Youngsang Kwon

Associate Professor
Earth Sciences
University of Memphis

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ykwon@memphis.edu

ACADEMIC FOCI

Biogeography, Forest dynamics, Species distribution modeling (SDM), Ecological modeling, Global carbon cycling, GIS, Remote Sensing, Spatial statistics & Geostatistics.

EDUCATION

2012 Ph.D. Department of Geography. State University of New York at Buffalo, Buffalo, NY
Dissertation: A multi-scale assessment of forest carbon cycling across the eastern USA using Forest Inventory Analysis and MODIS data

2004 M.S. Department of Environment Studies. Seoul National University, Seoul, Korea
Thesis: Estimating the air temperature cooling effect of the Cheonggyechun stream restoration project of Seoul using Landsat ETM+

2001 B.S. Department of Forest Resources and Environmental Science, Korea University, Seoul, Korea

PEER REVIEWED PUBLICATIONS

Neupane, D., **Kwon, Y**., Risch, T. S., & Johnson, R. L. (2020). Changes in habitat suitability over a two decade period before and after Asian elephant recolonization, Global Ecology and Conservation, https://doi.org/10.1016/j.gecco.2020.e01023.

Shin, E., **Kwon, Y.**, & Shaban-Nejad, A. (2019). Geo-clustered chronic affinity: pathways from socio-economic disadvantages to health disparities. *JAMIA Open,* ooz029, https://doi.org/10.1093/jamiaopen/ooz029.

Behrman, C., Van Arsdale, R., **Kwon, Y**., et al. (2019). Drone Geologic Mapping of an Active Sand and Gravel Quarry, DeSoto County, Mississippi. *Drones.* 3(3), 57; https://doi:10.3390/drones3030057

Kwon, Y., Doty, A., Huffman, M., Rolland, V., Istvanko, D., & Risch, T (2019) Implications of forest management practices on sex-specific habitat use by Nycticeius humeralis. *Journal of Mammalogy*, gyz088 https://doi.org/10.1093/jmammal/gyz088.

Kwon, Y., Lee, T., Lang, A., & Burnett, D. (2019). Assessment on latitudinal tree species richness using environmental factors in the southeastern United States. *PeerJ,* 7:e6781 https://doi.org/10.7717/peerj.6781.

Kwon, Y., & Feng, L. (2019). Investigation of the peninsula effect using the latitudinal abundance pattern for tree species in Florida. *Diversity*, 11(2), 20.

Neupane, D., **Kwon, Y**., Risch, T. S., Williams, A. C., & Johnson, R. L. (2019). Habitat use by Asian elephants: Context matters. *Global Ecology and Conservation*, e00570.

Borie, C., Parcero-Oubiña, C., **Kwon, Y**., Salazar, D., Flores, C., Olguín, L., & Andrade P. (2019). Beyond site detection: the role of satellite remote sensing in analyzing archaeological problems. A case study in lithic resource procurement in the Atacama Desert, northern Chile. *Remote Sensing.* 11(7), 869.

Kwon, Y., Larsen, C. P., & Lee, M. (2018). Tree species richness predicted using a spatial environmental model including forest area and frost frequency, eastern USA. *PloS One*, 13(9), e0203881.

Kwon, Y., & Baker, B. W. (2017). Area-based fuzzy membership forest cover comparison between MODIS NPP and Forest Inventory and Analysis (FIA) across eastern US forest. *Environmental Monitoring and Assessment*, *189*(1), 19.

Choung, S., Oh, J., Han, W. S., Chon, C. M., **Kwon, Y**., & Shin, W. (2016). Comparison of physicochemical properties between fine (PM2. 5) and coarse airborne particles at cold season in Korea. *Science of the Total Environment*, *541*, 1132-1138.

Fryxell, R. T., Moore, J. E., Collins, M. D., **Kwon, Y**., Jean-Philippe, S. R., Schaeffer, S. M., ... & Houston, A. E. (2015). Habitat and vegetation variables are not enough when predicting tick populations in the southeastern United States. *PloS One*, *10*(12), e0144092.

Kwon, Y., & Larsen, C. P. (2013). Effects of forest type and environmental factors on forest carbon use efficiency assessed using MODIS and FIA data across the eastern USA. *International Journal of Remote Sensing*, *34*(23), 8425-8448.

Kwon, Y., & Larsen, C. P. (2013). An assessment of the optimal scale for monitoring of MODIS and FIA NPP across the eastern USA. *Environmental Monitoring and Assessment*, *185*(9), 7263-7277.

Kwon, Y., & Larsen, C. P. (2012). Use of pixel-and plot-scale screening variables to validate MODIS GPP predictions with Forest Inventory and Analysis NPP measures across the eastern USA. *International Journal of Remote Sensing*, *33*(19), 6122-6148.

Kwon, Y., & Song, I. (2005). The Effect of Adjacent Landuse Type on Temperature of Landscape Patches in Seoul. *Journal of Korea Planners Association*, *40*(4), 235-245.

Park, J., & **Kwon, Y**. (2004). Estimating the air temperature cooling effect of the Cheonggyechun stream restoration project of Seoul, Korea. *Journal of the Korean Institute of Landscape Architecture*. 2, 120~129.

GRANTS

(Funded)

2019 FedEx Institute of Technology, Agriculture and Food Technologies Research Cluster
Title: Machine learning approach for predicting biodiversity
Duration: June 1, 2019 - July 30, 2020
PI. Youngsang Kwon Co-PI. Deepak Venugopal, Computer Sciences

2019 CAS research equipment funds: GPS instrumentation ($33,000 total cost)
Duration: Feb. 2019
Co-PIs. Andrew Mickelson & Youngsang Kwon

2019 Travel Enrichment Funds for summer 2019, University of Memphis
Duration: July 2019
Ecological Society of America (ESA) meeting at Louisville, KY

2017 FedEx Institute of Technology
Title: Drone Imaging of Active Sand and Gravel Quarries to Optimize Exploration and Mining
Duration: March 1, 2017 – February 29, 2018
PI. Dr. Dr. Roy Van Arsdale
Co-PIs. Dr. Youngsang Kwon, Dr. David Lumsden, Dr. Randel Cox, and Dr. Andrew Mickelson

2016 City of Memphis & FedEx Institute of Technology
Title: A Planning Support System for Comprehensive Planning and Zoning: A Geospatial Simulation Model of Land Use, Land Cover Change for the Memphis Metropolitan Region.
Duration: Dec.1 2016 – Dec.30 2017
Co-PIs. Reza Banai and Youngsang Kwon

2016 Faculty Research Grant (University of Memphis)
Title: Mapping the Morphology of Urban Sprawl: A Pilot Study of The Memphis Metropolitan Region.
Duration: July 1, 2016 – Aug 30, 2017
PI. Youngsang Kwon

2015 Conference travel support for Scientists and Engineers Early-Career Development (SEED) by Korean-American Scientists and Engineers Association (KSEA) ($500)

CERTIFICATE / SCHOLARSHIPS / AWARDS

2019 Agriculture and Food Research Fellow awarded by FedEx Institute of Technology.

2017 Drones Research Fellow awarded by FedEx Institute of Technology.

2016 Smart City Research Fellow awarded by FedEx Institute of Technology.

2010 Pixoneer Scholarship Award awarded by Korean-American Association for Geospatial and Environmental Sciences.

2008 NSF Research Traveling Fund on Spatial Filtering (Eigenvector) Workshop, sponsored by National Science Foundation (NSF).

2008 Mark Diamond Research Fund awarded by Graduate Student Association, University at Buffalo.

2008 Certificate of completion in workshop series “Teaching Effectiveness and and Public Speaking” issued by Dr. Ebert’s workshop series, University at Buffalo.

2004 Master’s Thesis First Prize awarded by Graduate School of Environmental Studies, Seoul National University.

2003 Certificate of Information Processing Engineer issued by Human Resources Development Service of Korea.

2003 Merit-based Scholarship granted through the Graduate School of Environmental Studies, Seoul National University.

2003 Recognition Certificate awarded by Cambodian National Information Communications Technology Development Authority, Royal Government of Cambodia, Secretary General.

EMPLOYMENT HISTORY

2020 – present.
Associate Professor

2013 – 2020.
Assistant Professor
Department of Earth Sciences, University of Memphis

2011- 2013.
Visiting Assistant Professor
Department of Geography, University of Delaware

2006 - 2010
Statistical Analyst (part-time) at National Conference for Community and Justice, Buffalo, NY.
Conducted statistical analyses of survey data and wrote annual reports.

2004 - 2005
Researcher at Dept. of Urban Environment, Seoul Development Institute, Korea.
Created Seoul Metropolitan Biotope Map and conducted land cover change detection using remote sensing and field surveys.