Eun-Hye Enki Yoo

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EDUCATION

University of California Santa Barbara, Santa Barbara, CA, USA.

Ph.D.,Geography, Fall 2006

Seoul National University, Seoul, Korea.

M.A., Geography, Spring 1999

B.A., Geography, Spring 1997

ACADEMIC EMPLOYMENT

SUNY at Buffalo, Buffalo, NY, USA.

Associate Professor, Department of Geography.   Sep. 2014 – present

Assistant Professor, Department of Geography.   Aug. 2007 – Aug. 2014

Member of National Center for Geographic Information and Analysis (NCGIA). Mar. 2008 – 2021

Member of the Asian Studies Advisory Council.   Fall 2021 – 2024

Affiliate, Division of Environmental Health Sciences in the School of Public Health and Health Professions.   Sep. 2010 – present

Affiliate, Research and Education in eNergy, Environment and Water (RENEW) Aug. 2016 – present

Seoul National University, Department of Geography, Kwanak, Seoul, S. Korea.

Visiting Scholar,   Sep. 2022 – May. 2023

University of Cambridge, Department of Geography, Cambridge, CB3 0BU, UK. Lucy Cavendish College, Lady Margaret Road, Cambridge CB3 0BU

Visiting Scholar,   Apr. 2016 – Jun. 2016

University of Wollongong, School of Mathematics and Applied Statistics Wollongong, NSW, AU.

Visiting Principal Fellow   Jan. 2016 – Mar. 2016

University of Canterbury, Department of Geography, Christchurch, Canterbury, NZ.

Visiting Scholar,   Oct. 2015 – Dec. 2015

University of Texas at Dallas, the School of Economic, Political and Policy Sciences Dallas, TX, USA.

Postdoctoral Research Fellow   Sep. 2006 – Jun. 2007

	• Associate Editor, *CDC Preventing Chronic Disease: Public Health Research, Practice, and Policy (PCD)*, 2022 to present. • Review Editor, *Frontiers in Climate: Climate and Health*, 2022 to present. • Editorial Board, *Spatial and Spatio-Temporal Epidemiology*, 2022 to present. • Guest Editor, *Geometica*—Special issue on 'Geospatial artificial intelligence', 2020. • Editorial Board, *Annals of the Association of American Geographers*, 2018 to present. • Editorial Board, *International Journal of Environmental Research and Public Health*, 2015 to present.

ACADEMIC HONORS AND AWARDS

- Michael Breheny Prize for the Best Paper in Environment and Planning B, Sep. 2014. for *"Neighborhood contexts, health, and behavior: understanding the role of scale and residential sorting"*, Environment and Planning B: Planning and Design, *40(3), 489-506.*

- First recipient of the James L. Smith Medal for Early Career Scientists, International Symposia on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences, Jul. 2014.

- University Consortium for Geographic Information Science (UCGIS) / Environmental Systems Research Institute (ESRI) Junior Scholar Award, University Consortium for Geographic Information Science Symposium, May 2012.

- Jack and Laura Dangermond Graduate Fellowship, Department of Geography, University of California Santa Barbara, Dec. 2005.

- First place, Student Paper Competition, Spatial Analysis and Modeling Specialty Group of the Association of American Geographers, Apr. 2005.

- Graduate Opportunity Fellowship, Department of Geography, University of California Santa Barbara, Spring 2002.

- Merit based Scholarship, Department of Geography, Seoul National University, Korea, 1995.

- Merit based Scholarship, Han-Won Scholarship Association, Korea, 1994.

GRANTS AS PRINCIPAL INVESTIGATOR

- "Heat, air pollution, greenspace, and mental health: Disparities and psycho-social mechanisms", Funding source: National Institute of Health (NIH/NIEHS), $2,700,252, Jul, 1 2023 – Jun., 30, 2028, **Yoo E.-H.** (PI), J. Roberts, K. Chen, and X. Zhou (all Co-investigators), Research on the effects of extreme heat, air pollution, and surrounding greenery on the risk of poor mental health outcomes to advance our understanding of the impact of environmental exposures on mental disorders to inform public health policies and urban design to protect vulnerable subpopulations, underserved communities, and individuals who are otherwise at risk for mental disorders. (Pending)

- "Improving air quality monitoring for Buffalo African-American community", Funding source: Environmental Protection Agency (EPA), $499,963, Aug, 1 2023 – Jul., 30, 2026, **Yoo E.-H.** (PI), K. Sun, M. Wang, and S. Grinslade (all Co-investigators), Research on air monitoring improvement in the Buffalo African-American community in Buffalo, NY, by deploying low-cost ambient air pollution sensors at optimal sampling sites in the residence of the marginalized community and developing the community-specific air quality prediction model by integrating the collected sensor measurements with existing data.

- "Modeling ambient air pollution using optimal sensor placement and multiscale spatiotemporal data fusion" Funding source: Research and Education in Energy,

Environment and Water (RENEW) Standard Seed Grants (University at Buffalo, SUNY), \$35,000, Jan. 15, 2017 – Jan. 15, 2019, **Yoo E.-H.** (PI), T. Singh, N. Napp, and L. Mu (all Co-investigators). Research on a supplementary data collection strategy and a data fusion framework to predict air quality needed in a given epidemiological and regulatory context using recent technological advancements in sensor developments and sensor network design.

GRANTS AS
CO-INVESTIGATOR

- "Green Space Exposure and Depression: Key Features and Underlying Mechanisms", National Institute for Mental Health & Alcoholism (NIH/NIMHA), \$417,384, Mar. 1, 2023 – Feb. 31, 2025, Roberts J.E. (PI) and **Yoo E.-H.** (co-I), Using ecological momentary assessment and geospatial approach, this study will determine the specific aspects of green space exposure that are relevant for depression-related outcomes and the underlying psychological processes that contribute to these outcomes (Pending).

- "GP-GO: Community-farm-focused GeoAI", National Science Foundation (NSF), \$399,959, Feb. 1, 2024 – Jan. 31, 2027, Bohlen M. (PI), **Yoo E.-H.**, and Ringland J. (Co-investigators) We aim to create a new pathway to experience-inclusive and cross-disciplinary graduate education in the geosciences by applying methods from data-intense Artificial Intelligence (AI) technologies for spatial data science (GeoAI) to assist small organizations such as farming communities and recruit non-traditional geoscience students to the endeavor (Pending).

- "Moderating effects of Medicaid long-term care services on heat wave-associated outcomes among people living with dementia", National Institute on Aging (NIA), RF1AG069782-01S1, \$32,944 (a total of \$2,099,390), Sep. 1, 2023 – Aug. 31, 2024, Kim H.-J. (PI), **Yoo E.-H.** (Co-investigators) We aim to evaluate whether Medicaid's long-term care services, particularly home- and community-based services, can mitigate these negative impacts of heat waves among people living with dementia.

- "Maximizing geospatial methods to understand emotional processes in PTSD-related Drinking Risk", National Institute for Alcohol Abuse & Alcoholism (NIH/NIAAA), R21AA029279-01A1 \$458,562, Mar. 25, 2022 – Feb. 29, 2024, J. Read (PI), **Yoo E.-H.**, and Craig Colder (Co-investigators), The study examine the momentary processes by which stress-related emotion regulation leads to drinking risk for individuals with PTSD. Using ecological momentary assessment and geographical coding methodologies, this study will provide a high-resolution examination of drinking risk, as it unfolds in real time and in real settings for this highly vulnerable group.

- "A Three-population three-scale social network model to assess disease dispersion" Funding source: the National Institute of General Medical Sciences of the National Institutes of Health (NIH/NIGMS), R01GM108731, \$2,662,074, Mar. 10, 2015 – Feb. 28, 2020, L. Bian (PI), C. Chen (PI), **Yoo E.-H.**, and E. Halloran (Co-investigators), Research on cell phone data mining to construct a census social network and the disease transmission simulation through the network.

- "Improving Population Health through Pediatric Surgery Capacity-Building in the Eastern Democratic Republic of Congo" Funding source: the Office of Global Health Initiatives at University at Buffalo, \$50,000, Jun. 15, 2017 – Jun. 14, 2019., D. Rothstein (PI), Ekaterina Noyes, Myron Glick, **Yoo E.-H.**, Sarah B. Cairo, and Elizabeth Borngraber (Co-investigators). Research on the disparity in access to pediatric surgical services through a traditional Plan, Do, Study, Act (PDSA) approach. My role involve a global needs assessment to enhance the teams knowledge of available medical resources as well as geographic or other barriers in accessing care.

- "From Real-Time Sensor Data Streams to Continuous Data Fields Models: Formal Foundations and Computational Challenges",

Funding source: National Science Foundation (NSF), Information & Intelligent Systems (IIS)1527504, $500,000, Sep, 1   2015 – Aug, 31   2018, S. Nittel (PI), M. J. Egenhofer (Co-PI), **Yoo E.-H.**, and C. Renschler (Co-investigators), Research on new approach for modeling fields in the context of real-time sensor streams.

- "Use of cellphone-based time-activity data for air pollutant exposure estimation" Funding source: National Institute of Health (NIH/NIEHS), R21 ES017826, $440,247, Sep. 1, 2010 – Jan. 31, 2014, L. Mu (PI), M. Demirbas, A. Rudra, **Yoo E.-H.**, and A. Szpiro (all Co-PIs), My role: Individual's time-activity pattern analysis and spatio-temporal modeling of PM2.5 exposure using multivariate kriging methods. Research on the use of GPS-equipped smartphones to collect time-activity data used to refine land use regression- and kriging-based estimates of ambient air pollutant exposures.

SELECTED PRESS & MEDIA COVERAGE OF RESEARCH

[13] "Climate change: Extreme heat linked to more mental health emergencies", Medical News Today, March 2nd, 2022
https://www.medicalnewstoday.com/articles/climate-change-extreme-heat-linked-to-me

[12] "The temperature toll", Yale Scientific, February 28, 2022
https://www.yalescientific.org/2022/02/the-temperature-toll/

[11] "Applications of Geospatial Methods to Environmental Science", Leveraging Advances in Remote Geospatial Technologies to Inform Precision Environmental Health Decisions - A Workshop, The National Academies of Sciences Engineering Medicine, Apr 15-16 at https://vimeo.com/533640841

[10] "Termite colony the size of Great Britain has been being built since the dawn of the Pyramids" by Rob Waugh, *Yahoo News UK*, November 22, 2018. Available at:
https://www.yahoo.com/news/termite-colony-size-great-britain-built-since-dawn-pyra

[9] "Massive 4,000-year-old termite mounds can be seen on Google Earth" by Ashley May, *USA Today*, Nov. 21, 2018. Available at:
https://www.usatoday.com/story/news/world/2018/11/21/ancient-termite-mounds-seen-g

[8] "Ancient termite megapolis as large as Britain found in Brazil" by Bard Wilkinson, *CNN*, November 21, 2018. Available at:
https://www.cnn.com/travel/article/termites-brazil-old-intl/index.html

[7] "A Metropolis of 200 Million Termite Mounds Was Hidden in Plain Sight" by Kenneth Chang, *New York Times*, Nov. 20, 2018. Available at:
https://www.nytimes.com/2018/11/20/science/termite-mounds-brazil.html?

[6] "These Ancient Termite Mounds Are As Old As the Egyptian Pyramids. And They're Visible from Space" by Laura Geggel, *Live Science*, November 20, 2018. Available at:
https://www.livescience.com/64125-ancient-termite-mounds.html

[5] "This wonder of the Earth is the size of Minnesota and built by bugs" by Ben Guarino, *Washington Post*, November 19, 2018. Available at:
https://www.washingtonpost.com/science/2018/11/19/termites-built-natural-wonder-ea

[4] "Termite mounds dating back millennia can be seen from space" by Jaime Sampaio, *Nature*, 19 November 2018,
https://www.nature.com/articles/d41586-018-07459-x

[3] "For 4,000 Years, Termites Have Been Building Something Incredible in Brazil" by Ed Yong, *The Atlantic*, Nov 19, 2018,
https://www.theatlantic.com/science/archive/2018/11/brazil-termite-murundus-mounds

[2] "High and termite-y... the mounds remaking Brazil" by Robby Berman, *Big Think*, 21 November, 2018,
   https://bigthink.com/surprising-science/brazil-termite-mounds

[1] BBC Radio Norfolk, Matthew Gudgin, 21/11/2018

Table 1: Summary of Publications

	Totals
Referred Publications	70
Journal Publications	52
Book Chapters	4
Fully Refereed Conference Publications	14

REFEREED
JOURNAL
PUBLICATIONS.

([†] denotes graduate student collaborator)

[54] **Yoo E.-H.**, Min J.-Y., Choi B.-Y., Lee H.-J., Ryoo S.-W., Min K.-B., Spatial-temporal association between greenspace exposure and depression in older adults, (under review)

[53] **Yoo E.-H.**, Roberts J.E., and Chen, K., Effects of Air Pollution on Emergency Room Visits for Mental Disorders: Risks and Effect Modification by Personal Characteristics and Comorbid Physical Disorders *Environmental Research: Health* (under review)

[52] **Yoo E.-H.**, Cooke A., [†]Eum Y., Examining the Geographical Distribution of Air Pollution Disparities Across Different Racial and Ethnic Groups: Incorporating Workplace Addresses, *Health & Place* (in press, accepted on 09/07/2023)

[51] Song I.-S., **Yoo E.-H.**, Jung I., Oh J.-K., and Kim S.-Y., 2023, Role of geographic characteristics in the spatial cluster detection of cancer: evidence in South Korea, 1999-2013, *Environmental Research* 116841,
   DOI: https://doi.org/10.1016/j.envres.2023.116841

[50] **Yoo E.-H.**, Roberts J.E., [†]Eum Y., Li X., [†]L. Chu, P. Wang, and K. Chen, 2023, Short-term exposure to fine particulate matter air pollution and mental disorders: A case-crossover study in New York City *Environmental Research: Health* 2023 Environ. 1:015001, DOI: https://doi.org/10.1088/2752-5309/ac6439

[49] Jiang X., [†]Eum Y., and **Yoo E.-H.**, 2022 Quantifying wildland-specific $PM_{2.5}$ on health impact assessment, *Science of the Total Environment*, 857 (20), 159548,
   DOI: https://doi.org/10.1016/j.scitotenv.2022.159548

[48] [†]Pu Q. and **Yoo E.-H.**, 2022 A gap-filling hybrid approach for hourly PM2.5 prediction at high spatial resolution from multi-sourced AOD data, *Environmental Pollution* 315: 120419 DOI: https://doi.org/10.1016/j.envpol.2022.120419

[47] [†]Zhu K., Kawyn M. N. , Kordas K., Mu L., **Yoo E.-H.**, Seibert R., Smith L. E., 2022, Assessing exposure to household air pollution in children under five: A scoping review, *Environmental Pollution*
   DOI: https://doi.org/10.1016/j.envpol.2022.119917

[46] [†]Eum Y. and **Yoo E.-H.**, 2022, Imputation of Missing Daily Time-Activity Using Word Embedding and Long Short-Term Memory Model, *Computers, Environment and Urban Systems* 95 (2022): 101823.
   DOI: https://doi.org/10.1016/j.compenvurbsys.2022.101823

[45] **Yoo E.-H.** and Roberts J.E., 2022, Static Home-based versus Dynamic Mobility-based Assessments of Exposure to Urban Green Space, *Urban Forestry & Urban Greening*, 70, 127528, DOI: https://doi.org/10.1016/j.ufug.2022.127528

[44] †Eum Y. and **Yoo E.-H.**, 2022, Using GPS-enabled Mobile Phones to Evaluate the Associations between Human Mobility Changes and the Onsets of Influenza Illness, *Spatial and Spatio-temporal Epidemiology*, 40, 100458, DOI: https://doi.org/10.1016/j.sste.2021.100458

[43] †S. M. A. Zaidi, V. Chandola, and **Yoo E.-H.**, 2021, DST-Predict: Predicting individual mobility patterns from mobile phone GPS data, *IEEE Access*, DOI: https://doi.org/10.1109/ACCESS.2021.3134586

[42] **Yoo E.-H.**, Roberts J.E., †Eum Y., X. Li, and K. Konty, 2021, Exposure to urban green space may both promote and harm mental health in socially vulnerable neighborhoods: A neighborhood-scale analysis in New York City, *Environmental Research*, DOI: https://doi.org/10.1016/j.envres.2021.112292

[41] **Yoo E.-H.**, Palermo T., and Maluka S., 2021, Geostatistical linkage of national demographic and health survey data: a case study of Tanzania, *Population Health Metrics*, 19:41, DOI : https://doi.org/10.1186/s12963-021-00273-0

[40] **Yoo E.-H.**, †Eum Y., Roberts J.E., †Q. Gao, and K. Chen, 2021, Association between extreme temperatures and emergency room visits related to mental disorders: A multi-region time-series study in New York, USA, *Science of the Total Environment*, 792, 148246, DOI: https://doi.org/10.1016/j.scitotenv.2021.148246

[39] **Yoo E.-H.**, †Eum Y., †Q. Gao, and K. Chen, 2021, Effect of extreme temperatures on daily emergency visits for mental disorders: Erie county, NY, USA, *Environmental Science and Pollution Research*, DOI: http://dx.doi.org/10.1007/s11356-021-12887-w

[38] **Yoo E.-H.**, †Pu Q., †Eum Y., and Jiang X., 2021, Impact of Individual Mobility on Long-term Exposure to Ambient PM2.5: Assessing Effect Modification by Travel Patterns and Spatial Variability of PM2.5, *International Journal of Environmental Research and Public Health*, 18, 2194, DOI: https://doi.org/10.3390/ijerph18042194.

[37] †Pu Q. and **Yoo E.-H.**, 2021, Ground PM2.5 prediction using imputed MAIAC AOD with uncertainty quantification, *Environmental Pollution*, 274: 116574, DOI: https://doi.org/10.1016/j.envpol.2021.116574

[36] †Pu Q. and **Yoo E.-H.**, S. B. Cairo, L. Malemo, and D. H. Rothstein, 2020, Spatial accessibility of health services in North Kivu, Democratic Republic of the Congo, *Applied Geography*, 121: 102262

[35] **Yoo E.-H.**, Roberts J.E., †Eum Y., and †Y. Shi, 2020, Quality of Hybrid Location Data drawn from GPS-enabled Mobile Phones: Does it Matter?, *Transaction in GIS*, https://doi.org/10.1111/tgis.12612

[34] **Yoo E.-H.**, Mangoin A. Z., and Chipeta M., 2020, Adaptive Spatial Sampling Design for Environmental Field Prediction using Low-cost Sensing Technologies, *Atmospheric Environment*, 221,117091

[33] †Jiang X. and **Yoo E.-H.**, 2019, Modeling wildland fire-specific PM2.5 concentrations for uncertainty-aware health impact assessments. *Environmental Science & Technology*, 53(20), pp.11828-11839.

[32] †Pu Q. and **Yoo E.-H.**, 2019, Spatio-temporal modeling of PM2.5 concentrations with missing data problem: a case study in Beijing, China, *International Journal of Geographical Information Science*, 34(3)

[31] Kerry R., **Yoo E.-H.**, and B. Ingram, 2019, Spatial Analysis of Drug Poisoning Deaths in the American West using Profile Regression to adjust for Collinearity and Spatial Correlation, *Drug and Alcohol Dependence*, 204, 107598

[30] **Yoo E.-H.**, 2019, How short is long enough?: Modeling temporal aspects of human mobility behavior using mobile phone data, *Annals of the Association of American Geographers*, 109(5),

[29] †Weaver A. M., E. Gurley, C. Crabtree-Ide, H. Salje, **Yoo E.-H.**, L. Mu, N Akter, P K. Ram, 2019, Air pollution dispersion from biomass fires to neighboring homes in Mirpur, Dhaka, Bangladesh, *BMC Public Health* 19, 425

[28] †Eum Y., **Yoo E.-H.**, and B., Elizabeth, 2019, "Socioeconomic determinants of pediatric asthma emergency department visits under regional economic development in western New York, *Social Science & Medicine* 222, 133-144

[27] Martin S.J., Funch R.R., Hanson P.R., and **Yoo E.-H.**, 2018, A vast 4000-year-old spatial pattern of termite mounds, *Current Biology*, 28, November 19

[26] Lim H., **Yoo E.-H.**, and M. Park, 2018, Warehouse rental market segmentation using spatial profile regression, *Journal of Transport Geography*, 73, 64-74

[25] **Yoo E.-H.**, B. Ingram, Kerry R., B. Ortiz, B. Scully, 2018, Identifying Aflatoxin Risk Areas through the Examination of the Associations Between Risk Factor Profiles and Aflatoxin Contamination, *Spatial Statistics*, 28, 84-104

[24] **Yoo E.-H.**, P. Brown, †Eum Y., 2018, Ambient Air Quality and Spatio-temporal Patterns of Cardiovascular Emergency Department Visits, *International Journal of Health Geographics* 17(1) 1-16

[23] Dodson Z., **E-H Yoo**, R.N. Roth, and C. Martin-Gill, 2018, Spatial Methods to Enhance Public Health Surveillance and Resource Deployment in the Opioid Epidemic. *American Journal of Public Health* 108(9), pp.1191-1196.

[22] K. Stanley, **Yoo E.-H.**, 2018, †T. Paul, and S. Bell. How many days are enough?: capturing routine human mobility, *International Journal of Geographical Information Science* 32(7), 1485-1504.

[21] Mennis J. and **Yoo E.-H.**, 2018, Geographic Information Science and the analysis of place and health, *Transaction in GIS*, 22(3), pp.842-854.

[20] †Jiang X. and **Yoo E.-H.**, 2018, The importance of spatial resolutions of Community Multiscale Air Quality (CMAQ) models on health impact assessment, *The Science of the Total Environment* 627(15), 1528-1543

[19] Shekhar S., **Yoo E.-H.**, Ahmed A., Haining R., Kodannolly S., 2017, Analysing malaria incidence at the small area level for developing a spatial decision support system: a case study in Kalaburagi, Karnataka, India, *Spatial and Spatio-temporal Epidemiology*, 20, 9-25.

[18] **Yoo E.-H.**, Chen D., †C. Diao, and C. Russell, 2015, The effects of weather and environmental factors on West Nile virus mosquito abundance in Greater Toronto Area, *Earth Interactions*, 20(3), 1-22.

[17] **Yoo E.-H.**, C. Rudra, and [†]M. Glasgow, L. Mu, 2015, Geospatial estimation of individual exposure to air pollutants: moving from static monitoring to activity-based dynamic exposure assessment, *Annals of the Association of American Geographers*, 105(5), 915-926.

[16] **Yoo E.-H.**, C.-L. Lee, and K.-H. Park, 2015, Valuing commercial spaces in multi-story buildings using a three-level mixed effects modeling approach, *International Regional Science Review*, 38(4), 413-436.

[15] [†]Glasgow M., Rudra C.B., **Yoo E.-H.**, Demirbas M., Rudra C., and Mu L., 2014, Using Smartphones to collect time-activity data for long-term personal-level air pollution exposure assessment, *Journal of Exposure Science and Environmental Epidemiology*, DOI:10.1038/jes.2014.78.

[14] Cao G., **Yoo E.-H.**, and Wang S., 2014, A statistical framework of data fusion for spatial and categorical variables, *Stochastic Environmental Research and Risk Assessment*, 1-15.

[13] **Yoo E.-H.**, 2014, Site-specific prediction of West Nile virus mosquito abundance in Greater Toronto Area using generalized linear mixed models, *International Journal of Geographical Information Science*, 28(2), 296-313.

[12] **Yoo E.-H.**, 2013, Exploring space-time models for West Nile virus mosquito abundance data, *Applied Geography*, 45, 203-210.

[11] **Yoo E.-H.**, Hoagland B.W., Cao G., and Fagin T., 2013, Spatial distribution of trees and landscapes of the past: a mixed spatially correlated multinomial logit model approach for the analysis of the Public Land Survey data, *Geographical Analysis*, 45, 420–441.

[10] Spielman S. E., **Yoo E.-H.**, and Linkletter C., 2013, The urban environment, behavior, and health: understanding the role of scale and sorting in the estimation of neighborhood effects, *Environment and Planning B: Planning and Design*, 40(3), 489-506.

[9] Powell R. L., **Yoo E.-H.**, and Still C. J. 2012. Vegetation and soil carbon-13 isoscapes for South America: integrating remote sensing and ecosystem isotope measurements. *Ecosphere*, 3(11):109. http://dx.doi.org/10.1890/ ES12-00162.1

[8] Patterson K. and **Yoo E.-H.**, 2012, Trapped in poor places?: an assessment of the residential spatial patterns of housing choice voucher holders in 2004 and 2008, *Journal of Social Service Research*, 38(5), 637-655.

[7] **Yoo E.-H.**, [†]A.B. Trgovac, 2011, Scale effects in uncertainty modeling of presettlement vegetation distribution, *International Journal of Geographical Information Science*, 25(3), 405-421.

[6] **Yoo E.-H.**, Kyriakidis P.C., and Tobler W., 2010, Reconstructing population density surfaces from areal data: a comparison of Tobler's pycnophylactic interpolation method and area-to-point Kriging, *Geographical Analysis*, 42 (1), 78-98.

[5] **Yoo E.-H.** and Kyriakidis P.C., 2009, Area-to-point Kriging in spatial hedonic price models, *Journal of Geographical Systems*, 11(4), 381-406.

[4] [†]Spielman S. E. and **Yoo E.-H.**, 2009, The spatial dimensions of neighborhood effects, *Social Science & Medicine*, 68(6), 1098-1105.

[3] **Yoo E.-H.** and Kyriakidis P.C., 2008, Area-to-point predictions under boundary conditions, *Geographical Analysis*, 40(4), 355-379.

[2] **Yoo E.-H.** and Kyriakidis P.C., 2006, Area-to-point Kriging with inequality-type data, *Journal of Geographical Systems*, 8(4), 357-390.

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PEER REVIEWED CONFERENCE PROCEEDINGS

[14] **Yoo E.-H.**, Roberts J.E., and †Eum Y., 2019, Implications of incomplete GPS-enabled mobile phone data on human mobility studies, AGILE 2019 22nd AGILE Conference on Geographic Information Science June 17-20, 2019 Limassol, Cyprus

[13] **Yoo E.-H.** and M. Chipeta, 2018, Adaptive Sampling for Optimal Mobile Sensor Data Collection, geoENV, July 4-5, Belfast, Northern Ireland, UK.

[12] Kerry R., **Yoo E.-H.**, 2018, B. Ingram, Spatial Analysis of Drug Poisoning Deaths in the American West using Profile Regression to adjust for Collinearity and Spatial Correlation, geoENV, July 4-5, Belfast, Northern Ireland, UK.

[11] †Pu Q. and **Yoo E.-H.**, 2018, Spatio-temporal Modeling of PM2.5 concentrations in Beijing, China, The 13th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences, Beijing, China, 22-23, May 2018

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[9] **Yoo E.-H.**, B. Ingram, Kerry R., B. Ortiz, B. Scully, Identifying Aflatoxin Risk Areas through the Examination of the Associations Between Risk Factor Profiles and Aflatoxin Contamination, Spatial Statistics 2017, July 4-7, Lancaster, UK.

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[6] Kerry R., B. Ortiz, B. Ingram, B. Scully, **Yoo E.-H.**, 2016, Irregularly Sampled Data in Space and Time: Using Poisson Kriging to Reduce the Influence of Uncertain Observations in Assessing the Risk of Aflatoxin Contamination of Corn in Southern Georgia, USA, *The proceedings of the 12th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences*, July 5-8, Montpellier, France.

[5] †Yan Zhuang, †Feng Lin, **Yoo E.-H.**, and Wenyao Xu, 2015, AirSense: A Portable Context-sensing Device for Personal Air Quality Monitoring, *The proceedings of the 2015 Workshop on Pervasive Wireless Healthcare*, 17-22, Association for Computing Machinery (ACM), New York, NY, USA.

[4] **Yoo E.-H.**, 2014, Spatiotemporal downscaling under the volume-preserving constraint, In: S., A.M., M., J.P., F., A. & Kravchenko, S. (Eds.). *The proceedings of the 11th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences*, pp. 2-5, July 8-11, East Lansing, Michigan, USA.

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[1] **Yoo E.-H.**, Y.-C. Wang, and †A. Trgovac, 2008, Spatial uncertainty assessment in the reconstruction of presettlement forest patterns in Western NY, USA, The proceedings of the 8th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences, vol. 1, 278-279.

REFEREED BOOK CHAPTERS

[4] **Yoo E.-H.**, 2022, Geographic Information Science, In: J. L. Aron and J. A. Patz (Eds) *Ecosystem Change and Public Health*, Johns Hopkins

[3] †Jiang X. and **Yoo E.-H.**, 2019, Evaluating the effect of domain size of CMAQ model on regional PM2.5 simulations, In: Y. Lu and E. Delmelle (Eds) *Geospatial Technologies of Urban Health*, Chap 4, pp. 53-72, Elsevier.

[2] **Yoo E.-H.**, 2017, Geostatistics, In: T. J. Cova and M.-H. Tsou (Eds) *Comprehensive Geographic Information Systems: GIS principles and technical designs of GIS*, Elsevier.

[1] **Yoo E.-H.**, D. Chen, and C. Russell, 2014 West Nile virus mosquito abundance modeling using a non-stationary spatio-temporal geostatistics, In: D. Chen, B. Moulin, J. Wu (Eds) *Analyzing and Modeling Spatial and Temporal Dynamics of Infectious Diseases*, Chap. 14, pp. 263-282, John Wiley & Sons, Hoboken, NJ.

BOOK REVIEWS

[2] **Yoo E.-H.**, 2015, *Scale in Spatial Information and Analysis* by Jingxiong Zhang, Peter Atkinson, Michael F. Goodchild, CRC Press, Boca Raton, FL, 2014, *Photogrammetric Engineering & Remote Sensing (PE&RS)*.

[1] **Yoo E.-H.** and J. Aldstadt, 2011, *Principles of Modeling Uncertainties in Spatial Data and Spatial Analyses* by Shi, Wenzhong, CRC Press, 2010, *Journal of Regional Science*, vol. 51(4), 860.

INVITED PANELIST

- *Human dynamics and pandemic reflections*, 'GIScience Forward: Meeting the Challenge' UCGIS Symposium 2022, Syracuse, NY, US, 7-9 Jun., 2022

- *A New Landscape of Medical Geography in Korea*, Panel session to discuss the potentials and tasks of medical geography in Korea. The Korean Geographical Society, Seoul, Korea. Jun. 21-22, 2013

- *20 Years of Spatial Statistics*, Panel session to commemorate the 20th anniversary publication of the Dan Griffith's landmark book, Organizer: Antonio Pez, The 55th Annual North American meetings of the Regional Science Association International, Brooklyn, NY, USA, Nov. 19-22, 2008.

INVITED SEMINARS & PRESENTATIONS

[38] **Yoo E.-H.**, A. Cooke, and Y. Eum, Examining the Geographical Distribution of Air Pollution Disparities Across Different Racial and Ethnic Groups: Incorporating Workplace, International Society of Exposure Science (ISES), 27-31, Aug., 2023, Chicago, Illinois, USA

[37] **Yoo E.-H.**, 2023 Geospatial approaches to enhance environmental health science: Heat, green space, and mental health. National Cancer Center, 6, Apr., 2023, Seoul, Korea

[36] **Yoo E.-H.**, 2023 Geospatial approaches to enhance environmental health science: Heat, air pollution, green space, and mental health. Department of Atmospheric Sciences Yonsei University, 28, Mar., 2023, Seoul, Korea

[35] **Yoo E.-H.**, 2023 Geospatial approaches to enhance environmental health science: Heat, air pollution, green space, and mental health. Department of Geography, Seoul National University, 21, Mar., 2023, Seoul, Korea

[34] **Yoo E.-H.**, 2020 The effect of spatial and temporal scale on the inferences about human exposure to air pollution. Scale and Spatial Analytic: A SPARC Workshop 2020, Arizona State University, 10-11, Feb., 2020, Tempe, AZ, US

[33] Jiang X., **Yoo E.-H.**, 2020 Modeling wildland fire-specific $PM_{2.5}$ concentrations for uncertainty-aware health impact assessments.The 100th American Meteorological Society Annual Meeting, Jan 12 - 16, Boston, MA, U.S.

[32] **Yoo E.-H.** and Jiang X., 2019 Fixed point versus time-activity based personal air pollution exposure assessment: Does the number of days of assessment matter? The 18th Annual CMAS Conference, Chapel Hill, NC, U.S., Oct 21 - 23

[31] **Yoo E.-H.**, Roberts J.E., and Eum Y., 2019 Implications of incomplete GPS-enabled mobile phone data on human mobility studies, AGILE 2019 22nd AGILE Conference on Geographic Information Science, June 17-20, Limassol, Cyprus

[30] **Yoo E.-H.**, Spatial Methods to Enhance Public Health Surveillance and Resource Deployment in the Opioid Epidemic, 2019 Fulbright Enrichment Seminar, Buffalo, NY, USA, 24-28 Apr. 2019

[29] Jiang X. and **Yoo E.-H.**, 2018 Modeling PM2.5 concentrations from wildland fires for health impact assessment. The 17th Annual CMAS Conference, Chapel Hill, NC, USA, October 22 - 24

[28] Center for Global Health Research 2018 Geospatial methods for Closing the Global Mortality Data Divide, Toronto, Canada, 14-15, Jun. 2018

[27] **Yoo E.-H.** and N. Napp, 2018 Mapping urban scale air quality using big data: Accounting for uncertainty, Air Sensors International Conference, Oakland, CA, USA, Sep. 12-14

[26] **Yoo E.-H.** and M. Chipeta, 2018 Adaptive Sampling for Optimal Mobile Sensor Data Collection, The 12th geoENV, Belfast, Ireland, Jul. 8-11

[25] Pu Q. and **Yoo E.-H.**, 2018, Spatio-temporal Modeling of PM2.5 concentrations in Beijing, China, The 13th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences, Beijing, China, May 22-23

[24] **Yoo E.-H.**, Mapping urban scale air quality using Big Data: accounting for uncertainty, 2017 GeoMED, Porto, Portugal, Sep. 06-09

[23] L. Bian, S. Zhong, Eum Y., M. Miller, P. Gao, Y. Pan, and **Yoo E.-H.** 2017 Smartphone-Based Survey of Individual Interaction and Mobility Behavior in the Context ofInfluenza Surveillance, 2017 MIDAS Annual Network Meeting, Atlanta, Main,USA, May 22

[22] **Yoo E.-H.**, A geospatial approach to exposure assessment for PM2.5, Graduate School of Public Health, Seoul National University, Seoul, S. Korea, Apr. 8, 2016

[21] **Yoo E.-H.**, A geospatial approach to air pollution exposure assessment, National Institute of Applied Statistics Research Australia (NIASRA), School of Mathematics and Applied Statistics, University of Wollongong, Wollongong NSW 2522, Australia, Mar. 3, 2016

[20] **Yoo E.-H.**, A geospatial modeling approach to public health research, University of Pittsburgh Graduate School of Public Health, Pittsburgh PA 15261, USA, Sep. 14, 2015

[19] **Yoo E.-H.**, Foot-and-Mouth disease in South Korea, Symposium on Health, Well-Being, Social Security and Vulnerability in Asia, University at Buffalo, The State University at New York, USA, Sep. 10, 2015

[18] **Yoo E.-H.**, Activity-based dynamic air pollution exposure assessment, Department of Geography, Seoul National University, Korea, May 19, 2015.

[17] **Yoo E.-H.**, A geospatial approach for activity-based dynamic exposure assessment, Geography & Geographic Information Science, University of Illinois at Urbana-Champaign, Champaign, IL, 13 Mar., 2015.

[16] **Yoo E.-H.**, An uncertainty-aware dynamic personal exposure assessment to air pollution, UB Air Pollution Workshop, Buffalo, NY, 26 Sep., 2014.

[15] **Yoo E.-H.**, Propagation of uncertainty in dynamic air pollution exposure modeling, GIScience Research Track, Esri International User Conference, San Diego, California, 14-18 Jul., 2014.

[14] **Yoo E.-H.**, 2014, Spatiotemporal downscaling under the volume-preserving constraint, The 11th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences, East Lansing, MI, USA, 8-11, Jul. 2014 (keynote speaker)

[13] **Yoo E.-H.**, Spatio-temporal prediction of PM2.5 concentrations in the presence of uncertainty, Department of Social and Preventive Medicine, University at Buffalo, The State University at New York, USA, Oct. 4, 2013

[12] **Yoo E.-H.**, Site-specific mosquito abundance modeling: case study in Greater Toronto Area, Department of Geography, Kyounghee University, Korea, Jun. 24, 2013.

[11] **Yoo E.-H.**, Spatio-temporal modeling mosquito abundance in Greater Toronto Area, Department of Geoinformatics, University of Seoul, Korea, Jun. 18, 2013.

[10] R. L. Powell, **Yoo E.-H.**, C. J. Still, Ecosystem Carbon-13 Isoscapes and uncertainty estimates for Africa: integrating Remote Sensing and field Isotope measurements, the American Geophysical Unions 45th annual Fall Meeting, San Francisco, CA, Dec. 3-7, 2012.

[9] **Yoo E.-H.**, Modeling uncertainty in combining two centuries of census data, 2012 University Consortium for GIScience (UCGIS) Symposium, Washington, DC, USA, Jun. 01, 2012.

[8] **Yoo E.-H.**, A dynamic zero-inflated count model for West Nile Virus vector mosquito, Department of Geography, Queens University, Kingston, Ontario, Canada, Apr. 05, 2012.

[7] **Yoo E.-H.**, Uncertainty modeling of presettlement vegetation distribution, Department of Geoinformatics, University of Seoul, Korea, Jan. 06, 2012.

[6] **Yoo E.-H.**, Geostatistical modeling under preferential sampling, Department of Geography and National Center for Supercomputing Applications (NCSA), University of Illinois at Urbana-Champaign, Urbana Champaign, Illinois, USA, Aug. 26, 2011.

[5] **Yoo E.-H.**, The Potentials and limitations of multivariate Geostatistics, Center for Spatial Analysis Seminar Series, McMaster University, Hamilton, Ontario, Canada, Mar. 26, 2010.

[4] **Yoo E.-H.**, Spatial uncertainty assessment: presettlement vegetation reconstruction, Integrated Graduate Education and Research Traineeship Program (IGERT) Colloquium, University at Buffalo, The State University at New York, USA, Nov. 14, 2008.

[3] **Yoo E.-H.**, Spatial uncertainty assessment: presettlement vegetation reconstruction, The Institute for Korean Regional Studies, Seoul National University, Korea, Jul. 22, 2008.

[2] **Yoo E.-H.**, A Geostatistical framework for downscaling spatial data, Department of Geoinformatics, University of Seoul, Korea, Jul. 18, 2008.

[1] **Yoo E.-H.**, A Geostatistical framework for downscaling spatial data: population density surface reconstruction, Korea Research Institute for Human Settlements, Anyang-si, Gyeonggi-do, Korea, Jul. 15, 2008.

WORKSHOPS

GeoMED 2017 one-day workshop: Health Applications of Google Earth Engine, Porto, Portugal, with Allison Lieber,, 6, Sep. 2017.

GeoMED 2017 one-day workshop: Modelling spatial and spatio-temporal areal unit data in R with CARBayes, Porto, Portugal, with Duncan Lee, 6, Sep. 2017.

StatWeek 2016 one-day workshop: Multi-level models for Social Network Analysis, Wollongong, Australia, with Mark Tranmer, 3, Feb. 2016.

StatWeek 2016 two-day workshop: High-Dimensional Data Analysis, Wollongong, Australia, with Olivier Thas, 1-2, Feb. 2016.

Spatial Accuracy 2014 pre-symposium one-day workshop: Hierarchical Models for Spatio-Temporal Data, East Lansing, USA, with Andrew Finley, Jul. 2014.

Bayesian Modeling of Spatial Health Data with INLA AND WINBUGS, Spatial Statistics 2013, Columbus, Ohio, USA, with Dr. Lawson, 4-7 Jun. 2013.

Multilevel Modeling workshop certification, NIH-supported GIS Population Science 5-day training program in Advanced Spatial Analysis from the Center for Spatially Integrated Science, Santa Barbara, USA, with Dr. Jones and Subramanian, Jul. 2011.

Spatial Accuracy 2010 pre-symposium one-day workshop: Geostatistical Optimization of Spatial Sampling Designs, Leicester, U.K., with Dr. Heuvelink, Jul. 2010.

Spatial Accuracy 2008 pre-symposium one-day workshop: Spatial Uncertainty Propagation, Shanghai, China, with Dr. Heuvelink, Jul. 2008.

CONFERENCE
PRESENTATION
WITH ABSTRACTS

[40] **Yoo E.-H.**, Roberts J. E., and Eum Y., 2022 Comorbidity between mental disorders and cardiorespiratory diseases in the community: A bayesian joint spatial analysis of multiple disease, GeoMED2022, Irvine, CA, USA, 12-14 Oct.

[39] Eum Y. and **Yoo E.-H.**, 2022 Evaluating Mobility Changes Associated with Influenza-Like Symptoms Using Mobile Phone-based GPS Data, GeoMED2022, Irvine, CA, USA, 12-14 Oct.

[38] Jiang X., Eum Y. and **Yoo E.-H.**, 2022 The impact of fire-specific PM2.5 calibration on health effect analyses, GeoMED2022, Irvine, CA, USA, 12-14 Oct.

[37] **Yoo E.-H.**, Roberts J. E., Powell B., Palmero T., Pu Q., 2022 Geospatial modeling of national health service delivery survey data, The 14th geoENV, Parma, Italy, 22-24 Jun.

[36] Eum Y. and **Yoo E.-H.**, The effects of influenza-like symptoms on human mobility patterns in Buffalo metropolitan area, New York, the 2016–2017 influenza season, 2019 AAG Annual Meeting, Washington, D.C, USA, 3-7 Apr. 2019

[35] Jiang X. and **Yoo E.-H.** Modeling wildland fire-specific PM2.5 concentrations for uncertainty-aware health impact assessment. The 115th Annual meeting of the Association of American Geographers, Washington, DC, USA, April 3 - 7, 2019

[34] Pu Q. and **Yoo E.-H.**, Spatio-temporal modeling of PM2.5 concentrations with missing data problem, Annual Conference of Association of American Geographers, Washington, DC, USA, 3-6 Apr. 2019.

[33] Jiang X. and **Yoo E.-H.** The importance of spatial resolutions of Community Multiscale Air Quality (CMAQ) models on health impact assessment. The 114th Annual meeting of the Association of American Geographers, New Orleans, LA, USA, April 10 - 14, 2018.

[32] Z. Dodson, **Yoo E.-H.**, and J. Buchanich, Leveraging Geospatial Methods to Accurately Identify Clusters of Opioid Drug Abuse and Target Interventions, The 39th Annual Meeting of the Society for Medical Decision Making.

[31] **Yoo E.-H.**, Eum Y., Jiang X. Air Pollution and Emergency Department Visits for Cardio Vascular Disease, The 113th Annual meeting of the Association of American Geographers, Hynes Convention Center, Boston, MA, USA, Apr. 5 - Apr. 9, 2017.

[30] Jiang X. and **Yoo E.-H.**, Bringing together multiple sources of data for modeling spatio-temporal variability of particulate matter in New York, USA , The 112th Annual meeting of the Association of American Geographers, San Francisco, CA, USA, Mar. 29 - Apr. 2, 2016.

[29] Eum Y. and **Yoo E.-H.**, Contextualization of GPS data with applications to epidemiological study, The 112th Annual meeting of the Association of American Geographers, San Francisco, CA, USA, Mar. 29 - Apr. 2, 2016.

[28] **Yoo E.-H.**, Uncertainty-aware personal air pollution exposure assessment, The 111th Annual meeting of the Association of American Geographers, Chicago, IL, USA, Apr. 22-25, 2015.

[27] **Yoo E.-H.**, Spatio-temporal prediction & simulation under the volume preserving constraints, The 11th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences, East Lansing Michigan, 48824, USA, Jul. 8-11, 2014.

[26] Jiang X. and **Yoo E.-H.**, Spatiotemporal Contextual Units for Environmental Exposure Study, The 110th Annual meeting of the Association of American Geographers, Tampa, FL, USA, Apr. 8-12, 2014.

[25] **Yoo E.-H.**, An uncertainty-aware dynamic air pollution exposure assessment, Spatial Statistics 2013, Columbus, OH, USA, Jun. 4-7, 2013.

[24] **Yoo E.-H.**, D. Chen, and C. Russell, 2013, Site-specific prediction of mosquito abundance in Greater Toronto Area using generalized linear mixed-effects models, The 109th Annual meeting of the Association of American Geographers, Los Angeles, CA, USA, Apr. 9-13, 2013.

[23] X. Pu and **Yoo E.-H.**, 2013, Assessing the effects of clustered sampling of Public Land Survey records for historic tree distribution reconstruction, The 109th Annual meeting of the Association of American Geographers, Los Angeles, CA, USA, Apr. 9-13, 2013.

[22] **Yoo E.-H.**, D. Chen, and C. Russell, 2012, Site-specific prediction of mosquito abundance using spatio-temporal Geostatistics, The 10th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences, Florianopolis, SC, Brazil, Jul. 10-13, 2012.

[21] M. Glasgow, L. Mu, P. Nayak, C. Crabtree Ide, M. Demirbas, **Yoo E.-H.**, A. Szprio, A. Rudra, J. Merriman, J. Wactawski-Wende, C. Rudra, Smartphone technology for improving air pollution exposure estimates, The 45th Society for Epidemiologic Research's Annual Meeting, Jun, 27-30, 2012.

[20] **Yoo E.-H.** and H. Hu, 2012, Floating U.S. Census boundaries, The 108th Annual meeting of the Association of American Geographers, NY, USA, Feb. 24-28, 2012.

[19] T. Fagin, **Yoo E.-H.**, B.W. Hoagland, and G. Cao, Modeling spatial distribution of PLS witness tree data using a multinomial logistic mixed model, The 108th Annual meeting of the Association of American Geographers, NY, USA, Feb. 24-28, 2012.

[18] **Yoo E.-H.** and W. Mering and P.R. Trawinski, 2011, A space-time zero-inflated count model of West Nile Virus vector mosquitoes, The 107th Annual meeting of the Association of American Geographers, Seattle, USA, April 12-16, 2011.

[17] **Yoo E.-H.** and S. E. Spielman, and C. Linkletter, 2010, Sorting out the effect of scale and residential selection on bias in estimates of contextual effects, The 57th North American Meetings of the Regional Science Association International, Denver, USA, Nov. 10-13, 2010.

[16] **Yoo E.-H.** and P.R. Trawinski, 2010, Joint space-time modeling of West Nile virus vector mosquito abundance, The 9th International Symposium on Spatial Accuracy Assessment (ISARA) in Natural Resources and Environmental Sciences, Leicester, UK, Jul. 20-23 2010.

[15] **Yoo E.-H.** and A. Trgovac, Scale effects in uncertainty modeling of presettlement vegetation distribution, The 106th Annual meeting of the Association of American Geographers, Washington, DC, USA, Apr. 14-18, 2010.

[14] S. E. Spielman and **Yoo E.-H.**, The spatial dimensions of neighborhood effects, The 55th Annual North American meetings of the Regional Science Association International, Brooklyn, NY, USA, Nov. 19-22, 2008.

[13] **Yoo E.-H.**, Y.-C. Wang, and A. Trgovac, Spatial uncertainty assessment in the reconstruction of presettlement forest patterns in western NY, USA, The 8th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences, Shanghai, China, Jun. 25-28, 2008.

[12] **Yoo E.-H.** and D.-J., Kim, Geostatistical accuracy assessment of public land appraisal values, The 104th Annual meeting of the Association of American Geographers, Boston, IL, USA, Apr. 7-11, 2008.

[11] **Yoo E.-H.** and Kyriakidis P.C., Area-to-point coKriging in spatial hedonic price models, The 103rd Annual meeting of the Association of American Geographers, San Francisco, CA, USA, Apr. 17-21, 2007.

[10] **Yoo E.-H.**, Spatial modeling of housing prices using Factorial Kriging, The 53rd Annual North American meetings of the Regional Science Association International, Toronto, Canada, Nov. 16-18, 2006.

[9] **Yoo E.-H.**, Kyriakidis P.C., and W. Tobler, Reconstructing population density surfaces from areal data, The 102th Annual meeting of the Association of American Geographers, Chicago, IL, USA, Mar. 7-11, 2006.

[8] **Yoo E.-H.**, H.-S. Shin, and H.-G. Son, Spatial prediction of housing prices in Seoul using a geostatistical approach, The Korean Geographical Society, Seoul, Korea, Jun. 8-9, 2006.

[7] **Yoo E.-H.** and Kyriakidis P.C., Area-to-point Kriging with inequality-type data, The 8th International Conference on Geocomputation, Ann Arbor, Michigan, USA, Aug. 1-3, 2005.

[6] **Yoo E.-H.**, Area-to-point Kriging prediction under boundary conditions, The 101th Annual meeting of the Association of American Geographers Student Paper Competition, Denver, CO, USA, Apr. 6-9, 2005.

[5] Kyriakidis P.C. and **Yoo E.-H.**, Geostatistical prediction/simulation of point values from areal data, The 7th International Conference on Geocomputation, Southampton, UK, Sep., 8-10, 2003.

[4] **Yoo E.-H.**, Spatial statistical analysis in a GIS environment, Geographic Information System Association of Korea, Ewha Women's University, Seoul, Korea, Nov., 1998.

[3] Washburn, L., Kyriakidis P.C., **Yoo E.-H.**, and J. Clark, Spatial scales and distribution of hydrocarbon seeps near Coal Oil Point, CA, Annual meeting of the American Association of Petroleum Geologists, Salt Lake City, UT, May 2003.

[2] **Yoo E.-H.** and K.-H. Park, Spatial pattern analysis of urban crime, The 98th Annual meeting of the Association of American Geographers, Los Angeles, CA, USA, Mar. 12-23, 2002.

[1] **Yoo E.-H.** and K.-H. Park, The way of linking S-plus and Arcview, The 8th ESRIs GIS Workshop, Seoul, Korea, Sep., 1998.

TEACHING EXPERIENCE

SUNY at Buffalo, Buffalo, NY, USA

Instructor   Sep. 2007 to present
- GEO 100, Geographic Perspectives and World Issues (undergraduate)
- GEO 281, Web GIS (undergraduate)
- GEO 410/505, Univariate Statistics in Geography (cross-listed)
- GEO 481/506, Geographical Information Systems (cross-listed)
- GEO 482/507, Locational Analysis (cross-listed)
- GEO 503, Geography Seminars (graduate) taught under the following subtitles [Special Topics in Spatial Data Analysis (2007), Advanced Geostatistics (2008), Practical Geostatistics (2009, 2010), GEO 577. Environmental Statistics (2012 to Present)]

University of Texas at Dallas, the School of Economic, Political and Policy Sciences
Dallas, TX, USA

Guest instructor Jun. 2008
- Training workshop in Spatial Filter Modeling for Environmental, Health and Social Scientists and Applied Statisticians, disseminating the novel methodology of spatial filtering to a group of emanating academics and established professionals, who are engaged in spatial analysis, demography, epidemiology, ecology and econometrics.

University of Calfiornia, Santa Barbara, Santa Barbara, CA, USA

Teaching assistant and project consultant
- Spatial Perspectives on Analysis for Curriculum Enhancement (SPACE), Jul. 2005 & Jun. 2006.
  training university and college instructors to design and implement innovative curriculum that will enhance undergraduate students to integrate and analyze spatially reference data with GIS, analytical cartography, and spatial statistics, Center for Spatially Integrated Social Science (CSISS)

- GIS and Population Science, Jun. 2005 - Jul. 2005 & Jul. 2006 - Aug. 2006. Training Ph.D. candidates and researchers in social science to use of spatial methods in population research, Center for Spatially Integrated Social Science (CSISS).

Kyung-Hee University, Seoul, Korea

Instructor Mar. 2001 to Jun. 2001
- AJ005: Geographical Data Analysis
- AJ119: Quantitative Geography

GRADUATE
DISSERTATION
COMMITTEES

Ph.D.	Graduated(5)	Supervised(0)
MA/MS	Graduated(3)	Supervised(9)
Ph.D.	Current(3)	Supervising(2)
MA/MS	Current(2)	Supervising(3)

MA/MS Committee Chair
- Wei Wang, Graduate student in Geography (Completed, 2019)
- Youdi Shi, Graduate student in Geography (Completed, 2018)
- J. Zhang, Graduate student in Geography (Completed, 2017)
- Y. Luo, Graduate student in Geography (Completed, 2015)
- H. Yu, Graduate student in Geography (Completed, 2015)
- Jiang X., Graduate student in Geography, "A search for spatio-temporal contextual units relevant to environmental exposure study " (Completed, 2013).
- X. Pu, Graduate student in Geography, "Assessing the effects of clustered sampling of Public Land Survey records for historic tree distribution reconstruction" (Completed, 2013).
- Q. Wang, Graduate student in Geography, "Evaluation of accessibility to social welfare facilities: housing choice voucher holders in Erie county, NY", (Completed, 2013).
- H. Hao, Graduate student in Geography. "Uncertainty analysis of areal weighting interpolation based on simulated incompatible census boundaries" (Completed, 2012).
- S.G. Cramblet Graduate student in Geography. "Buffalo in the brownfields: environmental injustice?" (Completed, 2012).

MA/MS Committee Member
- T. Hang, Graduate student in Geography (Completed, 2023)
- S. Kelly, Graduate student in Urban Planning (Completed, 2022)
- S. Zhang, Graduate student in Geography (Completed, 2018)
- Y. Zhao, Graduate student in Geography (Completed, 2014)
- P. Wang, Graduate student in Geography (Completed, 2012)
- E. Ameroso, Graduate student in Geography (Completed, 2010)

Ph.D. Committee Chair
- Jiang X., Graduate student in Geography (Completed, 2020)
- Eum Y., Graduate student in Geography (Completed, 2022)
- Pu Q., Graduate student in Geography (Completed, 2023)

Ph.D. Committee Member
- Z. Wei, Graduate student in Industrial and Systems Engineering (in progress)
- S. Zhong, Graduate student in Geography (Completed, 2021).
- D. Yin, Graduate student in Geography (Completed, 2020).
- W. Ji, Graduate student in Geography (Completed, 2017)
- C. Diao, Graduate student in Geography (Completed, 2017)
- G. Galindo, Graduate student in Industrial and Systems Engineering (Completed, 2012)
- M. Henchey, Graduate student in Industrial and Systems Engineering (Completed, 2012)
- D.J. Kim, Graduate student in Geography (Completed, 2009)

PROFESSIONAL SERVICE

Board Appointments
- Board of Directors, University Consortium for Geographic Information Science (Jul. 1, 2017 – Jun. 30, 2020).

- Board of Directors, Spatial Analysis and Modeling (SAM) specialty group of the Association of American Geographers (2014–2016)

- Board of Directors, University Consortium for Geographic Information Science (2014 – 2015).

- Secretary, University Consortium for Geographic Information Science (2011 – 2012).

Panelist Proposal Reviewer
- *NSF*, the U.S. National Science Foundation (NSF), Nov. 2022.

Non-Panelist Proposal Reviewer
- *NSF for the Human Networks and Data Science CAREER Program*, the U.S. National Science Foundation (NSF), Mar. 2021.

- *NSF for the Geography and Spatial Sciences (GSS) Program*, the U.S. National Science Foundation (NSF), Oct. 2015.

- *NSF for the Geography and Spatial Sciences (GSS) CAREER Program*, the U.S. National Science Foundation (NSF), Aug. 2015.

- *General Research Fund* of the Research Grants Council (RGC) of Hong Kong, Apr. 2014.

- *NSF for the Geography and Spatial Sciences (GSS) Program*, the U.S. National Science Foundation (NSF), Nov. 2013.

- *NSF Partnerships for International Research & Education program*, University at Buffalo, Jan. 2009.

Committees & Board Appointments

- Program committee: "The 12th International Conference on Geographic Information Science", in Leeds, UK, Sep. 12 to 15, 2023.

- Session organizer: *Human-Environment Interactions and Spatial Data Science*, a part of the Symposium: Harnessing the Geospatial Data Revolution for Sustainability Solutions, The Annual Meeting of the Association of American Geographers, in Denver, Colordo, Mar. 23 to 27, 2023.

- Program committee: "The 2023 AAG GeoAI Symposium", in Denver, Colordo, Mar. 23 to 27, 2023.

- Policy committee, University at Buffalo, SUNY (August, 2020 to August, 2023)

- Organization committee chair: "The 14th International Spatial Accuracy Research Association in Natural Resources and Environmental Sciences", Buffalo, USA, July 07–10, 2020.

- Scientific committee, GeoMED 2022, UC Irvine, CA, USA

- Research committee, University Consortium for Geographic Information Science (2019 – Present).

- Graduate committee, Department of Geography, University at Buffalo, SUNY (2018 to 2020)

- Program committee: "The UCGIS 2020 Hawaii Symposium", in Honolulu, Hawaii, May. 28 to Jun. 1, 2020.

- Program committee: "BigSpatial 2018" (7th ACM SIGSPATIAL International Workshop on Analytics for Big Geospatial Data)

- Program committee: "The 10th International Conference on Geographic Information Science", in Melborne, Australia, Aug. 28 to 31, 2018.

- Program committee: "UCGIS 2018 Symposium and CaGIS Auto Carto: Frontiers of Geospatial Data Science", in Madison, WI, May. 22 to 24, 2018.

- Steering committee: "The 13th International Spatial Accuracy Research Association in Natural Resources and Environmental Sciences", Beijing, China, May 21–24, 2018.

- Program committee: "BigSpatial 2017" (6th ACM SIGSPATIAL International Workshop on Analytics for Big Geospatial Data)

- Steering committee: Air Quality IDEAS Lab, Hayes Hall on South Campus, University at Buffalo, Buffalo, NY, USA, Jun 13-15, 2017

- Program committee: "The 9th International Conference on Geographic Information Science", in Montreal, Canada, Sep. 27 to 30, 2016.

- Steering committee: "The 12th International Spatial Accuracy Research Association in Natural Resources and Environmental Sciences", Montpellier, France, Jul. 5–8, 2016.

- Committee members: *International Geospatial Health Research Symposium: Creating Synergies*, AAG Annual Meeting, Chicago, April 21-25, 2015

- Session organizer: *Spatio-temporal analysis of vector-borne disease*, a part of the Symposium: Geography, GIScience, and Health: Spatial Frontiers of Health Research and Practice, The Annual Meeting of the Association of American Geographers, April 9-13, 2013.

- Program committee: "The 1st The Association for Computing Machinery (ACM)

SIGSPATIAL international HealthGIS 2012 Workshop", Redondo Beach, CA, USA, Nov. 6, 2012.

- Scientific committee: "The 9th International Spatial Accuracy Research Association in Natural Resources and Environmental Sciences", Leicester, UK, Jul. 20–23, 2010.

Promotion and Tenure Review
University Texas at Dallas (2014)

Manuscript Reviewer
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- *Routledge, Taylor & Francis Group (Applied GIS and spatial modeling)*, 2014
- *Springer (Statistics)*, 2007