

YOUNGJAE (JAY) KIM

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EDUCATION

Ph.D. in Geography | UNIVERSITY OF SOUTH CAROLINA (USC) | Columbia, SC, USA
Geography, May 9, 2026
Dissertation: Characterizing Spatiotemporal Dynamics in Beach-Dune Systems under Anthropogenic and High Energy Forcings
Master of Science | KYUNG HEE UNIVERSITY (KHU) | Seoul, South Korea
Geography, February 20, 2019
Thesis: Geomorphic changes in Gungchon–Chogok Beach using Uncrewed Aerial Systems (UAS)
Bachelor of Science | KHU | Seoul, South Korea
Geography, February 14, 2017
Thesis: A study on subsidence in limestone mining area: Gadeok-myeon, Cheongweon-gun, Chungbuk Province

PUBLICATIONS

Ellis, J.T., Kim, Y., & Smith, E.M. (Submitted) Beach-Dune-Washover Changes from a Coupled Extratropical Storm and Perigean Spring Tide. *Estuaries and Coasts*
Kim, Y., Park, C.S. & Ellis, J.T. (In press) Spatial and temporal controls on beach cusp development on an intermediate beach. *Earth Surface Processes and Landforms*
Kim, Y., Ellis, J.T. & Kupfer, J.A. (2025) Quantifying Spatial Structures of Managed and Unmanaged Coastal Dune Systems using Grid–Based Landscape Metrics. *Journal of Coastal Conservation*, 29(6), 57. <https://doi.org/10.1007/s11852-025-01143-9>
Kim, Y. & Park, C.S. (2024) Geomorphic Change by Rip Current Using UAS in Wonpyeong Beach, Samcheok-si. *Journal of the Korean Geographical Society*, 59(2), 163-182. <https://doi.org/10.22776/kgs.2024.59.2.163> (in Korean)
Kim, Y., Hwang, S. & Yoon, S.-O. (2019) Shoreline Change Before and After Breakwater Extension at the Gungchon Port, Geundeok-myeon, Samcheok-si, Gangwon-do. *Journal of the Korean Geomorphological Association*, 26(2), 29–38. (in Korean)

CONFERENCE PRESENTATIONS

Kim, Y., Ellis, J.T. & Kupfer J.A. (2024) *Quantification of Dune Vegetation and Wrack Patterns Using Grid–based Landscape Metrics Analysis in Coastal South Carolina*. Poster presentation at the Annual Meeting of American Geophysical Union (AGU), Washington, D.C., USA.
Kim, Y., Ellis, J.T. & Kupfer J.A. (2024) *Application of Grid–based Landscape Metrics Approach for Coastal Dune Vegetation and Wrack Pattern Analysis*. Oral presentation at the Annual Meeting of the Association of American Geographers (AAG), Hawai’i, USA (virtual).
Kim, Y., Park, C.S. & Ellis, J.T. (2023) *Beach Cusp Parameters, Wave Condition, and Beach Volume Relationship: A South Korean Case Study*. Oral presentation at the Annual Meeting of the AAG, Denver, USA.
Kim, Y., Ellis, J.T., Wang, C. & Sundin, G (2022) *sUAS–assisted Mapping of Large Woody Debris and Beach Volume Changes in the Pockoy Island*. Poster presentation at the Annual Meeting of the AAG, New York, USA (virtual).
Kim, Y., Wang, C. & Sundin, G (2022) *Application of sUAS to Detect the Changes of Large Woody Debris Distribution and Beach Volume to Pockoy Island*. Poster presentation at the Annual Symposium of the South Carolina Interagency Drone Users Consortium (SCiDUC), Columbia, South Carolina, USA.
Kim, Y. (2018) *Detecting Periodical Beach and Dune Changes around Gungchon-Chogok Beach, Samcheok, Gangwon-do using UAS*. Oral presentation at the Annual Meeting of the Korean Geographical Society. Seoul, South Korea. (in Korean)

RESEARCH EXPERIENCE

2026 – present	Postdoctoral Researcher	Department of Earth System Sciences, Yonsei University
2025 – 2026	Research assistant	Department of Geography, USC
2021 – 2026	Research associate	Wind-sediment Interactions and Nearshore Dynamics Lab, USC
2025	GIS specialist	South Carolina Department of Natural Resources (SCDNR)
2024	GIS specialist	Belle W. Baruch Institute for Marine & Coastal Sciences, USC
2022	Research assistant	Belle W. Baruch Institute for Marine & Coastal Sciences, USC

2019 – 2021	Research technician	Biogeography Lab, KHU
2017 – 2021	Contract researcher	National Wetland Center (NWC), South Korea
2017 – 2021	Contract researcher	National Institute of Ecosystem (NIE), South Korea
2019 – 2020	Research technician	Department of Geography Education, Kyungpook National University

TEACHING EXPERIENCE

2026 Spring	Teaching assistant (F2F)	GEOG 202 Weather and Climate (USC)
2024 Spring – 2025 Spring	Instructor (F2F)	GEOG 104 Introduction to Physical Geography (USC)
2022 Fall – 2023 Fall	Teaching assistant (F2F)	GEOG 201 Landform Geography (USC)
2021 Fall – 2022 Spring	Teaching assistant (F2F)	GEOG 103 Introduction to Geography (USC) GEOG 311 Cultural Geography (USC)
2017 Spring – 2019 Fall	Teaching assistant (F2F)	GEOG 1001 Introduction to Physical Geography (KHU) GEOG 1002 Introduction to Human Geography (KHU) GEOG 2054 Fieldworks in Physical Geography (KHU)

HONORS AND AWARDS

2026	Winner of the Korea-America Association for Geospatial and Environmental Sciences (KAGES) Paper Award
2021 – 2025	McCausland College of Arts & Sciences Graduate Stipend Enhancement Award (USC)
2024	Geography Department Travel Grant (USC)
2023	The Graduate School Travel Grant (USC)
2022	Geography Department Travel Grant (USC)
2017 – 2019	College of Sciences Graduate Assistantship Grant (KHU)
2017	2nd place in the Big Data Research Paper Competition (KHU)
2016	3rd place in the Big Data Research Paper Competition (KHU)

INVITED TALKS

2022 – 2025	Earth & Environmental Sciences Program, University of West Georgia Topic: Application of Remote Sensing and GIS for Coastal Research
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PROFESSIONAL SERVICE

2025 – present	Board Member	GridEquity; a community-responsive 501(c)(3)
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TECHNICAL SKILLS

Geospatial & Mapping	ArcGIS Pro, ArcMap, QGIS
Remote Sensing & Photogrammetry	Agisoft Metashape, CloudCompare, DJI Terra, Pix4Dmapper, Terrasolid
Data Analysis & Visualization	Adobe Photoshop, Golden Software Grapher, Golden Software Surfer
Programming & Scripting	R, Python, SQL
Field/Lab Techniques & Equipment	Total Station, GNSS-RTK, sediment analysis