

Yi Liu

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EDUCATION

University of Michigan	2023.01 - now
Doctoral program , School for Environment and Sustainability (SEAS)	
University of Toronto	2021.09 – 2021.12
Exchange student , Faculty of Applied Science and Engineering	
Southern University of Science and Technology	2018.09 – 2022.07
Bachelor of Engineering , Hydrology and Water Resources Engineering	
Undergraduate GPA: 3.70/4.00	
Outstanding Graduates	

RESEARCH EXPERIENCE

Information Technology

Proficient in programming tools: MATLAB, R

Comprehended software: Python, Google Earth Engine, ArcGIS, Solidworks

Problems on in-situ wind speed measurements for time series analysis **2022.01 – 2022.12**

Wind speeds recovery in China and its effect on wind power industry **2019.09 – 2022.10**

·Special Funds for the Cultivation of Guangdong College Students' Scientific and Technological Innovation

·AGU Fall Meeting 2020, eLightning

·13th International Conference on Applied Energy, talk

·*Increases in China's wind energy production from the recovery of winds since 2012*, first author, published on *Environmental Research Letters*

The role of temperature in nursery beach site fidelity of the juvenile white shark **2021.10 – 2021.12.25**

·Cooperating with Shark Lab at California State University, Long Beach and Bayesian Ecological & Environmental Statistics group at University of Toronto, published on *Scientific Reports*

INDIVIDUAL COURSE PROJECTS

Introduction to Remote Sensing Project **2021.05**

Picturing land use change in Shenzhen since the reform and opening-up via supervised classification (Classification and Regression Tree method) for Landsat images. Finding that 70% of the urbanization area is from vegetation region and 30% is from the sea by reclamation. The overall accuracy is 97% (Google Earth Engine and MATLAB based).

Global Climate Change Project **2021.05**

·Using sandstorm station records to investigate sandstorm trends and affecting factors. Finding that with increasing wind speed and hotter and drier climate in inner East Asia, the risk of sandstorms will go up (MATLAB based).

·*Stronger spring winds increase sand-dust storm risk in northern China*, first author, published on *Environmental Science: Atmospheres*

Meteorology and Climatology Project **2020.12**

Analyzing wind speed and pattern changes of jet stream in northern hemisphere for the recent decades with ERA5 reanalysis data. Based on the relatively stable trend for both v-wind and u-wind in jet stream area, we proposed that further research should be finer, for example, focusing on east Asia trough (Python based).

PUBLICATIONS

[Spurgeon, E., Anderson, J. M., Liu, Y., Barajas, V. L., & Lowe, C. G. \(2022\). Quantifying thermal cues that initiate mass emigrations in juvenile white sharks. *Scientific Reports*, **12**\(1\), 1-12.](#)

[Liu, Y., Zeng, Z., Xu, R., Ziegler, A. D., Jerez, S., Chen, D., ... & Yang, X. \(2022\). Increases in China's wind energy production from the recovery of wind speed since 2012. *Environmental Research Letters*, **17**, 114035.](#)

[Liu, Y., Xu, R., Ziegler, A. D. & Zeng, Z. \(2022\). Stronger winds increase the sand-dust storm risk in northern China. *Environmental Science: Atmospheres*, **2**, 1259-1262.](#)

[Liu, Y. & Zeng, Z. \(2022\). Wind Energy. In: *The Palgrave Handbook of Global Sustainability*. Palgrave Macmillan, Cham.](#)

[Zhou, L., Zeng, Z., Azorin-Molina, C., Liu, Y., Wu, J., Wang, D., Li, D., Ziegler, A. D., & Dong, L. \(2021\). A Continuous Decline of Global Seasonal Wind Speed Range over Land since 1980. *Journal of Climate*, **34**\(23\), 9443-9461.](#)

[Fan, W., Liu, Y., Chappell, A., Dong, L., Xu, R., Ekström, M., Fu, T., & Zeng, Z. \(2021\). Evaluation of global reanalysis land surface wind speed trends to support wind energy development using In Situ observations. *J. Appl. Meteorol. Clim.* **60**, 1, 33-50.](#)

AWARDS & HONORRE

- 2022 SEAS Conference Travel Grant
- 2021 Outstanding Graduates of Southern University of Science and Technology
- 2020 Excellent Athlete of Southern University of Science and Technology
- 2019 First Class Merit Scholarship of Southern University of Science and Technology (also in 2020 and 2021)

SKILLS & INTERESTS

- Capable of using Adobe Premiere in video editing
- With 2nd Dan of Taekwondo, the first female president of university Taekwondo club