

Yi Dai

Delft University of Technology, Delft, The Netherlands

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EDUCATION

Ph.D candidate

Delft University of Technology

Jul 2020 - Pre
Delft, The Netherlands

Master of Environmental Science

Delft University of Technology

Sep 2018 - Jul 2020
Delft, The Netherlands

Bachelor of Engineering in Environmental Science

Hohai University

Aug 2014 - Jul 2018
Nanjing, China

RESEARCH EXPERIENCES

Research interests:

Boundary layer meteorology (Frost mitigation),

Atmospheric turbulence modeling (large-eddy simulation)

MSc Thesis: Addressing the Grid size Sensitivity Issue in LES of SBL

Supervisor: Dr. Sukanta Basu

Ongoing
TU Delft, The Netherlands

An realistic simulation of Leipzig wind profile(1931) using WRF

Supervisor: Dr. Sukanta Basu

Jul 2019 - Sep 2019
TU Delft, The Netherlands

- This additional thesis work is to simulate wind observations by Mildner(1931) under near neutral (slightly stable) condition using state-of-the-art numerical weather prediction model WRF (Weather Research and Forecast Model)

Intern in the Department of Water Resources

China Water Conservancy Hydropower Science Academe

Jul 2017 - Sep 2017
Beijing, China

- To control the pollution emission of the main river in Jinan, Built the hydraulic model of Xiaoqing River in Jinan City using the geodata from Google earth and weather data from National Meteorological stations
- Participated in the proposal for "Water Resources Security Status and Risk Assessment in the Inland Region of Northwest China"
- Attended the conference of 973 Program of "the Whole Life Cycle Risk Inoculation Mechanism and Safety Prevention and Control Theory of Cascade Reservoirs" in Beijing China

Undergraduate Research Assistant

Project of National Natural Science Foundation

Jun 2017 - Jun 2018
Nanjing, China

- Analyzed 8 years daily hydrologic data of Yangtze River to figure out the rhythmic fluctuation of the river stage and sediment concentration pattern of Yangtze River
- Visualized and analyzed the pre-processed time series by cross comparison on month scale and yearly scale. Analyzed the results with connection to the management of Three Gorges Dam
- Acquired the satellite data of Poyang Lake in Jiangxi Province China, used Arcgis and Google Earth to analyze and find the annual distribution and change mechanism of shallow-lakes in Poyang Lake
- Established the Mike 21 model, explored the transfer mechanism of heavy metal in Poyang Lake

Publication

- Dai, Y., Basu, S., Maronga, B. et al. Addressing the Grid-Size Sensitivity Issue in Large-Eddy Simulations of Stable Boundary Layers. *Boundary-Layer Meteorol* (2020). <https://doi.org/10.1007/s10546-020-00558-1>

LEADERSHIP ACTIVITIES

- Vice President | Library Readers Association | Hohai University (2016 - 2017)
- Vice Director | Liaison Department | Library Readers Association | Hohai University (2015 -2016)
- Volunteer | First STEM Expo | Shanghai (Oct 2016)

SKILLS

- **Computer Skills:** Python(NumPy, Matplotlib, Pandas), Ubuntu, Bash, MATLAB, R, \LaTeX , QGIS, JavaScript for Google Earth Engine
- **Language Skills:** Mandarin(mother language), English

HONORS & AWARDS

- Holland Scholarship, Delft University of Technology, September 2018
- Excellent Student Scholarship, Hohai University, 2014