Yihang Wang

Ph.D. Student, Graduate Research Associate
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Education

08/08/2022 - Present **Ph.D. in Hydrosystems Engineering**
Arizona State University, Tempe, USA
Direction: Causal inference among atmospheric variables

08/24/2017- 01/10/2020 **Master of Hydraulic Engineering (Port, Coastal, and Offshore Engineering)**
Tianjin University, Tianjin, China

08/29/2013 – 07/06/2017 **Bachelor of Port, Channel, and Coastal Engineering**
Tianjin University, Tianjin, China

Research Experience

Jan. 2023 - Present
Graduate Research Associate: Smart Tree Watering in Arizona's Urban Environment
Arizona State University, Tempe, USA
Advisor: Dr. Zhihua Wang
Using the Urban Canopy Model to model the influence of tree's irrigation on urban environment, thus provide advice for the smart watering technologies.

Aug. 2022 - Present
Graduate Research Associate: Causal inference in atmospheric science
Arizona State University, Tempe, USA
Advisor: Dr. Zhihua Wang
Currently, the research in mainly about using CCM method to detect the causality among different meteorological variables.

Aug. 2017 – Nov. 2019
Graduate Researcher: Design of ecological revetment using vegetation
Tianjin University, Tianjin, China
Advisor: Dr. Jinfeng Zhang
Field study-observed vegetation in coastal and estuary areas as well as river bank in Tianjin, China, knowing their properties of habitat area, shape and others in natural condition.
Experimental study-carried a set of 1,050 hydraulic model tests in the wave flume of Tianjin University, learning the pattern of interaction between ecologically vegetated honeycomb-type revetment and waves and currents;
Numerical simulation-developed a numerical model to depict the interaction between vegetation and wave using SWASH model;
Derived formulations of Manning coefficient of this revetment and wave run-up on the revetment;
Designed a structure of ecologically vegetated honeycomb-type revetment which could be used in river bank and coastal areas.

Aug.2017 – Jun.2018
Graduate Researcher: Calculation of wave transformation, sediment transportation, and currents in nearshore zones
Tianjin University, Tianjin, China
Advisor: Dr. Jinfeng Zhang
The modeling and calculation of wave transformation, the stability of structures under wave force, sediment transportation, and currents in nearshore zones.

Research Areas

Causal Inference, Climate Dynamics, Atmospheric Processes, Urban Meteorology