

CURRICULUM VITAE

Edward Park

Associate Professor, Nanyang Technological University (NTU)

[Tropical Rivers Group](#) | [Google Scholar](#)

Edward Park is an internationally recognized geomorphologist in tropical river and delta systems, advancing quantitative Earth-surface science under Anthropocene forcing. His research integrates morphodynamic modelling, remote sensing, and fieldworks to understand tipping behaviour in large deltas across Southeast Asia.

Citations: 5,924 (Jul 2026) | h-index: 38 | FWCI: 3.1 (2024) | 120+ Q1 articles | S\$3.66M+ PI funding | Stanford Top 2% Scientist (since 2023)

Academic Qualifications

2017 PhD in Geography, The University of Texas at Austin, USA.
2011 BA in Geography, The Ohio State University at Columbus, USA.

Work Experience

Jul 2026 – Present	Head , Humanities and Social Sciences Education (HSSE), National Institute of Education (NIE), NTU
Oct 2025 – Present	Principal Investigator , Center for Climate Change and Environmental Health, NTU
Jul 2025 – Jun 2026	Assistant Head , HSSE, NIE, NTU
Oct 2021 – Present	Principal Investigator , Earth Observatory of Singapore (EOS), NTU
Mar 2025 – Present	Associate Professor , NIE and Asian School of the Environment (ASE) (courtesy), NTU
Jul 2019 – Feb 2025	Assistant Professor , NIE and ASE (courtesy), NTU
Sep 2017 – Jun 2019	Research Fellow , EOS, NTU

Major Awards and Recognition

- 2026 — International Association of Geomorphologists (IAG) Early Career Medal, highest global recognition in geomorphology ([NTU News](#))
- 2025 — Chinese Academy of Sciences (CAS) PIFI Distinguished Scientist ([NTU News](#))
- 2023 — Nanyang Research Award (Young Investigator), NTU ([NIEWS: Awards](#))
- 2023 – Present — Stanford University Top 2% Scientist (Geological & Environmental Sciences)
- 2022 — NIE Research Excellence Award

Keynote Addresses (Since 2024)

1. Park, E. (2027, June 21–24). *River Sand and Gravel Mining: Global Drivers, Impacts, and Pathways for Sustainable Management* [Keynote Address] IAG Regional Conference on Geomorphology, Taipei, Taiwan.
2. Park, E. (2026, Nov 2). *From the Mekong Delta to the World: Sand Mining, River Instability, and Pathways to Sustainable Management* [Keynote Address]. The 6th VNU-HCM International Conference on Environment and Natural Resources, Ho Chi Minh City, Vietnam.
3. Park, E. (2026, Nov 24). *Sustainable Sand Harvesting Technology and Sand Mining monitoring systems* [Keynote address]. The 2nd Monash Symposium on Climate-Resilient Infrastructure 2026 (M-CRInfra2026), Kuala Lumpur, Malaysia.
4. Park, E. (2025, Sept 25). *Sand mining impacts in the Mekong Delta* [Keynote address]. 6th International Conference on Water Resources (ICWR 2025), Putra Jaya, Malaysia. ([News](#))
5. Park, E. (2025, Mar 17). *Geospatial Technologies for Humanities and Sustainability* [Keynote address]. 2025 NIE Learning Festival, National Institute of Education, Singapore.
6. Park, E. (2024, Nov 14-15). *Environmental and social impacts in the Mekong Delta* [Keynote address]. 14th International Forum on Green Technology and Management, Ho Chi Minh, Vietnam. ([News](#))
7. Park, E. (2024, Sept 19). *Environmental impacts and unsustainable sand mining in Southeast Asia* [Keynote address]. International Conference on Sustainable Environment and Disaster Management, Malang, Indonesia. ([News](#))
8. Park, E. (2024, Aug 15-17). *Impacts of sand mining in the Mekong and sustainable management* [Keynote address]. Deltas 2024, Louisiana, USA. ([Programme](#))

Invited Talks/Seminars (since 2026)

1. Park, E. (2026, July 10). *Towards sustainable sand mining in the Mekong* [Invited talk]. Mekong River Commission (MRC), invited by CEO Busadee Santipitaks. Vientiane, Laos ([News](#))
2. Park, E. (2026, June 13–27). *Sand mining in the Anthropocene: Lessons from the Mekong Delta for a global challenge* [Invited talk]. Chinese Academy of Sciences (CAS) — hosted jointly by Institute of Earth Environment (Assoc. Prof. Hu Yong), Tsinghua University (Prof. Fuqian Tian), and Institute of Geographical Sciences and Natural Resources (Prof. Gang Zhao). Beijing, Xi'an & Zhengzhou, China. ([News](#))
3. Park, E. (2026, May 11). *Environmental impacts and sustainable development in the Mekong* [Invited talk]. University of Padova, invited by Prof. Paolo Tarolli. Padua, Italy. ([News](#))
4. Park, E. (2026, April 7). *Signatures of the Anthropocene: Tracing Environmental Transformations* [Invited talk + panel discussion]. Climate Transformation: Sustainable Societies Public Lecture Series, NTU Centre for Contemporary Art (NTU CCA). Singapore. ([News](#))
5. Park, E. (2026, April 1). *Sustainable sand harvesting, deep learning monitoring system and sand fingerprinting* [Invited talk]. Singapore Ministry of National Development (MND). Singapore.
6. Park, E. (2026, March 3). *Sand mining in the Mekong Delta: Extent and compounded impacts* [Invited talk]. International Association of Geomorphologists (IAG) Special Lecture, International Geomorphology Week. Online.

Key Grants Received (As PI)

Year	Project Title	Amount (\$\$)	Source	
2026 – 2027	Developing an AI-Driven Channel Adjustment Intelligence (CAI) Model to Detect Climate-Sensitive River Channel Dynamics: Application to the Kelantan River, Malaysia	24,975	Dr. Stephen Riady Geoscience Scholars Fund	Internal Funding (~\$1.16M total, incl. unlisted projects)
2025 – 2028	Role of Sand Mining in Climate Change: The First Proof-of-Concept Investigation in the Mekong Delta	100,000	NIE AcRF	
2025 – 2027	Sustainable Sand Harvesting: Balancing Environmental Impacts and Developmental Needs	150,000	NTUitive GAP Fund	
2025 – 2028	Patterns and drivers of evapotranspiration in Southeast Asian wetlands	170,000	MOE AcRF Tier 1	External Funding (~\$2.5M total, incl. unlisted projects)
2023 – 2030	Climate Transformation Programme (CTP) of Singapore	49.9M (PI Share 1M)	MOE AcRF Tier 3	
2023 – 2026	Sand mining in Southeast Asia: Monitoring System, the first budget and sustainable harvesting	682,350	MOE AcRF Tier 2	
2021-2024	Impacts on environmental pressure on livelihood transformation in the Mekong Delta	786,812	MOE AcRF Tier 2	

Selected Publications

1. **Park, E.**, et al. (2026). River sand and gravel mining: Global drivers, impacts, and pathways for sustainable management. *Reviews of Geophysics (IF 38.5)*, 64(3), e2024RG000868.
2. Kumar, S., **Park, E.**, et al. (2026). Counterfactual modeling isolates sand mining impacts, revealing it as a key driver of Mekong Delta destabilization. *Science Advances (IF 13.9)*, 12(28), eaef0558.
3. Luo, Q., Feng, L., **Park, E.**, et al. (2026). Global net increase in surface water connectivity in river–floodplain systems. *Nature Geoscience (IF 16.1)*, 19(5), 556–564.
4. Sun, X., Tian, L., Fang, H., Walling, D. E., Huang, L., **Park, E.**, et al. (2025). Changes in global fluvial sediment concentrations and fluxes between 1985 and 2020. *Nature Sustainability (IF 32.1)*, 8(2), 142–151.
5. Akanwa, A. O., Hemmler, K. S., **Park, E.**, et al. (2025). Toward a sustainable future of sand. *One Earth (IF 15.1)*, 8(2), 101200.
6. Tran, D. D., **Park, E.**, et al. (2025). Environmental pressures on livelihood transformation in the Vietnamese Mekong Delta: Implications and adaptive pathways. *Journal of Environmental Management (IF 8.0)*, 377,

124597.

7. **Park, E.** (2024). Sand mining in the Mekong Delta: Extent and compounded impacts. *Science of The Total Environment* (IF 9.8), 924, 171620.
8. Ang, W. J., **Park, E.**, et al. (2024). Dams in the Mekong: A comprehensive database, spatiotemporal distribution, and hydropower potentials. *Earth System Science Data* (IF 11.4), 16(3), 1209-1228.
9. Tran, D. D., Thuc, P. T. B., **Park, E.**, et al. (2024). Extent of saltwater intrusion and freshwater exploitability in the coastal Vietnamese Mekong Delta assessed by gauging records and numerical simulations. *Journal of Hydrology* (IF 6.4), 630, 130655.
10. Kumar, S., **Park, E.**, et al. (2024). A deep learning framework to map riverbed sand mining budgets in large tropical deltas. *GIScience & Remote Sensing* (IF 6.7), 61(1), 2285178.

Notable Media Mentions

2026	AGU EOS , The hidden costs of mining river sand (Interview in Article)
2026	The Straits Times , Kallang River incident: How can local anglers stay safe while fishing in Singapore? (Interview in Article)
2025	Mongabay , Mekong sand mining risks collapse of SE Asia's largest freshwater lake, study finds (Interview in Article)
2025	Channel NewsAsia , Talking Point: Flash Floods – How prepared are we? (Interview)
2025	East Asia Forum , Salinity intrusion threatens Vietnam's rice bowl (Article)
2025	Science , Sand mining threatens Asia's largest lake (Interview in Article ; NTU News)
2025	Bloomberg , Vietnam is Running Out of Sand to Fuel an Economic Boom (Interview in Article ; NTU News)
2024	Ho Chi Minh City Law News Paper , Salinity intrusion issues and management in the Mekong River Delta (Interview)
2024	Australian Broadcasting Corporation (ABC) , Water Scarcity Story of Singapore and Vietnam (Interview)
2024	Woodrow Wilson Centre (established by the US Congress in 1968) article, on sand mining and ESG (Article)
2024	Scientific studies (on salinity intrusion & illegal sand mining) featured on The Diplomat – 9 February (News report ; Study 1 ; Study 2)
2024	Featured in The Straits Times on sand sustainability in Southeast Asia (NTU News)

Innovation & Entrepreneurship

Technology disclosure filed under NTUitive (2024), soon to be licensed: **TD 2024-144 Sand Mining Monitoring: Sand mining monitoring system and sustainable sand harvesting technology**, by Edward Park (Inventor 1) and Sonu Kumar (Inventor 2)

Students Under Supervision

	Current	Graduated
PhD	- Shermaine Teo - Abhishek Kurmi - Liam Newman Luke - Huang Jiachun - Feng Yikang	- Sonu Kumar - Theodora Hui Yian Lee (Co-supervised)
Master's	Hifzhan Faiz Yeo	Danielle Poh

Service to Academic Community

2023 – present	Associate Editor , <i>Journal of Hydrology</i> (IF 7.3) and <i>Journal of Environmental Management</i> (IF 9.2))
2022 – present	Editorial board , <i>Geomorphology</i> (IF 3.2)
2020 – present	National representative of Singapore for <i>International Association of Geomorphologists</i> (IAG)
2015 – present	Peer-reviewed >300 journals (including <i>Nature</i> , <i>Science</i> , <i>PNAS</i>)