

Yi Liu

Address: 1088 Xueyuan Avenue, Shenzhen 518055, P. R. China

E-mail: liuy2018@mail.sustech.edu.cn**EDUCATION**

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	
First Class of the Merit Student Scholarship for three years	
University Athletes of the Year	
English test scores: TOEFL 98	

RESEARCH EXPERIENCE**Information Technology**

Proficient in programming tools: MATLAB

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

Problems on in-situ wind speed measurements for time series analysis **2022.01 – Present****Wind speeds recovery in China and its effect on wind power industry** **2019.09 – Present**

- 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, submitted to *Environmental Research Letters*

The role of temperature in nursery beach site fidelity of the juvenile white shark **2021.10 – 2021.12.25****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 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*, Communication, first author, revision submitted to *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

Liu, Y. & Zeng, Z. (2022). Chapter 9: Wind Energy. Brinkmann, R. (Ed.), *The Palgrave Handbook of Global Sustainability*. Springer Nature, corrected proof.

[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.](#)

SKILLS & INTERESTS

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