

**Kyle Neumann**  
CURRICULUM VITAE

Burkepile Lab  
Marine Science Institute  
University of California Santa Barbara  
Santa Barbara, CA 93106-6150  
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(503) 459-1730

**EDUCATION**

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**Ph.D. Candidate in Marine Science**, University of California Santa Barbara     *2015 to Present*

**Bachelor of Science in BioResource Research**, Oregon State University     *2015*  
Minor in Chemistry, Emphasis in Water Resources

**PROFESSIONAL AND ACADEMIC APPOINTMENTS**

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**Ph.D. Candidate**     *2018 to Present*  
Burkepile Community Ecology Lab  
*UC Santa Barbara Marine Science Institute*

**Lead Video Engineer**     *2017 to 2018*  
Exploration Vessel Nautilus  
*Ocean Exploration Trust*

**Graduate Student Researcher**     *2016 to 2018*  
Burkepile Community Ecology Lab  
*UCSB Marine Science Institute*

**Video Engineer**     *2014 to 2016*  
Exploration Vessel Nautilus  
*Ocean Exploration Trust*

**Ocean Instrumentation Specialist**     *2014 to 2015*  
*The Sexton Corporation*

**Research Assistant**     *2013 to 2015*  
Geomicrobiology Lab  
*Oregon State University*

**Conference Coordinator** 2014  
International Marine Technician's (INMARTECH) Conference  
*Oregon State University*

**CEO/Camera Systems Engineer** 2012 to 2013  
Remotely Operated Vehicle (ROV) Team  
*Linn Benton Community College*

**Camera/Production Assistant** 2011 to 2013  
Oregon Field Guide  
*Oregon Public Broadcasting*

## **TEACHING EXPERIENCE**

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**Research Mentor** to ten undergraduate students 2016 to Present  
Engineering and Science Programs  
*UC Santa Barbara*

**Director** 2017 to Present  
Ati Vai: A middle school educational program focused on  
watershed process and aquatic biology  
*Mo'orea, French Polynesia*

**Advisor** 2018 to 2019  
Undergraduate engineering senior capstone project  
*UC Santa Barbara*

**Teaching Assistant** 2017  
Introductory Biology Lab  
*UC Santa Barbara*

**Instructor** 2016 to 2017  
Robotics  
*The Anacapa School*

**Classroom Lead** 2015  
SciTrek  
*La Colina Junior High School*

## **PUBLICATIONS**

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**Neumann, K.C.**, Yoo, H., La, D., Burkepile, D.E. Programmable autonomous water sampler (PAWS) for aquatic research. *In prep for HardwareX*

Hollarsmith, J. A., Ramírez-Ortiz, G., Winkvist, T., Velasco-Lozano, M. DuBois, K., ReyesBonilla, H., **Neumann, K.C.**, Grosholz., E.D. Habitat structures mesophotic communities in the Bay of La Paz and the Revillagigedo Archipelago. *In revision at Journal of Biogeography.*

Torres, M., Colwell, F., Yang, J., Wishart, J., **Neumann, K.C.**, Verba, C. (2014). Biogeochemical reactions that control tracer and contaminant release. *National Energy Technology Laboratory Unconventional Resources Final Report (EPACT)*

## **FELLOWSHIPS & GRANTS**

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**2016 to Present** - NSF Graduate Research Fellowship (\$138,000)

**2019** - Association for the Sciences of Limnology and Oceanography Global Outreach Initiative (\$3,500)

**2019** - Worster Award for Mentorship of Undergraduate Research (\$5,000)

**2019** - Schmidt Family Foundation Environmental Solutions Fellowship (\$8,500)

**2017** - Link Foundation Ocean Instrumentation Fellowship (\$29,000)

**2017** - Honda Marine Ocean Instrumentation Fellowship (\$7,500)

**2016** - 1st prize in the UC Santa Barbara New Ventures Competition (\$12,500)

**2016** - Marine Technology Society's ROV Committee Scholarship (\$5,000)

**2016** - UC Santa Barbara Coastal Fund Grant (\$17,000)

## **AWARDS**

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**2018** - Distinguished Alumni Award Maria Carrillo High School

**2014** - Best Marine Technology Poster, *Pacific Northwest Marine Technology Summit*

**2014** - Second Place, Best Poster, *4th Annual Hydrophiles Water Research Symposium*

## CONFERENCE ACTIVITY

**December 2019** – Neumann, K.C., Zubia, M., Pierce, K., Underhill, W., Green, C. Burkepile, D.E. *Rivers, land use change, and the influence of rivers on reefs*. Talk at the Mo'orea Coral Reef LTER All Investigators Meeting

**November 2019** – Neumann, K.C., Yoo, H., La, D., Burkepile, D.E. *Water-Corers: Low-cost, open source water samplers designed to study ecosystem dynamics in novel ways and with high resolution*. Speed talk presented at the Western Society of Naturalists Meeting

**November 2018** – Neumann, K.C., Burkepile, D.E. *Nutrients from Ridge to Reef on Mo'orea, A High Island in the South Pacific*. Poster presented at the Western Society of Naturalists Meeting

**October 2014** – Neumann, K.C., Wishart, J.R., Colwell, F.S., Thurber, A., Vega-Thurber, R. *Development of high resolution osmotically driven sampling systems to track nutrient flux in shallow marine environments*. Poster presented at the Oregon Sea Grant State of the Coast Conference

**October 2014** – Neumann, K.C., Wishart, J.R., Colwell, F.S., Thurber, A., Vega-Thurber, R. *Development of high resolution osmotically driven sampling systems to track nutrient flux in shallow marine environments*. Poster presented at the Pacific Northwest Marine Technology Summit

**May 2014** – Wishart, J.R., Neumann, K., Edenborn, H.M., Hakala, J.A., Yang, J., Torres, M.E., Colwell, F.S. *Development of osmotic sampling systems for chemical and microbial characterization of Marcellus Shale flowback waters*. Poster presented at the 4th Annual Hydrophiles Water Research Symposium.

## DATA SETS

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**Neumann, K.C.,** Pierce, K., Burkepile, D.E. *Nutrient and sediment flux from major watersheds in Mo'orea, French Polynesia*

**Neumann, K.C.,** Zubia, M., Pierce, K., Burkepile, D.E. *Coral and algal community composition on fringing reefs adjacent to major watersheds in Mo'orea, French Polynesia*

**Neumann, K.C.,** Underhill, W., Green, C., Burkepile, D.E. *Land-use change on Mo'orea, French Polynesia as observed by LANDSAT and Worldview*

**Neumann, K.C.,** Ezzat, L., Pierce, K., Burkepile, D.E. *Microbial diversity in major watersheds on Mo'orea, French Polynesia*

## INVITED TALKS

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**August 2018** - *Connexions montagne-récif à Moorea*, Teavaro Community Center, Mo'orea, French Polynesia

**April 2018** - *My Path to Becoming a Scientist*, Maria Carrillo High School

**December 2016** - *Robotics in Undersea Research and Exploration*, ACE Maritime University, Atlantic Ocean

**December 2016** - *Crowdsourcing Environmental Data*, ACE Maritime University, Atlantic Ocean

**July 2016** - *Bob Ballard and Friends*, The Lobrero Theater, Santa Barbara CA

**February 2016 & 2017** - *Robotics in Undersea Research and Exploration*, The Anacapa School, Santa Barbara CA

**September 2014** - *5 weeks aboard the E/V Nautilus*, Kenwood Elementary School, Kenwood CA

**October 2014** - *Interning aboard the E/V Nautilus*, Linn Benton Community College, Albany OR

## SKILLS

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- Field Operations/Mission Planning
- 3D Design and Modelling
- Electromechanical systems engineering
- Hardware-software integration
- CNC and manual machining, welding and fabrication
- 3D printing and laser cutting
- Audio and video system design and operation
- Video and audio production
- Small boat operation

## CERTIFICATIONS

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- FAA Licensed Unmanned Aerial Vehicle Pilot
- AAUS Scientific Diver/TDI Nitrox Diver/Drysuit Diver
- PADI Rescue Diver (including: CPR/First Aid/AED/Oxygen Provider)
- STCW-95 Personal Survival Techniques

## **MEMBERSHIPS**

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- Association for the Sciences of Limnology and Oceanography
- Marine Technology Society
- IEEE Oceanic Engineering Society
- Western Society of Naturalists
- Divers Alert Network