FACULTY SPOTLIGHT

Cal Poly Maritime Academy

Q&A

with Mike Holden,

Mechanical Engineering Professor at Cal Poly Maritime Academy

What brought you to Cal Poly Maritime Academy?

I knew going into graduate school that I wanted to be a professor at a school that values teaching. I also like boats and sailing, so Cal Poly Maritime Academy seemed like a pretty great place to work. I feel like Cal Poly Maritime has an impact on its students and the industry that is much larger than its size might suggest, and it is rewarding to be a part of that.

What is your background and the path that led you to your role at Cal Poly Maritime Academy?

I double majored in aeronautical and mechanical engineering for my undergraduate degree at the University of California, Davis. Then I went to Stanford for my doctorate in the Department of Aeronautics and Astronautics. I worked at a drone startup for a few years after I graduated, mostly writing flight control and telemetry software, but since it was a small company, I was able to work on most of the aircraft systems. My first professor position was at San Francisco State University's Mechanical Engineering Department, but I was happy to move to Cal Poly Maritime Academy when a position opened up in 2007, and I have been here ever since.

I have been a windsurfer and sailor most of my life. I studied aerospace engineering because I wanted to understand the way sails work. I was on the UC Davis sailing team and worked as a sailmaker for a few summers. I don't have any commercial ship engineering experience, but many students and faculty members share my interests on the water. I live in Martinez with my wife, Jen, a pediatrician, and our dog, Casey. We have two sons. Our older son, Nate, is pursuing a master's degree in music education at Longy in Boston, and our younger son, Jack, is a senior at San Diego State University studying jazz piano.

What are some of the upcoming projects you are working on?

Over the years, I have developed several autonomous boats with my students for missions such as oceanographic measurements and harbor mapping. I am always looking for new applications for autonomous vessels and enjoy collaborating with my colleagues and students. I submitted a proposal to the Summer Undergraduate Research Program for the first time and am hopeful it will be selected for funding. It would involve analyzing data quality from depth sensors on a small autonomous boat.

What are some of the things you hope students take away from their training at Cal Poly Maritime?

I hope my students leave here with a love for engineering and the ability to understand how things work. I believe our program delivers strong technical knowledge, hands-on application and the ability to function as part of a team.

What is your favorite part of your job?

I particularly like teaching the engineering-labs. The smaller class sizes allow me to get to know the students better, and the courses are very hands-on. I teach the mechatronics, instrumentation and measurements labs, and sometimes the circuits labs as well.

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How do you like to spend your free time?

I have recently gotten into wingfoiling. The windy season on San Francisco Bay is during the summer, so wingfoiling works well with the academic schedule. I have also done a lot of windsurfing and sailboat racing over the years. My wife and I just got a van, and we are having fun camping and traveling as a couple now that our kids are grown.

How does engineering apply to your daily life?

I love to make things. Whether it's a coffee mug shelf with LED lights to randomly select the morning mugs, a remote-controlled lawnmower or a chicken-coop door that automatically lets the birds out, I use many of the topics from my mechatronics class around my house for fun.