Last Updated: 06 03 2022

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Notes:

- Section 1 should be less than 50 pages, Arial 11 point font.
- If needed, additional material can be included as Appendices.
- [Additional comments for NIE Faculty Members are indicated in blue]

CURRICULUM VITAE

Edward Park
Assistant Professor
National Institute of Education (NIE)
Principal Investigator
Earth Observatory of Singapore (EOS)
Nanyang Technological University (NTU)

Academic Qualifications

2017 PhD in Geography, The University of Texas at Austin, USA.

2011 BA in Geography, The Ohio State University at Columbus, USA.

Professional Qualifications / Memberships

2020 - Present	Singapore National Representative, International Association of Geomorphologists (IAG)	USA
2017 - Present	Member, Asia Oceania Geoscience Society (AOGS)	Singapore
2011 - Present	Member, American Association of Geographers (AAG)	USA
2011 - Present	Member, American Geophysical Union (AGU)	USA

Summary of Working Experience

Oct 2021 – Present	**Principal Investigator**, Earth Observatory of Singapore, NTU
Jul 2019 - Present	**Assistant Professor**, National Institute of Education and Asian School of the Environment (courtesy appointment), NTU
Sep 2017 - Jun 2019	Research Fellow, Earth Observatory of Singapore, NTU Affiliated Faculty, Department of Geography and the Environment, University of Texas at Austin
Aug 2011 - Aug 2017	Graduate Research Fellow/Teaching Assistant, The University of Texas at Austin, USA
Jan 2010 - Dec 2010	Undergraduate Researcher, The Ohio State University, USA
Jun 2005 – Jun 2007	Administrative Officer, 52 Division-211 Regiment, Republic of Korea Army

Academic Honours and Awards

Year	Academic Honour / Award
2018	**Outstanding Dissertation Award** (awarded to three doctoral graduates in 2017 after university-wide competition)**,** *Office of Graduate School, University of Texas at Austin* (prize USD $ 5,000)*.*
2017	**KAGES Student Leadership Award,** *Korean-American Association of Geospatial Technologies and Environmental Sciences.*

2016	**Dean's Prestigious Fellowship Supplement,** *Office of Graduate School, University of Texas at Austin* (prize USD $ 1,000). **David Bruton Jr. Endowed Fellowship,** *Office of Graduate School, University of Texas at Austin* (prize USD $ 1,000).
2015	**The Achievement Award** for recognition for excellence in research, publication, and institution building, *Department of Geography and the Environment, University of Texas at Austin* (prize USD $ 200). **Continuing Graduate School College Fellowship**, *Department of Geography and the Environment, University of Texas at Austin.* USD $ 38,000. **Tinker Field Research Grant**, *LILLAS, University of Texas at Austin.* USD $ 800. **Veselka Field Research Grant**, *Department of Geography and the Environment, University of Texas at Austin*. USD $ 500. **Graduate Students Scholarship**, *LILLAS Benson Brazil Center, University of Texas at Austin* (prize USD $ 800). **Sim Travel Award**, *Korean-American Association of Geospatial Technologies and Environmental Sciences (KAGES)* (prize USD $ 300).
2014	**Graduate Continuing Fellowship**, *Office of Graduate School, University of Texas at Austin*. USD $ 12,500 **Professional Development Award**. *Office of Graduate School, University of Texas at Austin* (prize USD $ 500).
2013	**Google Earth Pro and Google Earth Engine Grants**. USD $ 2,000. **Travel Grant**, *Department of Geography and the Environment, University of Texas at Austin*. USD $ 300.
2012	**Travel Grant**, *Department of Geography and the Environment, University of Texas at Austin*. USD $ 300. **Pixoneer Scholarship Award**, *Korean-American Association of Geospatial Technologies and Environmental Sciences (KAGES)* (prize USD $ 300).

RESEARCH SUMMARY

Key Areas of Research

- Geomorphology
- Hydrology
- Remote sensing
- Human-environment interactions

Editorship

2021 - Present	**Editorial board**, *Science of the Total Environment, Journal of Environmental Management*

Research Awards / Recognition

Year	Research Award / Recognition
2021	Mention in *NIE Director Address*, for the research recognition at NIE.
2021	A high impact journal article (which I am first and corresponding author of) is featured at the *NTU's Pushing Frontiers Magazine*, issue 18.
2020-2021	One of my articles published in 2020 is the most cited/downloaded article in the *International Journal of Applied Earth Observation and Geoinformation* (IF 4.6).
2015	**Winner of the Student Paper Competition (PhD Level)**, *Water Resources Specialty Group (WRSG) of Association of American Geographers (AAG)* (prize USD $ 500). **Best Paper Award**, *Latin America Specialty Group (LASG) of Association of American Geographers (AAG)* (prize USD $ 300). **M. Gordon "Reds" Wolman Doctoral Student Research Award**, *Geomorphology Specialty Group (GSG)*, *Association of American Geographers (AAG)* (prize USD $ 500).

Research Funding

External Grants

[Competitive Grants, e.g. NIE ERFP Tier 1, 2 and 3, MOE AcRF Tier 2 and 3]

Role	Year	Project Title	Amount (S$)	Source of Grant
PI	2021-2024	Impact on environmental pressure on livelihood transformation in the Mekong Delta	786,821	MOE AcRF Tier2
Co-PI	2016 - 2018	Roles of Tributaries, Floodplains, and the Anabranching Channels on Suspended Sediment Transport Patterns	20,458	NSF, USA

Internal Grants

[Non-competitive Grants, e.g. NIE AcRF, OER SUG, MOE AcRF Tier 1]

Role	Year	Project Title	Amount (S$)	Source of Grant
PI	2022 – 2023	Mapping sand mining budget in the Mekong River with Deep Learning	159,178	EOS Seed Grant
PI	2021 – 2024	Geography of Sand mining in Asia	89,771	MOE AcRF Tier 1
PI	2020 - 2022	Leaking pollutants: Investigating how the Johor River sediment affects Singapore's coastal water quality	164,912	MOE AcRF Tier 1
PI	2020-2022	Hydrology, sediment fluxes and floods in Chao Phraya River	46,190	NIE SUG-NAP

		Basins		
Co-PI	2019 - 2022	Southeast Asian Rivers: Assessment and Modelling of Sediment transport in the Irrawaddy and Sarawak Rivers	633,538	EOS Tier 2
Collaborator	2019 - 2011	Dam construction in hazard-prone regions in Southeast Asia	35,168	EOS Tier 1

Citation Summary

[Please summarise from the Citation Reports from Appendix 1]

Database	Citation Count		H-index
	without self-citations	with self-citations	
Google Scholar	1,001	1,210	15

Publications *(in chronological order, starting with the most recent)*

*denotes corresponding author signifying my role as a supervisor/leader of the project/paper.

Journal Articles (Refereed)

44. *Gruel, R., Park, E., et al. (2022). New systematically measured sand mining budget for the Mekong Delta reveals rising trends and significant volume underestimations. *International Journal of Applied Earth Observation and Geoinformation*.

43. Pumjan, S., Long, T., Ho, HL., & Park, E. (2022). Deep well injection for the waste brine disposal solution of potash mining in Northeastern Thailand. *Journal of Environmental Management*, 114821.

42. Loc, H. H., Irvine, K. N., Chua, L., & Park, E. (2022). Parameterizing Unit Hydrographs (UH) to account for Rainfall Derived Infiltration and Inflow (RDII) from different land use in tropical urban environments. *Journal of Hydrology*, 127623.

41. Le, A. N., Tran, D. D., Thong, N., Van, C. T., Vinh, D. H., Au, N. H., & Park, E. (2022). Drastic variations in estuarine morphodynamics in the Southern Vietnam: Investigating riverbed sand mining impact through hydrodynamic modelling and field controls. *Journal of Hydrology*, 127572.

40. Ho, H. L., Vu, H. S., Tran, D. D., Park, E., & Giang, A. D. (2022). Mapping volumetric soil moisture in the Vietnamese Red River Delta using Landsat 8 images. *Journal of Spatial Science*, 1-17.

39. *Park, E., Ho, H. L., Van Binh, D., Kantoush, S., Poh, D., Alcantara, E., ... & Lin, Y. N. (2022). Impacts of agricultural expansion on floodplain water and sediment budgets in the Mekong River. *Journal of Hydrology*, *605*, 127296.

38. *Hui, T. R. (URECA student), Park, E., Loc, H. H., & Tien, P. D. (2022). Long-term hydrological alterations and the agricultural landscapes in the Mekong Delta: Insights from remote sensing and national statistics. *Environmental Challenges*, 100454.

37. *Koh, Y. F. (FYP student), Loc, H. H., & Park, E. (2022). Towards a "City in Nature": Evaluating the Cultural Ecosystem Services Approach Using Online Public Participation GIS to Support Urban Green Space Management. *Sustainability*, *14*(3), 1499.

36. Zhang, W., Cheng, Z., Qiu, J., Park, E., Ran, L., Xie, X., & Yang, X. (2021). Spatiotemporal Changes in Mulberry-Dyke-Fish Ponds in the Guangdong-Hong Kong-Macao Greater Bay Area over the Past 40 Years. *Water*, *13*(21), 2953.

35. *Ang, W. (URECA student – awarded **2021 URECA Research Excellence Award**) and Park, E. (2021) Mapping floodplain bathymetry in the middle-lower Amazon using inundation frequency and field control. *Geomorphology*.

34. Alcantara et al. (2021) A satellite-based investigation into the algae bloom variability in large water supply urban reservoirs during COVID-19 lockdown. *Remote Sensing Applications: Society and Environment*.

33. *Loc, H. H., Lixian, M. L., Park, E., Dung, T. D., Shrestha, S., & Yoon, Y. J. (2021). How the saline water intrusion has reshaped the agricultural landscape of the Vietnamese Mekong Delta, a review. *Science of The Total Environment*, *794*, 148651.

32. *Lin. N., Park, E., Wang, Y., Quek, et al. (2021). The 2020 Hpakant jade mining failure in Myanmar: A multi-satellite investigation of the slope failure. *ISPRS P&RS.*

31. *Park, E., Loc, H., Binh, D. & Kantoush, S. (2021). The worst 2020 saline water intrusion disaster of the past century in the Mekong Delta: Impacts, causes, and management implications, *Ambio*.

30. *Yee, J. (FYP student), Loc, H., & Park, E. (2021) Socio-geographical evaluation of ecosystem services in an ecotourism destination: PPGIS application in Tram Chim National Park, Vietnam, *Journal of Environmental Management*.

29. Qiu, J., Cao, B., Park, E., Yang, X., Zhang, W., & Tarolli, P. (2021). Flood Monitoring in Rural Areas of the Pearl River Basin (China) Using Sentinel-1 SAR. *Remote Sensing*, *13*(7), 1384.

28. Contador, T. M., Alcântara, E., Rodrigues, T., & Park, E. (2021). Remote sensing of water transparency variability in the Ibitinga reservoir during COVID-19 lockdown. *Remote Sensing Applications: Society and Environment*, *22*, 100511.

27. Latrubesse, E., Park, E. & Kastner, K. (2021). The Ayeyarwady River (Myanmar): Washload transport and its global role among rivers in the Anthropocene. *PlosOne*.

26. *Loc, H. H., Park, E., Thu, T. N., Diep, N. T. H., & Can, N. T. (2021). An enhanced analytical framework of participatory GIS for ecosystem services assessment applied to a Ramsar wetland site in the Vietnam Mekong Delta. *Ecosystem Services*, *48*, 101245.

25. *NG, WX. (FYP student), & Park, E. (2021). Shrinking Tonlé sap and the recent intensification of sand Mining in the Cambodian Mekong River. *Science of The Total Environment*, 146180.

24. *Loc, H. H., Van Binh, D., Park, E., Shrestha, S., Dung, T. D., Son, V. H., ... & Seijger, C. (2021). Intensifying saline water intrusion and drought in the Mekong Delta: From physical evidence to policy outlooks. *Science of the Total Environment*, *757*, 143919.

23. *Park, E., Lim, J., Ho, H. L., Herrin, J., & Chitwatkulsiri, D. (2021). Source-to-sink sediment fluxes and budget in the Chao Phraya River, Thailand: A multi-scale analysis based on the national dataset. *Journal of Hydrology*, 125643.

22. Rotta, L., Alcântara, E., Park, E., Bernardo, N., & Watanabe, F. (2021). A single semi-analytical algorithm to retrieve chlorophyll-a concentration in oligo-to-hypereutrophic waters of a tropical reservoir cascade. *Ecological Indicators*, *120*, 106913.

21. Alcântara, E., Mantovani, J., Rotta, L., Park, E., Rodrigues, T., Carvalho, F. C., & Souza Filho, C. R. (2020). Investigating spatiotemporal patterns of the COVID-19 in São Paulo State, Brazil. *Geospatial Health*, *15*(2).

20. *Park, E., Emadzadeh, A., Alcântara, E., Yang, X., & Ho, H. L. (2020). Inferring floodplain bathymetry using inundation frequency. *Journal of Environmental Management*, *273*, 111138.

19. *Loc, H. H., Park, E., Chitwatkulsiri, D., Lim, J., Yun, S. H., & Maneechot, L. (2020). Local rainfall or river overflow? Re-evaluating the cause of the Great 2011 Thailand flood. *Journal of Hydrology*, *589*, 125368.

18. Latrubesse, E. M., Park, E., Sieh, K., Dang, T., Lin, Y. N., & Yun, S. H. (2020). Dam failure and a catastrophic flood in the Mekong basin (Bolaven Plateau), southern Laos, 2018. *Geomorphology*, *362*, 107221.

17. Rotta, L. H. S., Alcantara, E., Park, E., Negri, R. G., Lin, Y. N., Bernardo, N., ... & Souza Filho, C. R. (2020). The 2019 Brumadinho tailings dam collapse: Possible cause and impacts of the worst human and environmental disaster in Brazil. *International Journal of Applied Earth Observation and Geoinformation*, *90*, 102119.

16. Binh, D. V., Wietlisbach, B., Kantoush, S., Loc, H. H., Park, E., Cesare, G. D., ... & Sumi, T. (2020). A Novel Method for River Bank Detection from Landsat Satellite Data: A Case Study in the Vietnamese Mekong Delta. *Remote Sensing*, *12*(20), 3298.

15. Latrubesse, E. M., d'Horta, F. M., Ribas, C. C., Wittmann, F., Zuanon, J., Park, E., ... & Baker, P. A. (2020). Vulnerability of the biota in riverine and seasonally flooded habitats to damming of Amazonian rivers. *Aquatic Conservation: Marine and Freshwater Ecosystems*.

14. *Park, E., Merino, E., W Lewis, Q., O Lindsey, E., & Yang, X. (2020). A pathway to the automated global assessment of water level in reservoirs with synthetic aperture radar (SAR). *Remote Sensing*, *12*(8), 1353.

13. *Park, E. (2020). Characterizing channel-floodplain connectivity using satellite altimetry: Mechanism, hydrogeomorphic control, and sediment budget. *Remote Sensing of Environment*.

12. *Park, E., Ho, H., Tran, D., Yang, X., Alcantara, E., Merino, E. & Son, V. (2020). Dramatic decrease in flood frequency of the Mekong Delta due to riverbed-mining and dyke construction. *Science of the Total Environment*.

11. Storozum, M., Lu, P., Wang, S., Chen, P., Yang, R., Ge, Q., Cao, J., Wan, J., Wang, H., Qin, Z., Liu, H. & Park, E. (2020). Geoarchaeological evidence of the AD 1642 Yellow River flood that destroyed Kaifeng, a former capital of dynastic China. *Scientific Reports, 10*(1), 1-12, 4.122.

10. Bernardo, N., Carmo, A., Park, E., & Alcântara, E. (2019). Retrieval of suspended particulate matter in inland waters with widely differing optical properties using a semi-analytical scheme. *Remote Sensing, 11*(9), 2283, 4.118.

9. *****Park, E. & Latrubesse, E. (2019). A geomorphological assessment of wash-load sediment fluxes and floodplain sediment sinks along the lower Amazon River. *Geology, 47*(5), 403-406, 5.0.

8. *****Park, E., Lewis Q. and Sanwlani, N. (2019). Large lakes gauging using fractional imagery. *Journal of Environmental Management, 231*(null), 687-692, 4.865.

7. Yang X., Lu, X., Park, E., and Tarolli, P. (2019). Impacts of climate change on lake fluctuations in the Hindu-Kush-Himalaya-Tibetan Plateau. *Remote Sensing, 11*(9), 1082, 4.1.

6. Lewis, Q. and Park, E. (2018). Volunteered Geographic Videos (VGV) in physical geography: Data mining from YouTube. *Annals of the American Association of Geographers, 108*, 52-70, 2.8

5. Latrubesse, E. M., Arima, E., Dunne, T., Park, E., Baker, V., d'Horta, F., Wight, C., Wittmann, F., Zuanon, J., Baker, P., Ribas, C., Norgaard, R., Filizola, N., Ansar, A., Flyvbjerg, B. and Stevaux, J. (2017). Damming the rivers of the Amazon Basin. *Nature, 546*, 363-369.

4. *****Park, E. and Latrubesse, E. M. (2017). Hydrogeomorphic complexity of the lower Amazon River floodplain and hydrological connectivity assessed using remote sensing and field measurements. *Remote Sensing of Environment, 198*(null), 321-332, 8.2.

3. Restrepo, J. D., Park, E., Aquinos, S. and Latrubesse, E. M. (2016). Coral reefs chronically exposed to river sediment plumes in the southwestern Caribbean: Rosario Islands, Colombia.. *Science of the Total Environment, 553*, 316-329.

2. *****Park, E. and Latrubesse, E. M. (2015). Surface water types and sediment distribution patterns at the confluence of mega rivers: Solimões-Amazon and Negro rivers junctions. *Water Resources Research, 51*(null), 6197-6213.

1. *****Park, E. and Latrubesse, E. M. (2014). Modeling suspended sediment distribution patterns of the Amazon River using MODIS data. *Remote Sensing of Environment, 147*(null), 232-242.

Conference Papers (Published in Proceedings)

1. Bouvet de Maisonneuve, C., Eisele, S., Forni, F., Park, E., Phua, M. & Putra, R. (2019). Bathymetric survey of lakes Maninjau and Diatas (West Sumatra), and lake Kerinci (Jambi). In *Journal of Physics: Conference Series* (pp. 1-9). London, United Kingdom: IOP Publishing.

<u>Chapters in Scholarly Books</u>

1. Latrubesse, E., Park, E., Ramonell, C., Sounny Slitine, A. & Cafaro. E. (In-press). The Chaco Megafans. In Wilkinson, M & Latrubesse, E. (Eds.), *MEGAFANS—A GLOBAL*

SYNTHESIS (pp. na). Cambridge: Cambridge University Press.

Chapters from Academic References

1. Latrubesse, E. & Park, E. (2017). Rivers and streams. In Marston, R. (Ed.), *The International Encyclopedia of Geography – People, the Earth, Environment, and Technology* (pp. 1-8). NYC: Wiley-Blackwell.

Editorship of Special Issues of Journal

4. Park, E. & Hudson, P. (Ed.) (2021). *Earth Surface Processes and Landforms (ESPL),* Lowland rivers: Geomorphology, sustainable management and ecosystem services.

3. Park, E. & Alcantara, E. (Ed.) (2020). *Remote Sensing*, Remote Sensing of natural and man-made disaster. 1 (nn).

2. Park, E., Yang, X., & Ho, H. (Ed.) (2020). *Remote Sensing*, Natural disasters and human impacts in Asian rivers. 1 (nn).

1. Alcantara, E. & Park, E. (Ed.) (2018). *Remote Sensing*, Remote Sensing of Large Rivers. 1 (nn).

Research/Technical Reports

1. Lee, C., Kim, J., Park, E. and Kastner, K. (2016). *Analysis of river flow using ADCP post-processing software: ADCPtool*. Korea.

Invited Seminars

2022 Tropical Rivers in the Anthropocene: Amazon, Mekong and beyond. Department of Geography, *National University of Singapore (NUS)*, Singapore. Host: Dr. Dongfeng Li.

2021 Human impacts and morphodynamics of the Tropical Rivers, School of Environmental Science and Engineering, *Southern University of Science and Technology (SUSTECH)*, China. Host: A/P Lian Feng.

2021 Tropical Rivers in the Anthropocene, Earth Observatory of Singapore (EOS), *Nanyang Technological University (NTU)*, Singapore. Host: A/P Xianfeng Wang.

Conference Presentations

Park, E., Lin, YNN., Sieh, K. & Latrubesse, E. (2021, Feb) Dam failure and the catastrophic flood in the Bolaven Plateau, 2018. International Association of Geomorphologists (IAG) Geomorphology Week, Webinar.

Park, E. (2020, Dec) Investigating the dam failure in Southern Laos: Mechanism. *Asian Institute of Technology (AIT)-Beijing Normal University (BNU) Joint Conference on Environmental Hazards*, Webinar (Invited).

Park, E. and Latrubesse, E. M., Aquino, S. and Lim, Jana. (2018, Dec) Recent fluvial bar morphodynamics in the lower Irrawaddy River in Myanmar. *American Geophysical Union (AGU) Fall Meeting*, Washington DC, USA.

Park, E., Latrubesse, E. M. and Aquino, S. (2018, April) Sediment transport patterns and environmental issues in Irrawaddy River, Myanmar. *American Association of Geographers (AAG)*, New Orleans, USA.

Park, E. and Latrubesse E. M. (2017, Nov) Distribution of sediment sinks along the Amazon River: An *in-situ* geomorphic assessment. *International Association of Geomorphologists (IAG),* India.

Park, E. and Latrubesse, E. M. (2017, Dec) Morphodynamics at the confluence of mega rivers: Amazon and Madeira rivers. *American Geophysical Union (AGU) Fall Meeting*, New Orleans, USA.

Park, E. and Latrubesse, E. M. (2017, Aug) Rivers in Rivers: The Irrawaddy River: An initial assessment on suspended sediment transport and spatiotemporal suspended sediment distribution patterns. *Asia Oceania Geosciences Society (AOGS)*, Singapore.

Latrubesse, E. M. and Park, E. (2017, Aug) Are sediment loads of insular Southeast Asia overestimated? Clues from Borneo. *Asia Oceania Geosciences Society (AOGS)*, Singapore.

Park, E. and Latrubesse E. M. (2015, Sep) Suspended sediment distribution patterns of the Amazon River: impact of tributaries and channel-floodplain interactions. To be presented in *River, Coastal, and Estuarine Morphodynamics (RCEM) 9th Symposium*, Iquitos, Peru.

Park, E. and Latrubesse, E. M. (2015, Dec) Channel-floodplain sediment interactions along large rivers: hydrological connectivity and sediment budgets. *American Geophysical Union (AGU) Fall Meeting*, San Francisco, CA.

Park, E. and Latrubesse E. M. (2015, Apr) Modeling post-confluence sediment routing patterns in large rivers using MODIS data. *Association of American Geographers (AAG) Annual Meeting*, Chicago, IL.

Park, E. and Latrubesse, E. M. (2013, Apr) Mega-pattern analysis of suspended sediments distribution in the Amazon River using multi-temporal satellite imageries. *Association of American Geographers (AAG) Annual Meeting,* Los Angeles, CA.

Park, E. and Latrubesse, E. M. (2012, Dec) Mega-pattern analysis of suspended sediments distribution in the Amazon River using multi-temporal satellite imageries. *American Geophysical Union (AGU) Fall Meeting*, San Francisco, CA.

Working Papers / Pipeline

Papers under revision/review

1. Park, E. et al. (revision submitted) The worst drought in the Mekong Delta: Cause and the policy outlook. *Ambio*.

2. Park, E. et al (revision in preparation) Amazon River rating curve at Obidos revisited. *Water Resources Research*.

3. Ho, H., et al. Parameterizing the Rainfall derived infiltration rates in Singapore using numerical approaches. *Ecohydrology*.

4. Latrubesse, E., Park, E. et al (revision submitted) The Ayeyarwady River: Sediment transport and its role among global rivers in the Anthropocene. *PlosOne*.

5. Lin. et al. (submitted) The 2020 jade mining failure in Myanmar: Cause and the context of improper mining. *Remote Sensing of Environment.*

6. Chen et al. (revision submitted) Empirical analysis of marine pollutants distribution around Singapore based on field survey. *Marine Chemistry*.

7. Alcantara et al. (revision submitted) Investigating the relationship between COVID-19 lockdown and the water quality of large urban reservoirs in Sao Paulo, Brazil. *Remote Sensing Applications: Society and Environment*.

8. Yee et al. (submitted) Cultural ecosystem services investigations based on PPGIS in the hybrid park in the Mekong Delta. *Journal of Environmental Management*.

9. Koh et al. (submitted) City in Nature: Assessing the ecosystem services of re-naturalized urban park in the tropics. *Ecosystem Services*.

10. Yang et al (submitted) Flood monitoring of rural areas in the Pearl River Basin using Sentinel-1 SAR data. *Remote Sensing*.

Papers under preparation

(Listing only **first/corresponding author** manuscript that is over 80% complete)

1. Paradoxical hydrological behaviour of a Cambodian floodplain affected by rapid agricultural expansion. To be submitted to *Journal of Hydrology*.

2. Assessing environmental pressures in the Mekong River using Landsat-driven suspended sediment distribution maps. To be submitted to *Remote Sensing of Environment*.

3. Remote sensing mapping of river plumes and suspended sediments in Sarawak, Borneo. To be submitted to *Geomorphology*.

4. The first sand mining budget of the Mekong Delta assessed by remote sensing and field controls. To be submitted to *Remote Sensing of Environment*.

5. Sustainability of prawn-rice rotational crops in the Mekong Delta: A case study from Kien Giang. To be submitted to *Science of the Total Environment.*

6. Anthropogenic sediment sinks along the Chao Phraya Basin. To be submitted to *Earth Surface Processes and Landforms* (invited).

7. Spatiotemporal distribution of the dams in Indonesia. To be submitted to *Scientific Data*.

8. Source to sink sediment fluxes in South America: Natural disasters and human impacts. Invited by the editor for *Earth-Science Reviews*.

9. Mapping bathymetry of the Amazon River lowland using inundation frequency and field controls. To be submitted to *Geomorphology*.

10. Efficacy of geography fieldwork in Singapore schools: A study through the water quality measurement of Serangoon River. To be submitted to *Journal of Geography*.

Media Exposure

2022	Measuring the real cost of sand mining in the Mekong, *Eco-Business* https://www.eco-business.com/opinion/measuring-the-real-cost-of-sand-mining-in-the-mekong/
2022	Interview on Malaysia flood, *Channel 8, Singapore* https://www.8world.com/stories/focus/global-warming-affecting-food-production-1700801
2021	Article featured at *Nature News* https://www.nature.com/articles/d41586-021-01740-2
2021	Der Mekong in Kambidscha – ein okolo-gischer Reisebericht (Germany), *Riffreporter.de* https://www.riffreporter.de/de/umwelt/mekongwasser-klimawandel-staudaemme-sand

Innovation
NA

Entrepreneurship
NA

TEACHING SUMMARY

Key Courses Taught (Current Year and Last 2 years)

Course Code	***Course Title***	***Academic Year***	***Course Level***	***Type*** *(Lecture, Tutorial, etc.)*	***Semester***
MAS 919	GIS and Geospatial Learning in Sustainability	AY21 – AY22	PG	Lecture and Tutorial	2
AAG 23C	Tropical Geomorphology	AY21 – AY22	UG	Lecture and Tutorial	2
AAG 28H	Intro to Geographic Information System	AY21 – AY22	UG	Lecture and Tutorial	1
AAG 10A	Elements in Physical Geography	AY21 – AY22	UG	Lecture and Tutorial	1
AAG 23A	Statistics in Geography	AY20 – AY21	UG	Lecture and Tutorial	2
AAG 10C	Techniques in Geography	AY20 – AY21	UG	Lecture and Tutorial	2
AAG 40D	Academic Exercise: Geography	AY20 – AY21	UG	Lecture and Research supervision	2
AAG 40C	Geographical Methods and Fieldwork	AY20 – AY21	UG	Lecture and Research supervision	1
AAG 23C	Tropical Geomorphology	AY19 – AY20	UG	Lecture and Tutorial	2
AAG 23D	Biogeography and soils	AY19 – AY20	UG	Lecture and Tutorial	1
MAS 841	Field inquiry in	AY19 – AY20	PG	Lecture and	1

	Physical Geography			Tutorial	

Academic Supervision and Mentoring

PhD students

No.	PhD Student	Period	Role *(Pls. indicate if Main/Sole or Co-supervisor)*	Thesis/ Project Title	Current Status
Currently Supervising					
1	Sonu Kumar	2021-present	Main	Sand mining budget in Southeast Asian rivers	Conducting 1st year
2	Yilin Zhang	2021-present	Co	Climate change and rainfall patterns in Southeast Asia	Conducting 1st year
3	Theodora Hui Yian Lee	2019 - present	Co	Identifying environmental surrogates for environmental pollution in Southeast Asia	Advanced to PhD candidate in Feb 2021.

Masters students (By Research Only)

No.	Masters Student	Period	Role	Thesis/ Project Title	Current Status
Currently Supervising					
1	Danielle Poh Yi Le	2020 - present	Main	Climate change, dams and sand mining: investigating cause of the Tonle Sap	Finishing last semester

Masters students (By Coursework) & Undergraduate Students

No. Graduated (Current Year and Last 2 Years)			No. Currently Supervising		
MSc#/MA/MEd	**FYP**	**URECA**	**MSc#**	**FYP**	**URECA**
	8	4			4

Post-doctoral fellow

No.	Research Assistant	Appointment	Period	Thesis/ Project Title	Current Status
In employment (as at Current Year)					
1	Dung Duc Tran	Research Fellow	2022 - present	Environmental impacts in the Mekong	-

Research Assistants

No.	Research Assistant	Appointment	Period	Thesis/ Project Title	Current Status
In employment (as at Current Year)					
1	Kai Wan Yuen	Research Associate	2021 - present	Environmental impacts in the Mekong	-

2	Rachel Lau	Research Assistant	2021 – present	Johor River water quality	-
3	Berwyn Kwek	Research Assistant	2021 - present	Geography of Sand mining	-

Teaching Awards / Recognition

Year	Teaching Award / Recognition
2021 – present	Mentored UG student (Wei Jing Ang, ASE Y3) who have won *URECA Research Excellence Award* and *URECA Publication Award*
2021 – present	Mentored an UG students whose six (6) thesis is published in Q1 journal.
2021	Innovative approach to overcome pandemic restrictions of overseas fieldwork for 8 FYP student is featured at the *NIEWES*.

Teaching Grants
NA

SERVICE SUMMARY

Service Awards / Recognition

Year	Role
2018	Outstanding Reviewer Award, *Advances in Water Resources* (SCI, IF: 3.7)
2017	KAGES Student Leadership Award, *Korean-American Association of Geospatial Technologies and Environmental Sciences*.

School

Period of appointment	Role
2022 – present	NIE Committee of Emerging Technology (appointed by NIE Director)
2021 - present	AG Brownbag Committee
2019 - present	AG OOE Budget Committee
2019 - present	AG Outreach Committee
2020 - present	Facilities Management Team (HSSE Raingarden)

University
NA

Academic Community

Period of appointment	Role
2021 - present	Guest editor of a special issue in Journal *ESPL* (IF: 3.8)
2020 - present	National representative of Singapore for *International Association of Geomorphologists* (*IAG*) – the most important academic organization in the field of *Geomorphology*.
2017 - present	Guest editor of three special issues in Journal *Remote Sensing* (IF: 4.1)

MOE

Period of appointment	Role
2021 - present	Exco member of Geography Teachers Association (GTA), Academy of Singapore Teachers (AST).

Other Service

Date	Role
May 2022	Presented research on behalf of our AG at the PGCE virtual fair.
Apr 2022	Presented MOE Grant sharing session, GPL, NIE.
Mar 2021	Presented AG's Geography program at MOE TIP event.
May 2021	Presented research on behalf of our AG at the PGCE virtual fair.
2015 - present	Peer-reviewer of >50 academic journal (including *Nature*).

APPENDIX 1

Citation Report

Top-ten cited publications.

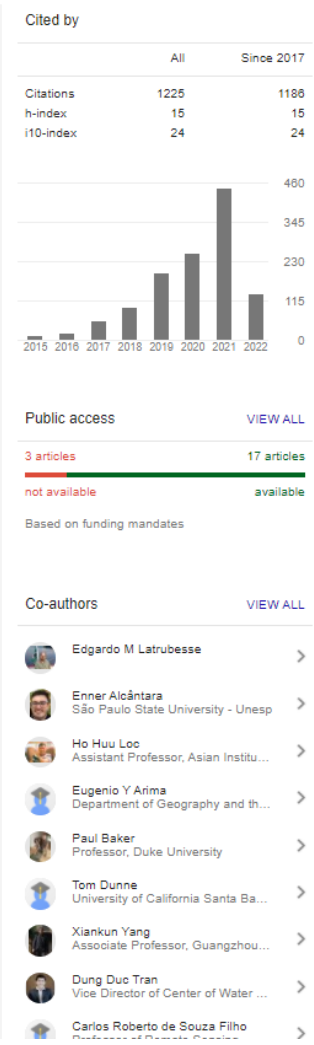
Edward Park

FOLLOW

Assistant Professor of Physical Geography, Nanyang Technological University
Verified email at ntu.edu.sg - Homepage

Environmental management Fluvial geomorphology Remote sensing

TITLE	CITED BY	YEAR
Damming the rivers of the Amazon basin EM Latrubesse, EY Arima, T Dunne, E Park, VR Baker, FM d'Horta, ... Nature 546 (7658), 363-369	439	2017
Modeling suspended sediment distribution patterns of the Amazon River using MODIS data E Park, EM Latrubesse Remote Sensing of Environment 147, 232-242	135	2014
The 2019 Brumadinho tailings dam collapse: Possible cause and impacts of the worst human and environmental disaster in Brazil LHS Rotta, E Alcantara, E Park, RG Negri, YN Lin, N Bernardo, ... International Journal of Applied Earth Observation and Geoinformation 90, 102119	108	2020
The hydro-geomorphologic complexity of the lower Amazon River floodplain and hydrological connectivity assessed by remote sensing and field control E Park, EM Latrubesse Remote Sensing of Environment 198, 321-332	70	2017
Coral reefs chronically exposed to river sediment plumes in the southwestern Caribbean: Rosario Islands, Colombia JD Restrepo, E Park, S Aquino, EM Latrubesse Science of the Total Environment 553, 316-329	62	2016
Surface water types and sediment distribution patterns at the confluence of mega rivers: The Solimões-Amazon and Negro Rivers junction E Park, EM Latrubesse Water Resources Research 51 (8), 6197-6213	50	2015
Dramatic decrease of flood frequency in the Mekong Delta due to river-bed mining and dyke construction E Park, HL Ho, DD Tran, X Yang, E Alcantara, E Merino, VH Son Science of The Total Environment 723, 138066	39	2020
Intensifying saline water intrusion and drought in the Mekong Delta: From physical evidence to policy outlooks HH Loc, D Van Binh, E Park, S Shrestha, TD Dung, VH Son, NHT Truc, ... Science of the Total Environment 757, 143919	30	2021
Characterizing channel-floodplain connectivity using satellite altimetry: Mechanism, hydrogeomorphic control, and sediment budget E Park Remote Sensing of Environment 243, 111783	23	2020
Vulnerability of the biota in riverine and seasonally flooded habitats to damming of Amazonian rivers EM Latrubesse, FM d'Horta, CC Ribas, F Wittmann, J Zuanon, E Park, ... Aquatic Conservation: Marine and Freshwater Ecosystems	21	2020



Based on Google Scholar (visited 22 03 2022)
https://scholar.google.com.sg/citations?user=FZ1Ov9EAAAAJ&hl=en&authuser=1

APPENDIX 2

Student Feedback on Teaching

APPENDIX 3

Teaching Innovations and Achievements

Year	Description
2021 – 2022	Developed new tutorial program “Grain size distribution with Mastersizer” for Tropical Geomorphology course (AAG 23C). Mastersizer is the cutting-edge equipment (~50k SGD) only available at the Earth Observatory of Singapore (EOS). Using my PI appointment at EOS, NIE students learned using Mastersizer and conducted their tutorial and course final project using the equipment at EOS.
2020 - 2021	Overseas fieldwork for 8 FYP students were cancelled due to COVID-19 pandemic. However, I changed the approach to “Geospatial Technology” and directed students to focus on key environmental issues in the region. Each student has tackled important geographical issues through GIS and Remote Sensing, to make the FYP experience as valuable as much as the conventional overseas field-based approach. My innovative teaching approach for the FYP has been featured at the NIEWS letter. https://www.nie.edu.sg/niews/december2020/
2021	One of the FYP students that I supervised, has published her work in Q1 journal (with myself as a corresponding author). https://www.sciencedirect.com/science/article/pii/S004896972101247X