Time Analysis and Research Laboratory, University of Illinois at Urbana-Champaign.
- 2017-2018 **Teaching Assistant**, Department of Geography & GIS, University of Illinois at Urbana-Champaign.
- 2016-2017 **Block Grant Fellow**, University of Illinois at Urbana-Champaign.
- 2014-2016 **Teaching Assistant**, Department of Geography & GIS, University of Illinois at Urbana-Champaign.
- 2014 **Researcher**, Korea Environment Institute, Sejong, South Korea.
- 2011-2013 **Research Assistant**, Research Institute of Korean Studies, Korea University, Seoul, South Korea.

RESEARCH & TEACHING INTERESTS

- Geographic Information Science (GIS)
- Geospatial Data Analytics
- Spatio-Temporal Data Analytics
- Low-Cost Air Pollution Sensors
- Spatial Statistics
- Environmental Health
- Environmental Justice/Health Disparities
- Exposure to Air Pollution
- Human Mobility
- Racial Segregation

EXTERNAL RESEARCH GRANTS

- 2020-2021 **Center for Human Health and the Environment (CHHE) Pilot Project Grant**, CHHE at the North Carolina State University (Supported in part by the National Institute of Environmental Health Sciences [NIEHS] under Award No. P30ES025128).
Title: “A Low-Cost Mobile Air-Pollution Sensor with Geospatial Mapping: A Tool for Community-Engaged, Environmental Health Disparity Research”
Total Amount: \$31,112
Role: **PI** (with Co-PI Sinan Sousan)
- 2020 **COVID-19 CARES Act Research Fund**, North Carolina General Assembly.
Title: “Ethics Protocol for Vaccine Distribution and Eastern North Carolina COVID Mapping”
Total Amount: \$1,239,600
Role: **Co-PI** (with multiple PIs Gregory Kearney and Maria Clay, in partnership with Vidant Health)
- 2017-2019 **National Science Foundation (NSF) Doctoral Dissertation Research Improvement Grant**, NSF Geography and Spatial Sciences Program (Award No. 1735295).
Title: “Segregation and Its Effects on Social Disparities in Exposure to Air Pollution”
Total Amount: \$10,607
Role: **Co-PI** (with PI Mei-Po Kwan) (*I was not an official PI due to graduate student status but I was the lead writer of the grant proposal and took direct responsibility for the completion of this project.*)
- 2017 **American Association of Geographers (AAG) Dissertation Research Grant**, AAG.
Title: “Segregation and Its Effects on Social Disparities in Exposure to Air Pollution”
Total Amount: \$1,000
Role: **PI**

INTERNAL RESEARCH GRANTS

- 2020-2021 **Diversity and Inclusion Research and Scholarship Program Seed Grant**, Office for Equity and Diversity, East Carolina University.
Title: “Mapping Accessibility with Dignity: An Inclusive, Equitable University Environment for People with Disabilities”
Total Amount: \$10,650
Role: **PI** (with Co-PI Joonkoo Yun)
- 2020-2021 **Engaged Outreach and Scholarship Academy (EOSA) Research Grant**, Office of Community Engagement and Research, East Carolina University.
Title: “Community Air Quality Monitoring Using Low-Cost Air Sensors and Citizen Science Approaches in Environmental Justice Communities”
Total Amount: \$9,500
Role: **PI** (in partnership with Clean Air Carolina)
- 2020 **Natural Resources and the Environment Research Cluster (NRERC) Seed Grant**, NRERC, East Carolina University.
Title: “Development of an Advanced Spray Diagnostics Test Rig for the Characterization of Biofuel Spray Flows Exhausted from Liquid Fuel Injectors”

Total Amount: \$10,650
Role: **Co-PI** (with PI Yang Liu)

PUBLICATIONS

- Park, Y.M.** (2021). A GPS-enabled portable air pollution sensor and web-mapping technologies for field-based learning in health geography. *Journal of Geography in Higher Education*. Revision and resubmission.
- Park, Y.M.** (2020). Assessing Personal Exposure to Traffic-Related Air Pollution Using Individual Travel-Activity Diary Data and an On-Road Source Air Dispersion Model. *Health & Place*, 63: 102351.
- Park, Y.M.** & Kwan, M.-P. (2020). Understanding Racial Disparities in Exposure to Traffic-Related Air Pollution: Considering Spatiotemporal Dynamics of Population Distribution. *International Journal of Environmental Research and Public Health*. 17(3), 908.
- Park, Y.M.** & Kwan, M.-P. (2018). Beyond Residential Segregation: A Spatiotemporal Approach to Examining Multi-Contextual Segregation. *Computers, Environment and Urban Systems*, 71, 98-108.
* **Won First Place in the Spatial Analysis and Modeling Specialty Group Student Paper Competition at the 2018 AAG Annual Meeting.**
- Park, Y.M.** & Kwan, M.-P. (2017). Individual Exposure Estimates May Be Erroneous When Spatiotemporal Variability of Air Pollution and Human Mobility Are Ignored. *Health & Place*, 43, 85-94.
* **Featured by Health & Place as the most cited article published in the journal since 2017.**
* **Won First Place in the GIS Specialty Group Student Paper Competition at the 2016 AAG Annual Meeting.**
- Park, Y.M.** & Kwan, M.-P. (2017). Multi-Contextual Segregation and Environmental Justice Research: Toward Fine-Scale Spatiotemporal Approaches. *International Journal of Environmental Research and Public Health*, 14(10), 1205.
- Park, Y.M.** & Kim, Y. (2014). A Spatially Filtered Multilevel Model to Account for Spatial Dependency: Application to Self-Rated Health Status in South Korea. *International Journal of Health Geographics*, 13:6.
* **Won the Peter Gould Student Paper Award in the AAG Health and Medical Geography Specialty Group Student Paper Competition in 2014.**
- Park, Y.M.** & Kim, Y. (2012). An Evaluation and Suggestion of Photovoltaic Power Plant Locations Based on Environmental and Social Impacts and Sustainability. *Journal of the Economic Geographical Society of Korea*, 15(3), 438-456.
- Park, Y.M.** & Kim, Y. (2011). Agriculture Location Analysis Using Kriging and Analytic Hierarchy Process (AHP). *Journal of the Korean Cartographic Association*, 11(2), 75-90.

AWARDS & FELLOWSHIPS

- 2020 **Jacques May Thesis Prize for the Best Doctoral Dissertation**, Health and Medical Geography Specialty Group, AAG (\$250).

- 2018-19 **Block Grant Fellowship**, Graduate College, University of Illinois (\$16,750).
- 2018 **Teaching Excellence Award**, Department of Geography and GIS, University of Illinois.
- 2018 **First Place (John Odland Award)**, Spatial Analysis and Modeling Specialty Group Student Paper Competition, AAG (\$500).
- 2018 **Graduate College Conference Travel Grant**, University of Illinois (\$225).
- 2017 **Messina Stanley Graduate Scholarship**, Department of Geography and GIS, University of Illinois (\$1,000).
- 2017 **Student Paper Award**, Korean-American Association for Geospatial and Environmental Sciences (\$500).
- 2017 **Travel Award**, Spatial Analysis and Modeling Specialty Group, AAG (\$250).
- 2017 **Travel Award**, Urban Geography Specialty Group, AAG (\$100).
- 2017 **Sim Travel Award**, Korean-American Association for Geospatial and Environmental Sciences (\$500).
- 2016-17 **Block Grant Fellowship**, Graduate College, University of Illinois (\$16,500).
- 2016 **First Place**, GIS Specialty Group Student Honors Paper Competition, AAG (\$1,000).
- 2015 **Third Place**, International Student Paper Competition, Korea Environment Institute (\$1,000).
- 2014 **Peter Gould Student Paper Award**, Health and Medical Geography Specialty Group Student Paper Competition, AAG (\$100).
- 2013 **Second Place**, Research Poster Competition, National Geographic Information Institute (\$500).
- 2012-13 **National Research Scholarship** (for an outstanding graduate thesis proposal), Korea Student Aid Foundation (\$8,000).
- 2010 **Second Place**, Travel Program Proposal Competition, Korea Travel Conference (\$1,000).
- 2008-10 **Academic Excellence Awards**, Department of Geography Education, Korea University.
- 2007-08 **Admission Scholarship** (awarded to selected students with exceptional scores in the national entrance examination), Korea University (\$8,500).

INVITED TALKS

- **Park, Y.M.** “Making Our Campus More Accessible for All Individuals: Engaging Students in Indoor Mapping”, Department Spring Colloquium, Department of Geography, Planning, and Environment, East Carolina University, NC, Jan 2021.
- **Park, Y.M. & Yun, J.K.** “Participatory Mapping for Campus Accessibility with Dignity”, Diversity Seminar, East Carolina University, NC, Oct 2020.
- **Park, Y.M.** “A User-Friendly Portable Air Pollution Sensor for Community-Engaged, Environmental Health Disparity Research.”, KSEA Annual Seminar, NC, May 2020.

- **Park, Y.M.** “Moving Beyond Residential Neighborhoods: A Fine-Scale Spatiotemporal Approach to Examining Environmental Inequalities.” School of Geography, University of Leeds, Leeds, UK, April 2018.
- **Park, Y.M. (Invited Panelist).** “What Next for New and Emerging Forms of Data?” HABITS Symposium (New and Emerging Forms of Data for Policy Making: Transport, Health and Air Quality Management), Leeds, UK, April 2018.
- **Park, Y.M.** “A Spatiotemporal Analysis of Racial Disparities in Exposure to Air Pollution.” HABITS Symposium (New and Emerging Forms of Data for Policy Making: Transport, Health, and Air Quality Management), Leeds, UK, April 2018.
- **Park, Y.M.** “Where, When, and How Long You Stay at a Given Location Determine Your Level of Exposure to Air Pollution.” School of Earth, Society, and the Environment’s Research Review, University of Illinois, IL, February 2017.

TEACHING EXPERIENCE

- FA 2020 **Instructor, GIS II/Advanced GIS (GEOG 4430/6430)**
Department of Geography, Planning, and Environment, East Carolina University.
* **Teaching effectiveness score (student evaluation): 4.69/5.00** (Online instruction due to COVID-19).
- SP 2020 **Instructor, Medical Geography (GEOG 4340/6340).**
Department of Geography, Planning, and Environment, East Carolina University.
* **Teaching effectiveness score (student evaluation): 4.74/5.00**
- SP 2020 **Guest Lecturer, Transportation Planning and Policy (PLAN 4075/ PLAN6075).**
Lecture Title: “Travel behavior modeling”
Department of Geography, Planning, and Environment, East Carolina University.
- FA 2019 **Instructor, GIS II/Advanced GIS (GEOG 4430/6430).**
Department of Geography, Planning, and Environment, East Carolina University.
* **Teaching effectiveness score (student evaluation): 4.82/5.00**
- SP 2018 **Teaching Assistant (Lab Instructor), Business Applications of GIS (GEOG 440).**
Department of Geography and GIS, University of Illinois.
* **Included in the List of Teachers Ranked as Excellent by Their Students (Top 10%).**
* **Teaching effectiveness score (student evaluation): 4.75/5.00**
- FA 2017 **Teaching Assistant (Lab Instructor), Introduction to GIS Systems (GEOG 379).**
Department of Geography and GIS, University of Illinois.
* **Included in the List of Teachers Ranked as Excellent by Their Students.**
* **Teaching effectiveness score (student evaluation): 4.63/5.00**
- SU 2016 **Instructor, Digital Earth (GEOG 105 – Online Course).**
Department of Geography and GIS, University of Illinois.
- SP 2016 **Teaching Assistant (Lab Instructor), Business Applications of GIS (GEOG 440).**
Department of Geography and GIS, University of Illinois.
- FA14-15 **Teaching Assistant, Geography of Globalization (GEOG 106).**
Department of Geography and GIS, University of Illinois.

- FA 2010 **Teaching Assistant**, *Intermediate Geographic Information Systems (GEOG 458)*.
Department of Geography, Korea University.
- SP 2010 **Student Teacher**, *Teaching practice in a high school*.
Bucheon Girls' High School, Bucheon, South Korea.

PRESENTATIONS

- Kearney, G., Wall, B., **Park, Y.M.**, Hickey, T., Jones, K., Hylock, R., Howard, R., Clay, M., Fallon, J. & Schmidt, P. "Eastern North Carolina COVID-19 Surveillance and Community Mapping." ECU-Vidant Health Unified Quality Improvement Symposium, Greenville, NC, February 2021. (Poster presentation).
- **Park, Y.M.** & Zhao, K. "User-Friendly Mobile Air Sensing Devices: The Key to the Success of Community-Based Participatory Research on Air Pollution Monitoring." Air Sensor International Conference, Pasadena, CA, May 2020. (Cancelled due to COVID-19)
- **Park, Y.M.** "Assessing Personal Exposure to Traffic-Related Air Pollution Using Individual Travel-Activity Diary Data and an On-Road Source Air Dispersion Model." American Association of Geographers Annual Meeting, Denver, CO, April 2020. (Cancelled due to COVID-19)
- **Park, Y.M.** "Assessing Personal Exposure to Air Pollution Using Human Movement Data." KSEA-NC Interdisciplinary Research Conference, Raleigh, NC, February 2020.
- **Park, Y.M.** "Where You Visit, How Long You Stay There, and What You Do There Affect Your Exposure to Air Pollution." STEM@Starlight – Collaboration in the Sciences and Beyond, Greenville, NC, October 2019.
- **Park, Y.M.** & Kwan, M.-P. "How Does Human Mobility Affect Urban Segregation and Environmental Justice? A Spatiotemporal Approach." American Association of Geographers Annual Meeting, Washington D.C., April 2019.
- **Park, Y.M.** & Kwan, M.-P. "Spatiotemporal Analysis of Multi-Contextual Segregation in Urban Areas." American Association of Geographers Annual Meeting, New Orleans, LA, April 2018.
- **Park, Y.M.** & Kwan, M.-P. "Spatiotemporal Uncertainties in Assessing Individual Exposure to Air Pollution." American Association of Geographers Annual Meeting, Boston, MA, April 2017.
- **Park, Y.M.** "Segregation in Various Geographical and Temporal Contexts in Daily Life and Its Effects on Social Disparities in Exposure to Air Pollution." Geography & GIScience Colloquium, University of Illinois at Urbana-Champaign, IL, February 2017.
- **Park, Y.M.** & Kwan, M.-P. "Assessment of Personal Exposure to Air Pollution and Its Effects on Health: Using Hourly Estimates, Human Movement Data, and Three-Dimensional Visualization to Address the Uncertain Geographic Context Problem." American Association of Geographers Annual Meeting, San Francisco, CA, April 2016.
- **Park, Y.M.** "A Spatially Filtered Multilevel Model to Account for Spatial Dependency: Application to Self-Rated Health Status in South Korea." American Association of Geographers Annual Meeting, Chicago, IL, April 2015.
- **Park, Y.M.** "Assessment of Regional Health Inequality in South Korea: A Coupled Multilevel Analysis and Spatial Filtering Method." The Association of Korean Geographers Conference, Seoul, South Korea, May 2013.

- **Park, Y.M.** “An Evaluation and Suggestion of Photovoltaic Power Plant Locations Based on Environmental and Social Impacts and Sustainability.” The Association of Korean Geographers Conference, Gongju, South Korea, May 2012.
- **Park, Y.M.** “Agriculture Location Analysis Using Kriging and Analytic Hierarchy Process (AHP).” The Korean Cartographic Association Conference, Seoul, South Korea, December 2011.

PROFESSIONAL SERVICE

2020	NSF Grant Proposal Reviewer , Human-Environment and Geographical Sciences Program, NSF.
2020-present	Scholarship Reviewer , Korean-American Association for Geospatial and Environmental Sciences.
2019-present	Graduate Faculty Member , East Carolina University.
2017-present	Manuscript Reviewer , <i>Health & Place</i> (5); <i>Computers, Environment and Urban Systems</i> (3); <i>Annals of the American Association of Geographer</i> (1); <i>PLOS ONE</i> (1); <i>Cities</i> (1); <i>The Professional Geographer</i> (1); <i>Science of the Total Environment</i> (1); <i>Cartography and Geographic Information Science</i> (1); <i>Sustainable Cities and Society</i> (1).
2019-present	Social Committee , Department of Geography, Planning, and Environment, East Carolina University.
2017-18	Vice President , Geography Graduate Student Association, Department of Geography and GIS, University of Illinois.
2015-16	Research Review Committee , School of Earth, Society, and the Environment, University of Illinois.
2015-16	Social Chair , Geography Graduate Student Association, Department of Geography and GIS, University of Illinois.
2011	Field Trip Assistant , Department of Geography, Korea University.

MENTORING & ADVISING

2020-present	Thesis Committee Member: M.S. student (Lu Kernstine), Department of Biology, East Carolina University.
2020-present	Thesis Committee Member: M.S. student (Samantha Dowiarz), Department of Biology, East Carolina University.
2020	Research Mentor: EC Scholars (Grace Krell, Trek Thorne, and Kaylee Warren), East Carolina University.