



## Barbara G Simpson

Assistant Professor of Civil and Environmental Engineering

### Bio

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#### BIO

Our research group is made up of a small team of talented students with a wide range of skills and experience. We explore advanced computational and experimental methods to characterize structural response. Our aim is to develop innovative structural systems that improve structural performance and reduce the effects of natural hazards on the built environment.

Research areas include resilient and sustainable design and retrofit of building structures and offshore renewable energy systems, performance-based earthquake engineering, and next-generation computational modeling, including real-time hybrid simulation for fluid-structure interaction.

#### ACADEMIC APPOINTMENTS

- Assistant Professor, Civil and Environmental Engineering

#### LINKS

- My Lab Site: <https://simsoba.su.domains/>

### Teaching

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#### COURSES

##### 2025-26

- Nonlinear Structural Analysis: CEE 282 (Win)
- Structural Engineering and Mechanics Seminar: CEE 298 (Win)
- The Dynamics of Wind Turbines: CEE 284W (Spr)
- Wind Energy Explained: CEE 34N (Spr)

##### 2024-25

- Nonlinear Structural Analysis: CEE 282 (Win)
- Structural Engineering and Mechanics Seminar: CEE 298 (Win)
- Wind Energy Explained: CEE 34N (Spr)

##### 2023-24

- The Dynamics of Wind Turbines: CEE 284W (Spr)
- Wind Energy Explained: CEE 34N (Win)

##### 2022-23

- Software Development in Structural Engineering: CEE 201F (Win)
- The Dynamics of Wind Turbines: CEE 284W (Spr)
- Wind Energy Explained: CEE 34N (Win)

## **STANFORD ADVISEES**

### **Doctoral Dissertation Reader (AC)**

Juan Valois Martinez, Hemiao Zhang

### **Postdoctoral Faculty Sponsor**

Busra Yildirim

### **Doctoral Dissertation Advisor (AC)**

Gustavo A. Araújo, Bryam Astudillo Carpio, Yun Ni, Akiri Seki

### **Master's Program Advisor**

Alexis Krueger, Braden Tarrago

### **Doctoral (Program)**

Gustavo A. Araújo, Bryam Astudillo Carpio, Elaine Liu, Morgan McBain, Yun Ni, Akiri Seki