Ved N. Bhoot

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2020-26	Ph.D. Earth System Science, University of California, Irvine
	Advisor: Dr. Michael L. Goulden
2020-25	Graduate Student Researcher, University of California Irvine
2021-24	Teaching Assistant, University of California, Irvine
	(Fall 2021, Winter 2022, Spring 2023, Spring 2024)
2022	M.S. Earth System Science, University of California, Irvine
2019-20	Certificate, Data Science, University of California, Berkeley Extension
2018-20	Research Assistant, Lawrence Berkeley National Laboratory
2018	Intern, Cal Energy Corps, Lawrence Berkeley National Laboratory
2017-18	Volunteer Undergraduate Research Assistant, Lawrence Berkeley National Laboratory
2016-18	B.A. Environmental Earth Science, University of California, Berkeley
2014-16	A.A. Natural Sciences, Pasadena City College

PUBLICATIONS

Bhoot, V.N., Kim, J.E., Randerson, J.T., & Goulden, M.L.. (2025). Declines in conifer recovery and forest loss from four decades of wildfire in California. *ESS Open Archive*. https://doi.org/10.22541/essoar.175130438.89588120/v1 (Preprint) (In revision in *Journal of Geophysical Research, Biogeosciences)*

Wang, J. A., Goulden, M. L., Norlen, C. A., **Bhoot, V.**, Coffield, S., & Randerson, J. T. (2024). Rising forest exposure and fire severity from climate warming amplify tree cover losses from wildfire in California. *Environmental Research Letters*, *19*(11), 114087. https://doi.org/10.1088/1748-9326/ad86cf

Cheng, Y., **Bhoot, V.N.**, Kumbier, K. *et al.* (2021). A novel random forest approach to revealing interactions and controls on chlorophyll concentration and bacterial communities during coastal phytoplankton blooms. *Sci Rep* 11, 19944. https://doi.org/10.1038/s41598-021-98110-9

IN PREPARATION/SUBMITTED

Bhoot, V.N., Kim, J.E., Randerson, J.T., & Goulden, M.L.. Fuel driven changes to wildfire risk and wildfire-vegetation feedbacks across California. (*in preparation*)

Norlen, C.A., **Bhoot, V.N.**, Randerson, J.T., Goulden, M.L.. How is forest drought resilience changing? A mechanistic framework for predicting dieback risk. (*submitted to Global Change Biology*)

CONFERENCES/WORKSHOPS

ORAL

Bhoot, V.N.. (2025). Comparison of observed vs simulated outcomes of wildfire on a burned fuel treatment in 2020. *iFireNet 2025 Workshop* (Talk)

Bhoot, V.N., Kim, J.E., Randerson, J.T., & Goulden, M.L.. (2024). Post-fire recovery of Conifers and Hardwoods in California from 1986-2022. *American Geophysical Union 2024 Fall Meeting* (Talk)

Bhoot, V.N., Kim, J.E., Randerson, J.T., & Goulden, M.L.. (2024). Post-fire recovery of Conifers and Hardwoods in California from 1986-2022. *Annual Meeting of the Ecological Society of America* (Talk)

Bhoot, V.N.. (2023). Post-fire Recovery of Vegetation throughout California using Machine Learning. *UCI CLEWS Group* (Invited Talk)

POSTER

Bhoot, V., Goulden, M., Hemes, K., Norlen, C., & Wang, J.. (2021). Can Machine Learning Predict Post-Fire Vegetation Recovery? *American Geophysical Union 2021 Fall Meeting* (Poster)

Bhoot, V., Cheng, Y., Newcomer, M.E.. (2019). Uncovering Nutrient Interactions Driving Coastal Algal Blooms in Santa Cruz with Iterative Random Forests. *American Geophysical Union 2019 Fall Meeting* (Poster)

SKILLS

Programming – R, MATLAB, Python, High Performance Computing

GUI software – QGIS, ArcPro, Forest Vegetation Simulator

Fire focused – FlamMap, RANDIG command line fire simulator

TEACHING

ESS 184 – Understanding the Carbon Cycle for Climate Change solutions Spring 2024

- Led lecture on the cap-and-trade program, and forest carbon offsets.

ESS 40C – Earth System Physics Spring 2023

ESS 70B – Sustainable Food and Water Systems Winter 2022

ESS 51 – Land Interactions Fall 2021

LEADERSHIP

Graduate Representative 2022-2023

- Served as the liaison for the graduate student body in the Earth System Science department.
- Planned and led annual retreat for graduate students in the department.
- Hosted department graduate student town halls and produced an annual report on outcome, program suggestions, and state of the graduate student body to be presented in person to department faculty and administration.

Half-Baked Co-host 2021-2022

- Hosted a weekly seminar series for graduate students to give a talk on their research.

SERVICE

Mentor – H199A Undergraduate Honors Research 2025-current

- Mentored rising undergraduate senior for an honors thesis project to compare forest biomass grown from the current state of the art vegetation growth model (FVS) to compare with remote sensing derived biomass data from the Center for Ecosystem and Climate Solutions (CECS). Helped student develop the idea and provided technical assistance for conducting the analysis and running FVS.

Mentor – Amity High School Science Research Program 2021-2022

- Mentored high school sophomore for statistical analysis of climate effects on wildfire severity.
- Student led poster, “Effects of Climate Change on Wildfire Severity from the 1950s to the Near Future in the Pacific Southwest”

REVIEW

- IOP Environmental Research Letters (3)
    - Certified IOP Trusted Reviewer
- Geophysical Research Letters (1)
- AGU Advances (1)