# Jiarong Wu

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## Education

**Princeton University** — Princeton, NJ
Ph.D. in Fluid Mechanics, Advisor: Luc Deike, GPA: 3.82/4 — 2018–Current

**Tsinghua University** — Beijing, China
B.S. in Mechanical Engineering, GPA: 90.4/100 — 2014–2018

## Research Experience

**Princeton University** — Princeton, NJ
Graduate research assistant advised by Prof. Luc Deike — 2018–current

- Wind wave generation and growth mechanism

**Tsinghua University, State Key Laboratory of Hydroscience and Engineering** — Beijing
Undergraduate research assistant, senior thesis advised by Prof. Shuhong Liu — 2017–2018

- Study of cavitation around a bionic hydrofoil with leading-edge tubercles in high speed water tunnel

**Duke University** — Durham, NC
Summer research intern advised by Prof. Tony Jun Huang — Summer 2017

- Fluorescent signal enhancement using surface acoustic wave based streaming and heating

## Publications

1. **J. Wu** and L. Deike (2021), "Wind wave growth in the viscous regime", Physics Review Fluids.
2. **J. Wu**, S. Popinet, and L. Deike, "Wind wave interaction with fully coupled numerical simulation", Journal of Fluid Mechanics, submitted.
3. **J. Wu**, S. Popinet, and L. Deike, Numerical modeling of the statistics of surface breaking waves through a multi-layer approach. In prep.

## Talks and Presentations

1. **J. Wu** and L. Deike, "Direct Numerical Simulation of Surface Waves and Turbulent Boundary Layer Interaction", APS Division of Fluid Dynamics Meeting, Phoenix, AZ, 2021
2. **J. Wu**, "Numerical Investigation of Wind-wave Interaction ", MAE Research Day, 2021
3. **J. Wu** and L. Deike, "Numerical Investigation of Wind-wave Interaction ", 25th International Congress of Theoretical and Applied Mechanics, virtual, 2021
4. **J. Wu** and L. Deike, "Parameterization of Wind Wave Growth Rate, a Direct Numerical Simulation Study", AGU Ocean Sciences Meeting, San Diego, CA, 2020
5. **J. Wu** and L. Deike, "Direct Numerical Simulation of Wind Wave Growth", APS Division of Fluid Dynamics Meeting, Seattle, WA, 2019

## Teaching

- **Teaching Assistant** at Princeton University — Fall 2020/2021
  *MAE501 Mathematical Methods of Engineering Analysis I*
- **Counselor** at Research Science Initiative science summer camp at Tsinghua University — Summer 2015

## Scholarships and Awards

- MAE Britt and Eli Harari Fellowship 2021
- Mary and Randall Hack '69 Graduate Award for Water and the Environment 2021
- MAE Second Year Fellowship 2019
- Scholarship for FDSE (Fluid Dynamics of Sustainability and the Environment) summer school at Ecole Polytechnique, Paris 2019
- Tsinghua Alumni Scholarship for outstanding academic performance 2015–2017