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PROFESSIONAL PREPARATION

2023 - present	Assistant Professor Texas A&M University, College Station, TX *Department of Oceanography*
2020 - 2022	Postdoctoral Research Investigator Woods Hole Oceanographic Institution, Woods Hole, MA *Marine Chemistry & Geochemistry*, PI: Dr. Julie Huber
2018 - 2020	Postdoctoral Research Fellow, Center for Dark Energy Biosphere Investigations Woods Hole Oceanographic Institution, Woods Hole, MA *Marine Chemistry & Geochemistry*, PI: Dr. Julie Huber
2018	Postdoctoral Research Associate University of Southern California, Los Angeles, CA *Marine Environmental Biology*, PI: Dr. David Caron
2018	Ph.D. Marine Biology and Biological Oceanography University of Southern California, Los Angeles, CA *Marine Environmental Biology*, Dissertation advisor: Dr. David Caron
2011	B.S. Aquatic & Fishery Sciences, Minor: Microbiology University of Washington, Seattle, MA

PUBLICATIONS

1. Alexander, H., **Hu, S. K.**, Krinos, A. I., Pachiadaki, M., Tully, B. J., Neely, C. J., & Reiter, T. (2023). Eukaryotic genomes from a global metagenomic data set illuminate trophic modes and biogeography of ocean plankton. *mBio*, e0167623. DOI: 10.1128/mbio.01676-23
2. **Hu, S. K.**, Smith, A. , Anderson, R., Sylva, S., Setzer, M., Steadmon, M., Frank, K., Chan, E., Lim, D., German , C., Breier, J. A., Lang, S. Q., Butterfield, D., Fortunato, C. S., Seewald, J., & Huber, J. A. (2022). Globally-distributed microbial eukaryotes exhibit endemism at deep-sea hydrothermal vents. *Molecular Ecology*. 32(23). DOI: 10.1111/mec.16745
3. Hammond, S.W., Lodolo, L., **Hu, S.K.,** & Pasulka, A.L. (2022) Methodological 'lenses' influence the characterization of phytoplankton dynamics in a coastal upwelling ecosystem. *Environmental Microbiology Reports.*
4. Cohen, N.R., Alexander, H., Krinos, A.I., **Hu, S.K.**, and Lampe, R.H. (2022) Marine Microeukaryote Metatranscriptomics: Sample Processing and Bioinformatic Workflow Recommendations for Ecological Applications. *Front Mar Sci* 9: 867007.
5. Ollison, G.A., **Hu, S.K.**, Hopper, J.V., Stewart, B.P., Smith, J., Beatty, J.L., et al. (2022) Daily dynamics of contrasting spring algal blooms in Santa Monica Bay (central Southern California Bight). *Environmental Microbiology* 1462-2920.16137.
6. Tully, B.J., Buongiorno, J., Cohen, A.B., Cram, J.A., Garber, A.I., **Hu, S.K.**, *et al.* The Bioinformatics Virtual Coordination Network: an open-source and interactive learning environment. (2021) *Front. Educ. 6:711618*. DOI: 10.3389/feduc.2021.711618
7. **Hu, S.K.**, Herrera, E., Smith, A., Pachiadaki, M.G., Edgcomb, V.P., Sylva, S.P., Chan E.W., Seewald, J.S., German, C.R., & Huber, J.A. (2021) Protistan grazing impacts microbial communities and carbon cycling at deep-sea hydrothermal vents. *Proc Natl Acad Sci USA* 118(29). DOI: 10.1073/pnas.2102674118

8. Ollison G., **Hu, S.K.**, Mesrop, L.Y., Delong, E. & Caron, D. A. (2021) Come Rain or Shine: Depth Not Season Shapes the Protistan Community at Station ALOHA in the North Pacific Subtropical Gyre. *Deep-Sea Res I.* 120, 103494. DOI: 10.1016/j.dsr.2021.103494
9. Coesel, S.N., Durham, B.P., Groussman, R.D., **Hu, S.K.**, Caron, D.A., Morales, R.L., *et al.* (2021) Diel transcriptional oscillations of light-sensitive regulatory elements in open-ocean eukaryotic plankton communities. *Proc Natl Acad Sci USA* 118(12). DOI: 10.1073/pnas.2011038118
10. Krinos, A., **Hu, S.K.**, Cohen, N.R. & Alexander, H. (2021) EUKulele: Taxonomic annotation of the unsung eukaryotic microbes. *J Open Source Softw* 6(57), 2817.DOI: 10.21105/joss.02817
11. Coenen, A.R., **Hu, S.K.**, Luo, E., Muratore, D., and Weitz, J.S. (2020) A Primer for Microbiome Time-Series Analysis. *Front Genet* 11(310). DOI: 10.3389/fgene.2020.00310
12. Boeuf, D., Edwards, B.R., Eppley, J.M., **Hu, S.K.**, Poff, K.E., Romano, A.E., *et al.* (2019) Biological composition and microbial dynamics of sinking particulate organic matter at abyssal depths in the oligotrophic open ocean. *Proc Natl Acad Sci USA* 116(24): 11824–11832. DOI: 10.1073/pnas.1903080116
13. Liu, Z., Mesrop, L.Y., **Hu, S.K.**, & Caron, D.A. (2019) Transcriptome of *Thalassicolla nucleata* Holobiont Reveals Details of a Radiolarian Symbiotic Relationship. *Front Mar Sci* 6(284). DOI: 10.3389/fmars.2019.00284.
14. Pasulka, A., **Hu, S.K.**, Countway, P.D., Coyne, K.J., Cary, S.C., Heidelberg, K.B., & Caron, D.A. (2019) SSU rRNA Gene Sequencing Survey of Benthic Microbial Eukaryotes from Guaymas Basin Hydrothermal Vent. *J Eukaryot Microbiol* 66(4):637-653. DOI: 10.1111/jeu.12711
15. Caron, D.A. & **Hu, S.K.** (2019) Are We Overestimating Protistan Diversity in Nature? *Trends in Microbiology* 27(3): 197–205. DOI: 10.1016/j.tim.2018.10.009
16. **Hu, S.K.**, Liu, Z., Alexander, H., Campbell, V., Connell, P.E., Dyhrman, S.T., *et al.* (2018) Shifting metabolic priorities among key protistan taxa within and below the euphotic zone. *Environ Microbiol* 20: 2865–2879.
17. **Hu, S.K.**, Paige E. Connell, Mesrop, L.Y., & Caron, D.A. (2018) A Hard Day's Night: Diel Shifts in Microbial Eukaryotic Activity in the North Pacific Subtropical Gyre. *Front Mar Sci* 5(251). DOI: 10.3389/fmars.2018.00351
18. Liu, Z., **Hu, S.K.**, Campbell, V., Tatters, A.O., Heidelberg, K.B., & Caron, D.A. (2017) Single-cell transcriptomics of small microbial eukaryotes: limitations and potential. *ISME J.*11: 1282–1285.
19. Connell, P.E., Campbell, V., Gellene, A.G., **Hu, S.K.**, & Caron, D.A. (2017) Planktonic food web structure at a coastal time-series site: II. Spatiotemporal variability of microbial trophic activities. *Deep Sea Res Part I Oceanogr Res Pap* 121: 210–223.
20. **Hu, S.K.**, Campbell, V., Connell, P., Gellene, A.G., Liu, Z., Terrado, R., & Caron, D.A. (2016) Protistan diversity and activity inferred from RNA and DNA at a coastal ocean site in the eastern North Pacific. *FEMS Microbiol Ecol* 92(4). DOI: 10.1093/femsec/fiw050
21. **Hu, S.K.**, Liu, Z., Lie, A.A.Y., Countway, P.D., Kim, D.Y., Jones, A.C., *et al.* (2015) Estimating Protistan Diversity Using High-Throughput Sequencing. *J Eukaryot Microbiol* 62: 688–693. DOI: 10.1111/jeu.12217
22. Lie, A.A.Y., Liu, Z., **Hu, S.K.**, Jones, A.C., Kim, D.Y., Countway, P.D., *et al.* (2014) Investigating Microbial Eukaryotic Diversity from a Global Census: Insights from a Comparison of Pyrotag and Full-Length Sequences of 18S rRNA Genes. *Appl Environ Microbiol* 80(14):4363. DOI: 10.1128/AEM.00057-14

NON-REFEREED PUBLICATIONS

1. Goordial, J., **Hu, S.,** & Tully, B. (2020). C-DEBI NextGen 2019 Early Career perspective on 'What's Next?': Upcoming Challenges and Opportunities. DOI: 10.31219/osf.io/7xkpq
2. Lim, Darlene S.S., Raineault, N.A., Brier, J.A., Chan, E., Chernov, J., Cohen, T., Deans, M., Garcia, A., German, C. R., Hauer, M., **Hu, S.K.,** Huber, J.A., Kane, R., Kobs Nawotniak, S., Lees, D., Lowe, J., Lubetkin, M., Marsh, L., Milesi, V., Miller, M., Miramalek, Z., Saunders, M., Sharif, K., Shields, A., Shock, E., Smith, A.R., and Sylva, S. (2020), SUBSEA 2019 Expedition to the Gorda Ridge, *Oceanography* 33(1), Supplement Pages 36 – 37.

IN PROGRESS PUBLICATIONS (*In Review* | *Accepted*)

1. **Hu, S. K.**, Anderson, R. E., Pachiadaki, M. G., Edgcomb, V. P., Serres, M. H., Sylva, S. P., German, C. R., Seewald, J. S., Lang, S. Q., & Huber, J. A. (2023). Microbial eukaryotic predation pressure and biomass at deep-sea hydrothermal vents: Implications for deep-sea carbon cycling. In *bioRxiv* (2023.08.11.552852). https://doi.org/10.1101/2023.08.11.552852 (*In Review*)
2. Krinos, A. I., Brisbin, M. M., **Hu, S. K.**, Cohen, N. R., Rynearson, T. A., Follows, M. J., Schulz, F., & Alexander, H. (2023). Missing microbial eukaryotes and misleading meta-omic conclusions. In *bioRxiv* (p. 2023.07.30.551153). https://doi.org/10.1101/2023.07.30.551153 (*In Review*)
3. Gleich, S., **Hu, S. K.**, Krinos, A., & Caron, D. A. Protistan community composition and metabolism in the North Pacific Subtropical Gyre: Influences of mesoscale eddies and depth. (*Accepted*)
4. Beckett, S.J., Demory, D., Coenen, A.R., Casey, J.R., Follet, C.L., Dugenne, M., Connell, P., Carlson, Michael C.G., **Hu, S. K.**, et al. Disentangling top-down drivers of mortality underlying diel population dynamics of Prochlorococcus in the North Pacific Subtropical Gyre. In *bioRxiv* doi: https://doi.org/10.1101/2021.06.15.448546 (*Accepted*)
5. Ollison, G. A., **Hu, S. K.**, Hopper, J. V., Stewart, B. P., Beatty, J. L., & Caron, D. A. To Live and Die in LA: Physiology governing Diatom vs Dinoflagellate Bloom and Decline in Coastal Santa Monica Bay. (*In Review*)

PRESENTATIONS & POSTERS

2023	Department of Biology, University of Louisiana at Lafayette, Lafayette, LA (*Invited speaker*)
	Marine Biology & Marine Science Seminar, Galveston, TX (*Invited speaker*)
	Hydrothermal Vents OCNG course, College Station, TX (*Guest lecture*)
2022	Marine Microbes Gordon Research Conference, Les Diablerets, VD, Switzerland (*Invited speaker*)
2021	Department of Oceanography, Texas A&M University, College Station, TX (*Invited speaker*)
	BioGeoSCAPES scoping workshop (*Invited speaker*)
	Deep-Sea Biology Society Symposium, Brest, FR (*Oral presentation*)
	OSU Microbiology Spring Research Symposium, Corvallis, OR (*Invited speaker*)
	Microbiology Society Annual Conference, UK (*Invited speaker*)
	University of Rhode Island GSO Department seminar, Narrangansett, RI (*Invited speaker*)
2020	WHOI Biology Department, Woods Hole, MA (*Invited speaker*)
	WHOI Postdoctoral Symposium, Woods Hole, MA (*Oral presentation*)
	Global Environmental Microbiology Summer Course, Los Angeles, CA (*Guest lecture*)
	WHOI Marine Chemistry & Geochemistry Department, Woods Hole, MA (*Invited speaker*)
	UGA Skidaway Department Seminar, Savannah, GA (*Invited speaker*)
	Ocean Sciences Meeting, San Diego, CA (*Oral presentation*)
2019	C-DEBI Annual Meeting, Monterey, CA (*Oral presentation*)
	WHOI Postdoctoral Symposium, Woods Hole, MA (*Oral presentation*)
2018	C-DEBI Annual Meeting, Monterey, CA (*Poster presentation*)
	Ocean Sciences Meeting, Portland, OR (*Oral presentation*)
	PhD dissertation defense, Los Angeles, CA (*Oral presentation*)
2017	WiSE STEM Bytes Seminar, Los Angeles, CA (*Invited speaker*)
	Biology department seminar, Cal Poly Pomona, CA (*Invited speaker*)
	Ocean Sciences Meeting, Honolulu, HI (*Poster presentation*)
	Graduate student department seminar, Los Angeles, CA (*Oral presentation*)
2016	Graduate student department seminar, Los Angeles, CA(*Oral presentation*)
	A New Age of Discovery: Aquatic Microeukaryotes, Heidelberg, Germany (*Poster presentation*)
2015	San Pedro Ocean Time-series station workshop, Los Angeles, CA (*Oral presentation*)
2014	Graduate student department seminar, Los Angeles, CA (*Oral presentation*)
	Gordon Conference: Marine Microbes, Waltham, MA (*Poster presentation*)
2013	International Congress of Protistology, Vancouver, B.C. (*Poster presentation*)

MENTORSHIP

PhD advisement	**Undergraduate**	**Committee member**
Alexis Adams: July 2023 – present	Collin Hebner: Sept 2023 – present	Demi Carballosa (*Masters*)
Kayla Nedd: July 2023 – present	Erica Herrera – May-August 2019	

TEACHING

2023 **The Blue Planet** (OCNG 251) – Introductory Oceanography course for undergraduate non-Oceanography majors at Texas A&M University. Fall semester 2023.

Introduction to R programming language – 1-day workshop introduction to R programming. Open to graduate students in Oceanography at Texas A&M University.

2021 **Advanced data visualization in R** – One day workshop open for technical staff, scientists, students, and postdocs at WHOI. Taught methods in data visualization and ways to make figures in R.

Introduction to R programming language – 4-day workshop introduction to R programming. Open to summer students and interns, and students and postdocs at WHOI.

Certified Software Carpentries Instructor – Completed training specific to teaching bioinformatics and coding through Software Carpentries. Teaches workshops in the R programming language and application of R for ecological studies at WHOI.

2020 **Guest lecturer MESA Community College** – Introduction to deep-sea hydrothermal vents and hydrothermal vent food web ecology.

Instructor for Bioinformatics Virtual Coordination Network – Lead instructor and organizer for the R coding topic of the BCVN effort. BVCN was launched at the start of the COVID-19 pandemic, when in-person work at research labs was suspended. BVCN is an open-access online educational resource for learning computational methods and bioinformatics.

2013 **Teaching Assistant** – Introduction to Microbiology, USC

2013 **NSF REU Mentor** – Mentor for undergraduate students, USC

2012 **Teaching Assistant** – Organismal Biology and Evolution, USC

PROFESSIONAL ACTIVITIES & SERVICE

2023 **NSF Biological Oceanography –** Panel member for peer reviewing proposals submitted to NSF's Biological Oceanography program.

2021 **URGE Leader & DEI actions at WHOI** – Led discussion group for Unlearning Racism in the Geosciences to deepen the community's understanding of racism on historically excluded people in STEM. Developing department and institution-wide anti-racist policies and strategies at WHOI.

2020 **Ocean Sciences Meeting session co-chair** – Primary liaison for session entitled: Coupling meta'omics and biochemical measurements to understand trophic strategies or physiological adaptations among marine organisms (micro- to macro-)

2019 **C-DEBI Early Career Workshop** – Organizer and participant for workshop devoted to enhancing early career scientists' success related to deep-sea research. Outcomes include white paper addressing challenges in deep biosphere research and proposals.

2019 **NSF Ideas Lab EukHiTS** – Workshop participant on *Research Frontiers and Grand Challenges in Microbial Eukaryote -Omics*. Outcomes: lead author and co-author on opinion and review manuscripts, respectively.

2018 **Ecological Dissertations in Aquatic Sciences** – Participant, microbial group leader. Outcomes: lead author and co-author on perspective and review manuscripts, respectively.

2014-present **Invited peer reviewer** – including: *ISME Journal, Nature Communications, Molecular Ecology, Environmental Microbiology, Aquatic Microbial Ecology, mSystems, Deep Sea Research II, & Limnology & Oceanography*

2017	**WiSE Guest Speaker** – Presenter and panelist for Women in STEM group, USC
2017-2019	**Protocols.io** – Ambassador, protist working group, & contributor
2016-2018	**Co-founder & Chair Grad Student Association** – USC
2015- 2017	**Graduate student faculty liaison** – USC
2016	**Invited Speaker** – Yorkdale Elementary, LA
2015	**Invited Speaker** – Panelist for careers in STEM; Port of Los Angeles High School, LA
	Presenter – Introduction to microscopy and protistology; Chattanooga High School, USC
2011-2012	**Marine Technologist I** – Scientific diver – UW SAFS, Seattle, WA
2010-2011	**Research Intern –** Northwest Fisheries Science Center, NOAA, Seattle, WA
2009-2010	**Research Intern** – Fisheries Acoustics Research Lab, UW SAFS, Seattle, WA

SELECTED GRANTS, AWARDS, & FELLOWSHIPS

2023	College of Arts and Sciences Undergraduate Research Program, Texas A&M University PI, 01/01/2024 – 08/01/2024 ($2,784) *Internal proposal*: Exploring the elusive microeukaryotes of the deep ocean College of Arts and Sciences Undergraduate Research Program, Texas A&M University PI, 08/14/2023-12/31/2023; Co-PIs: S. Coy, L. Campbell ($2,332) *Internal proposal*: Illuminating viral dark matter: assaying RNA virus infection rates in the ocean Microscopy and Imaging Center, Texas A&M University PI, 03/01/2023-03/01/2024 ($600) *Internal proposal:* Seek & seq: Exploring novel protistan biology & morphology at deep-sea hydrothermal vents
2022	NSF OCE – PI, 06/01/2022 – 06/30/2024 ($341,325) *Proposal title:* Collaborative Research: Microbes need frenemies: unveiling microbial relationships with protists and viruses that support deep-sea hydrothermal vent food webs
2020	International Society for Evolutionary Protistology Prize for Creativity in Online Presentation (*$200*) – ISEP
2019	NSF OCE – Named Postdoctoral Investigator (current funding) *Proposal title:* Characterizing and quantifying the impact of phagotrophic protists at hot spots of primary production at Axial Seamount
2019	Schmidt Ocean Institute (*Ship time*) – Co-PI *Proposal title:* Characterizing and quantifying the impact of phagotrophic protists at hot spots of primary production at deep-sea hydrothermal vents
2018-2020	C-DEBI Postdoctoral Fellowship (*$58,000/year*) – WHOI
2018	Katrina J. Edwards Memorial Dissertation Award (*$500*) – USC
2017-2018	Tyler Environmental Fellowship for PhD students (*$28,500*) – USC
2016-2017	WiSE Merit Award for Current Doctoral Students (*$1,500*) – USC
2013-2016	WiSE Travel Grants (Total *$1,500*) – USC
2014	Graduate Student Travel Grant (*$500*) – USC
2014	Honorable Mention – NSF Graduate Research Fellowship Program
2013	USC Wrigley Summer Fellowship – WIES, Catalina Island, CA
2012	Outstanding Teaching Assistant Award – USC (General Biology)
2011	Undergraduate Commencement speaker – UW SAFS, Class of 2011

MAJOR FIELD OPERATIONS

2023	**PROTATAX (Protists at Axial Seamount**) – RV Thomas G. Thompson As Co-Chief Scientist: Deployment of instrumentation to carry out *in situ* grazing experiments with the miniSID. ROV Jason dives to explore Axial Seamount and collect samples for shipboard experiments and vent fluid collection for downstream metagenomics and metatranscriptomics. Support: NSF
2022	**PROTATAX (Protists at Axial Seamount**) – RV Thomas G. Thompson Deployment of instrumentation to carry out *in situ* grazing experiments with the miniSID. ROV Jason dives to explore Axial Seamount and collect samples for shipboard experiments and vent fluid collection for downstream metagenomics and metatranscriptomics. Support: NSF *Cruise not completed, due to COVID-19.*
2020	**Mid-Cayman Rise Hydrothermal Vent** – RV Atlantis Exploration of Von Damm and Piccard hydrothermal vent fields using ROV Jason. Support: NSF, NASA, WHOI
2019	**Gorda Ridge Hydrothermal Vent** – EV Nautilus Investigated hydrothermal vent associated microbial populations using ROV Hercules. Support: NASA SUBSEA, NOAA, WHOI, URI, OET
2018	**Daily Santa Monica Pier Sampling –** Santa Monica, CA Planned, organized, and led daily field sampling for several weeks to monitor spring-time coastal algal blooms. Support: NSF
2018	**Hawaii Ocean Time-series #300** – RV Kilo Moana Conducted plankton tows and sample collection to sort single cells belonging to the Rhizaria group of microbial eukaryotes. Support: Simons Foundation
2015	**Hawaii Ocean Time-series #273** – RV Kilo Moana Participated in regular monthly sampling for the long-running time series program at station ALOHA. Conducted size fractionation and water sample collection to study the seasonal and spatial changes of microbial eukaryotic populations in the oligotrophic ocean. Support: Simons Foundation
2012-2014	**Dimensions of Biodiversity** – RV Yellowfin & Wrigley Marine Science Center Planned, organized, and led seasonal operations to conduct grazing and growth experiments and molecular surveys of microbial eukaryotes at the Port of Los Angeles, the SPOT station, and Catalina Island. Support: NSF
2012-2018	**San Pedro Ocean Time-series program** – RV Yellowfin Planned, organized, and led monthly operations at the coastal time-series site (SPOT station). Monthly cruises sampled the entire water column mid-way between the Port of Los Angeles and Catalina Island. Support: NSF