

SAMANTHA R. CSIK

Santa Barbara, CA. • scsik@ucsb.edu • +1 609 651-2573 • samanthacsik.github.io

EDUCATION

- M.A. in Ecology, Evolution, and Marine Biology (EEMB)** **2020**
University of California, Santa Barbara (UCSB)
- B.S. in Marine Biology, *magna cum laude*** **2016**
Northeastern University (NEU)

DATA SCIENCE & ANALYSIS EXPERIENCE

Data Training Coordinator, National Center for Ecological Analysis & Synthesis (NCEAS) **Aug 2021 - Present**

- Developing and teaching data science curricula for the Master of Environmental Data Science (MEDS) program and data science initiatives across NCEAS and UCSB

Data Science Fellow (ext.), NCEAS **Jan 2021 – Aug 2021**

- Engineered a knowledge model of salmon-related ideas and concepts to improve salmon data discoverability within the KNB data repository
- Facilitated an international effort among salmon researchers, managers, and data scientists to harmonize salmon data across organizations and increase data findability and interoperability using semantic tools

Data Science Fellow, NCEAS **Aug 2020 – Jan 2021**

- Improved the number and quality of semantically-described datasets within the Arctic Data Center (ADC) data repository by (a) expanding and developing ontologies to accurately describe ADC data and (b) semantically annotating 1100+ datasets
- Wrote scripts and developed pipelines in R to facilitate batch updates of Arctic Data Center metadata records with semantic annotations

Thesis Research, Department of EEMB, UCSB **2017 – 2020**

- Developed and conducted a 2-year interdisciplinary research project that examined how temperature alters the physiology and ecology of an important CA fisheries species
- Utilized quantitative analysis, including nonlinear regression analysis, to determine the effects of environmental stressors on animal performance

Graduate Student Researcher, Marine Science Institute, UCSB **2017, 2019**

- Summarized long-term oceanographic data using time series analysis
- Wrote and presented reports based on data analyses to inform future directions of experimental work

LAB & FIELD-BASED RESEARCH EXPERIENCE

Graduate Student Researcher, Marine Science Institute, UCSB **2019**

- Facilitated an undergraduate-led field study involving experimental planning, boating and field logistics, purchasing and deployment of large mesocosm cages, and animal collection and care

<i>Undergraduate Researcher</i> , Marine Science Center, NEU	2015-2016
<ul style="list-style-type: none"> - Surveyed for coral disease across reefs in Bocas del Toro, Panama - Developed an independent research project to study the disease susceptibility of an endangered coral species 	
<i>NSF REU Fellow</i> , Florida International University & Oregon State University	2014
<ul style="list-style-type: none"> - Conducted a 3-month long field study investigating the effects of land-based nutrient runoff and corallivory on coral disease and mortality - Prepared coral microbiome samples for DNA sequencing to identify shifts in coral microbial communities in response to predation by fishes 	
<i>Student</i> , Three Seas Program, NEU	2013-2014
<ul style="list-style-type: none"> - Demonstrated the ability to carry out research projects from start to finish in a year-long series of lab and field-based coursework at the Marine Science Center (NEU) in Nahant, MA, the Smithsonian Tropical Research Institute in Bocas del Toro, Panama, and Friday Harbor Laboratories (University of Washington), in Friday Harbor, WA 	

DATA ANALYSIS WORKSHOPS & COMMUNITIES

Organizations

<i>R-Ladies Santa Barbara</i> , Co-Organizer	Apr 2020 – Present
<i>Tidy Tuesday Coding Club</i> , Participant	2018 – 2019

Workshop Lead/Instructor

<i>Data Science with R & Python</i> , R-Ladies Santa Barbara	Dec 2021
<i>R-Ladies Santa Barbara</i> , Learning Communities Session @ UCSB's Data Science Summit	Dec 2021
<i>RStudio Tips & Tricks (and other keyboard shortcuts)</i> , MEDS Program	Nov 2021
<i>Teach Me How to Google</i> , MEDS Program	Oct 2021
<i>Writing data science-related blog posts for your personal website</i> , MEDS Program	Sep 2021
<i>Customizing your personal website with CSS</i> , MEDS Program	Aug 2021
<i>Data Visualization with ggplot2</i> , R-Ladies Santa Barbara	Aug 2020
<i>Intro to the Tidyverse</i> , R-Ladies Santa Barbara	May 2019

Workshop Assistant/Helper

<i>Reproducible Research Techniques for Synthesis</i> , NCEAS	Nov 2021
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Workshop Participant

<i>SoCal All Hands useR Meeting</i>	Nov 2019
<i>Python Software Carpentry Workshop</i> , UCSB	Jun – Sep 2019
<i>Git & R Software Carpentry Workshop</i> , UCSB	Jan 2019
<i>Respirometry Workshop for Government Scientists, Stakeholders, and Academics</i> , UCSB	2019, 2020

PUBLICATIONS

Peer-Reviewed

Jerde CL, Kraskura K, Eliason EJ, **Csik SR**, Stier AC, Taper ML (2019). Strong evidence for an intraspecific metabolic scaling coefficient near 0.89 in fish. *Frontiers in Physiology*. 10, <https://doi.org/10.3389/fphys.2019.01166>

Thesis

Csik SR. 2020. The effects of temperature on the metabolism and foraging ecology of the California spiny lobster (*Panulirus interruptus*). M.A. Thesis. The University of California, Santa Barbara. Santa Barbara, California, U.S.A. Available at <https://escholarship.org/uc/item/3425x51f>.

Ontologies

Csik SR & Schildhauer MP (2020). The Arctic Report Card Ontology (ARCRC). BioPortal. <https://bioportal.bioontology.org/ontologies/ARCRC/?p=summary>

PRESENTATIONS

Samantha Csik. *It's just all about semantics*. Santa Barbara Women in STEM. Lightning Talks, with a Focus on Software. Mar. 3rd 2021. Oral Presentation. <https://www.sbwomeninstem.org/events/2021/3/3/lightning-talks-event-software>

Samantha Csik. *Analyzing aquatic respirometry data in the California spiny lobster* (*Panulirus interruptus*). Respirometry Workshop for Government Scientists, Stakeholders, and Academics. University of California, Santa Barbara. Apr. 3rd 2020. Oral Presentation.

Samantha Csik, Erika J. Eliason, Adrian C. Stier. *Effects of temperature on the physiology and foraging ecology of the CA spiny lobster* (*Panulirus interruptus*). Western Society of Naturalists. Ensenada, Mexico. Nov. 1st 2019. Oral Presentation.

Samantha Csik & Steve V. Vollmer. *Disease resistance varies by genotype in an endangered Caribbean coral*. Western Society of Naturalists. Pasadena, CA. Nov. 17th 2017. Oral Presentation.

Samantha Csik & Steve V. Vollmer. *Disease resistance varies by genotype in an endangered Caribbean coral*. Honors Thesis. Boston, MA. April 12, 2016. Oral Presentation.

Samantha Csik & Steve V. Vollmer. *Disease resistance varies by genotype in an endangered Caribbean coral*. Research, Innovation, and Science Expo. Northeastern University. April 7, 2016. Poster.

TEACHING & MENTORING

Teaching Assistant

(UCSB) *Conservation, Management and Food Production in Aquatic Systems*;
Behavioral Ecology; *Biology of Fishes*; *Intro to Ecology*; *Intro to Biology*

Fall 2017 – Spring 2020

(NEU) *General Biology*; *Lab & Diving Operations Organizer*, *Three Seas Program*

Spring 2015, 2016

Undergraduate Mentor

Kylie Van De Wyngaerd, Santa Barbara Coastal LTER REU Fellow, UCSB

Summer 2019

<i>Maggie Slein</i> , Ocean Global Change Biology REU Fellow, UCSB	Summer 2019
<i>Vincent Han Lee</i> , Undergraduate Volunteer, UCSB	Winter 2019
<i>Gabbie Baillargeon</i> , Ocean Global Change Biology REU Fellow, UCSB	Summer 2018
<i>Anna Zhou</i> , Women in Science and Engineering, UCSB	2017–2018

COURSEWORK DEVELOPMENT

<i>Biology of Fishes (Lab)</i> , UCSB	Fall 2018
- Lab 1: “What is a Fish?”	
- Lab 5: “Fish Evolution, Taxonomic Keys, and Shannon Diversity”	

PROFESSIONAL SERVICE & OUTREACH

Diversity, Equity & Inclusion Program Participant

<i>Diversity Team</i> , NCEAS	Oct 2021 – Present
<i>Unlearning Racism in Geoscience (URGE)</i> , NCEAS	Jan 2021 – May 2021

Invited Speaker/Panel Member

<i>Teach Me How to Google</i> , Master of Technology Management, UCSB	Jan 2022
<i>Data Semantics for MEDS EDS 213</i> , MEDS Program	Oct 2021
<i>Jr. Oceanographers Summer Camp</i> , Santa Barbara Museum of Natural History Sea Center	Jul 2019
“ <i>Organism Spotlight: Spiny Lobster</i> ”, Santa Barbara Junior High School 8 th Grade Science Class	May 2019
“ <i>Bugs of the Sea...Long Live and Lobster!</i> ”, Santa Barbara Museum of Natural History Sea Center	Oct 2017

Volunteer

<i>World Oceans Day</i> , Santa Barbara Museum of Natural History Sea Center	Jun 2018, 2019
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Campus Organizations

<i>Treasurer</i> , Graduate Student Advisory Committee, UCSB	2017-2019
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Ad-hoc reviewer

<i>Journal of Experimental Marine Biology and Ecology</i>

GRANTS & AWARDS

<i>Graduate Student Association Excellence in Teaching Award Nominee</i> , UCSB	2020
<i>Excellence Scholarship</i> , NEU	2011-2016
<i>Dean’s List</i> , NEU	2011-2016
<i>Provost’s Undergraduate Research & Creative Endeavors Award</i> , NEU	2015
<i>NSF Research Experience for Undergraduates Fellow</i> , Florida International Univ. & Oregon State Univ.	2014

MEMBERSHIPS & AFFILIATIONS

Western Society of Naturalists

2017 - 2020

American Academy of Underwater Sciences (AAUS)

2014 – 2020

TECHNICAL & RESEARCH SKILLS

Software:	R & RStudio, Git/GitHub, Protégé (Ontology Editor), ImageJ, Microsoft Office Suite: Word, PowerPoint, Excel, Google Suite: Google Docs, Google Slides, Google Sheets, Google Forms
Certifications:	AAUS scientific diver, PADI advanced open water diver, CPR, first aid, AED, oxygen administration
Field Procedures:	transect survey techniques, environmental sampling techniques, live specimen handling & husbandry, underwater navigation, boating and dive safety
Lab Procedures:	pipetting, light microscopy, bacterial plating, DNA extractions, PCR, seawater system construction & maintenance, aquatic respirometry, aquatic animal heart rate logger implantation