

UC SANTA BARBARA

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## Exploring the Ocean's Secrets

Tommy Riparetti will test his communication skills by attempting to emulate Neil deGrasse Tyson — the rock-star scientist who formerly hosted the PBS TV series “NOVA scienceNOW.”

Enthralled with Tyson’s renowned ability to engage audiences, Riparetti hopes to captivate internet viewers with lively commentary from a media control room on the E/V Nautilus research ship as remotely-operated vehicles (ROVs) — Hercules and Argus — explore never-seen ocean depths of the Cordell Bank, a marine sanctuary off the coast of San Francisco.

“I just don’t want to sound silly,” said Riparetti, who recently completed a master’s degree from UC Santa Barbara’s Gevirtz Graduate School of Education. “I want to sound like I know what I’m talking about.”

A science communication fellow for the Nautilus Exploration Program, Riparetti will be sitting next to scientists and ROV pilots, who use levers to guide the technically sophisticated rovers that conduct tests and relay video. Riparetti’s job is to follow the deep-sea footage, ask the team questions and explain what’s happening to people watching live streaming video on the Nautilus Live website.

“People will hear me saying things like, ‘Right now, we’re 2,000 meters deep and we’re going into the mud here and I think we see some detritus floating down.’ And I’ll be reading a comment feed, so viewers in China or Europe can ask questions,” he said. “I’ll be kind of a TV host.”

Because some scientists work in really specialized fields — like studying sea sponges — Riparetti's role is to be a translator who communicates in simple layman's terms. "If a viewer asks something I don't know, I'll just say I'm not sure," he said. "Luckily, I can ask the pilots and scientists right next to me."

Excited about exploring areas of a habitat no one has seen, Riparetti boarded the E/V Nautilus in San Francisco on Sunday, August 6, for a 10-day expedition to the Cordell Bank, a rocky plateau that rises up from the ocean floor to a fairly shallow depth. Overseen by the National Oceanic and Atmospheric Administration, it is a marine protected area rich with sea life and ecosystems.

Riparetti applied for the Nautilus Exploration fellowship in February, on the recommendation of his adviser, Peggy Lubchenco, a continuing lecturer and academic coordinator for the Gevirtz Graduate School of Education. He was accepted a few weeks later, along with two UCSB undergraduates, Dan Baldwin, and Anshika Bagla. Among 19 students selected in North America, Riparetti, Baldwin and Bagla were assigned to different two- to three-week expeditions aboard the E/V Nautilus, which is exploring the Pacific Ocean from May to November.

While preparing for his expedition at the University of Rhode Island Graduate School of Oceanography, Riparetti met Robert Ballard, founder of The Ocean Exploration Trust, a nonprofit that operates the E/V Nautilus. Dedicated to ocean exploration, Ballard — a UCSB alumnus — is the scientific adventurer who discovered the wreckage of the Titanic in 1985.

Though Ballard will not be joining the Cordell Bank expedition, he did spend some time with Riparetti. "He told me that when he went to UCSB he took every science class and majored in physics, chemistry and biology — that would be biting off more than I could chew," said Riparetti, who has a bachelor's degree in molecular biology. "He's one of those real magnetic personalities, like a storyteller. I mean he's sailed the seven seas."

As part of the training, Riparetti was encouraged to look into the camera because some ship-to-shore internet interactions will be with children at summer camps. "I don't have much in-front of camera experience, other than making surf videos with my buddies," he joked.

Lubchenco pushed Riparetti to apply for the fellowship based on her own experience as a science communication specialist on two Antarctica expeditions. "It is a no

brainer that Tommy will seize this opportunity and capitalize on it," she said. "He has already demonstrated that he is a charismatic teacher, integrating technology, live music and art into his lessons. He can leverage this experience into a much bigger opportunity to promote ocean exploration, conservation and a general excitement for scientific endeavors."

Noting the national shortage of qualified science teachers, Lubchenco said she is proud of the teacher education program at UCSB. "Tommy is one of many exceptional student teachers we have trained," she said. "Without a doubt, he will increase the public's understanding of important science concepts."

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## **About UC Santa Barbara**

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.