

# Tyler Warren Barbero

he/him  
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<https://tbarbero.github.io/>

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<b>EDUCATION</b>	<b>Colorado State University</b> , Fort Collins, CO <b>M.S. Atmospheric Science</b>	2021-current
	<b>University of California, San Diego</b> , La Jolla, CA <i>Department: Scripps Institution of Oceanography</i> <b>B.S. Oceanic and Atmospheric Sciences</b> <b>Minor Mathematics</b> (UC-GPA: 3.52/4.00)	2018-2020
	<b>De Anza/Foothill Community College</b>	2016-2018
<b>TECHNICAL SKILLS</b>	<b>Software:</b> Python, MatLab, Bash/Shell Scripting, Git, LaTeX <b>Instrumentation:</b> Trimble NetR9 GNSS Receiver, Radiosonde-launch system, Solar instruments	
<b>RESEARCH EXPERIENCE</b>	<b>Summer Research Fellowship</b> <i>Princeton—Geophysical Fluid Dynamics Laboratory</i> <i>Cooperative Institute for Modeling the Earth System (CIMES)</i> <ul style="list-style-type: none"><li>• Project: Evaluating the Impacts of Initial Conditions on Hurricane Movement in High-Resolution Global Models (Host: Jan-Huey Chen)</li></ul>	2021
	<b>Undergraduate Researcher</b> <i>Project: An investigation of the controls behind the diurnal cycle of dust in the Salton Basin</i> (Advisor: Prof. Amato Evan) <ul style="list-style-type: none"><li>• Utilized various in-situ observations in analyses to understand diurnal dust dynamics within the Basin</li></ul>	2020
	<b>Undergraduate Research Assistant</b> <i>Evan Research Lab at the Scripps Institution of Oceanography</i> <ul style="list-style-type: none"><li>• Designed and built mount for GNSS antenna currently mounted at our Salton Sea meteorological site</li><li>• Wrote Python and Bash scripts to automate data retrieval GNSS receiver to server</li><li>• Communicated with UCAR scientists to process raw data into Precipitable Water Vapor (PWV) via <a href="#">SuomiNet</a></li><li>• Collaborated with CW3E researchers to process their GPS data to PWV via SuomiNet</li><li>• Launched weather balloons to observe the structure of the atmosphere during several dust storms</li><li>• Field work involves numerous trips to the Salton Sea: used hands-on tools to construct meteorological platform for instruments, mounted instrumentation and routine maintenance</li></ul>	2019-2020
<b>PRESENTATIONS</b>	<b>AGU Poster Presentation</b> <i>Project: An investigation of the controls behind the diurnal cycle of dust in the Salton Basin.</i> <a href="#">AGU 2020 Poster</a>	2020

**Summer Research Conference at UC San Diego** 2019, 2020  
*Cross-disciplinary Undergraduate Research Conference  
for the Southern California Region*

**Undergraduate Research Presentation** 2019  
*Jacob's School of Engineering at UC San Diego*

- Presented research to a committee that included the Dean of Jacobs School of Engineering and several scholarship donors to increase funding for future aspiring researchers

**TEACHING & SERVICE** **Research Experience for Undergraduates Panel** 2020  
*Student Speaker*

- Shared my story as a transfer student landing research opportunities
- Led group discussions to guide new student through the REU and internship application process

**Info Session for New OAS majors (virtual)** 2020  
*Student Speaker*

- Welcoming new OAS freshman and transfer students through sharing my experiences in OAS and providing information on classes, research interests and opportunities

**Student Mentor in OAS** 2019-2020

- One-on-one mentoring discussing their research interests, recommending specific coursework for their concentration, and connecting students to faculty in their interests

**Student Tutor** 2018

- Prepared and led tutorial discussions in mathematics and physics for local high school AVID program

**AWARDS** **Undergraduate Research Scholarship, Hiestand Scholars** 2019-2020  
*Cross-disciplinary Engineering and Scripps Institution of Oceanography projects*

**Provost Honors (UCSD)**  
*3.5+ GPA in 12 graded or more units*

- Fall '18 '20, Winter '20, Spring '20

**RELEVANT COURSES**

**Ocean and Atmosphere**

- Graduate Atmospheric Thermodynamics and Climate Sciences I
- Chemical Physics: Statistical Thermodynamics I
- Geophysical Fluid Dynamics
- Fluid Dynamics
- Introduction to Atmospheric Physics
- Introduction to Ocean Waves
- Observational Physical Oceanography
- Introduction to Physical Oceanography
- Chemistry of the Oceans & Atmosphere
- Satellite Remote Sensing
- Analysis of Oceanic & Atmospheric Data

**Mathematics**

- Numerical Linear Algebra
- Applied Linear Algebra
- Linear Algebra I
- Partial Differential Equations
- Ordinary Differential Equations
- Introduction to Probability
- Vector Calculus

**HOBBIES &  
INTERESTS**

- Surfing • Rock-Climbing
- Weather and Clouds

**REFERENCES**

**Amato T. Evan**  
Associate Professor  
Scripps Institution of  
Oceanography, CASPO  
**aevan@ucsd.edu**

**Janet M. Becker**  
Teaching Professor  
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**Rick Salmon**  
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