

Ivano W. Aiello — Curriculum Vitae

Moss Landing Marine Laboratories · San José State University

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Education

- Postdoctoral Scholar, Sedimentology — University of California, Santa Cruz, 1998–2000
- Ph.D., Sedimentology — University of Bologna, 1997
- M.S., Earth Sciences — University of Florence, 1992

Professional Appointments

- 2023–present — Chair, Moss Landing Marine Laboratories (SJSU)
- 2021–2023 — Interim Director, Moss Landing Marine Laboratories (SJSU)
- 2015–present — Professor, Geological Oceanography, MLML (SJSU)
- 2015–2021 — Chair, Moss Landing Marine Laboratories (SJSU)
- 2011–2015 — Associate Professor, Geological Oceanography, MLML (SJSU)
- 2006–2011 — Assistant Professor, Geological Oceanography, MLML (SJSU)
- 2003–2006 — Adjunct Professor of Geology, MLML at San José State University (SJSU)
- 2002–2010 — Visiting Scientist, Institute of Marine Sciences, UC Santa Cruz (UCSC)
- 2001–2002 — Lecturer, Department of Ocean & Marine Sciences, UCSC
- 1997–2000 — Field Geologist, Italian Geological Survey
- 1995–1999 — Lecturer, Earth Sciences Department, University of Florence, Italy
- 1992–1996 — Field Geologist, GeoEco – Geologic Engineering, Florence, Italy

Awards

- 2015–2016 — Hanse-Wissenschaftskolleg (Institute for Advanced Study) Fellow, Delmenhorst/Bremen, Germany
- 2011 — Early Career Investigator Award, San José State University Research Foundation
- 2010–2011 — Distinguished Lecturer, Consortium for Ocean Leadership (USSSP Distinguished Lecturer series)

Grants & Sponsored Research

Active & recent (2019–2025)

- Elkhorn Slough Foundation — Elkhorn Slough Project (Amendment no. 7) — 03/01/2025–06/30/2026 — Direct \$31,756; Total \$40,000 — PI: Ivano Aiello
- CSU Monterey Bay — Seafloor Mapping of the Monterey Canyon's Head during the 2024 El Niño — 01/25/2024–08/25/2025 — Direct \$7,359; Total \$7,359 — PI: Ivano Aiello

- CA Dept. of Transportation (Caltrans) — D4_MRN-1 Bolinas Lagoon SLR Adaptation Planning Study — 04/29/2024–02/28/2026 — Direct \$583,336; Total \$679,686 — PI: Kevin O’Connor Clark (SJSU); co-PI: Ivano Aiello (SJSU)
- Elkhorn Slough Foundation — Advanced Geospatial & Geotechnical Services and Materials for Estuarine Restoration — 05/22/2019–06/30/2025 — Direct \$123,016; Total \$155,000 — PI: Ivano Aiello
- Elkhorn Slough Foundation — ESNERR History & Topography to Improve Decision-making for Estuary Restoration (HiTIDER) — 07/01/2021–06/30/2024 (Phase 1) — Direct \$279,462; Total \$352,122 — PI: Ivano Aiello (program later expanded to cumulative Direct \$669,437; Total \$769,202)
- Columbia University — Global Synthesis of Timing & Depth of Biosilica Mineralization in Cenozoic Marine Sediments (DSDP-ODP-IODP legacy cores) — 08/01/2022–07/31/2024 — Direct \$23,531; Total \$35,885 — PI: Ivano Aiello
- Columbia University — Participation of Scientist Based in US Institutions in IODP Expedition 385 — 2019–2020 — Total \$58,461.75 — PI: Ivano Aiello
- Elkhorn Slough Foundation — Advanced Geospatial & Geotechnical Services — 2019–2020 — Total \$155,000 — PI: Ivano Aiello

Earlier awards (pre-2019)

- NSF — Acquisition of an X-Ray Diffractometer — 2018–2019 — Total \$144,158 — PI: Ivano Aiello
- Rhode Island Dept. of Environmental Management — Thin-Layer Sediment Placement (NERRS): Adaptation Strategy to Enhance Coastal Marsh Resilience — 2017–2019 — Total \$30,000 — PI: Ivano Aiello
- Columbia University — Participation of Scientist Based in US Institutions in IODP Expedition 363 — 2016–2019 — Total \$39,130 — PI: Ivano Aiello
- California Marine Sanctuaries Foundation — Beach Recovery & Sediment Budget in Southern Monterey Bay NMS after 2015–2016 El Niño — 2016–2017 — Total \$20,000 — PI: Ivano Aiello
- UNC Chapel Hill — Characterizing Subseafloor Life & Environments in the Guaymas Basin — 2015–2017 — Total \$10,180 — PI: Ivano Aiello
- Elkhorn Slough Foundation — GHG: MLML GIS 2015 – Minhoto Restoration — 2015–2019 — Total \$39,131 — PI: Ivano Aiello
- UC San Diego / California Sea Grant #C0100100 — TLS Surveys of Rocky Intertidal Habitats (N. California) — 2014–2016 — Total \$16,000 — PI: Ivano Aiello
- UC San Diego #42120100 — SIO Cruise in the Atlantic Ocean — 2013 — Total \$14,811 — PI: Ivano Aiello
- Ocean Leadership #SA13-31 — The “Mini-JR” Project: Discovering the Seafloor with UNOLS Vessels — 2012–2013 — Total \$2,174 — PI: Ivano Aiello (w/ S. Bartl)
- NSF OCE #1061074 — Basalt-Hosted Biosphere at North Pond (ridge-flank microbial observatory) — 2011–2016 — Total \$271,304 — co-PI: Ivano Aiello
- Ocean Leadership #BA-10 — Post-Expedition Analysis (PEA) — 2011–2013 — Total \$14,934 — PI: Ivano Aiello
- San Francisco Estuary Institute #1014 — RMP 2012 Grain-Size Analysis — 2011–2012 — Total \$7,060 — PI: Ivano Aiello
- San Francisco Estuary Institute #994 — 2011–2012 — Total \$900 — PI: Ivano Aiello
- NSF OCE #0962974 — Expedition 323 Objective Research on Bering Sea Paleoceanography — 2010–2013 — Total \$117,930 — PI: Ivano Aiello (with Ravelo, Cook, Mix, Lund, Alvarez-Zarikian)

- California Sea Grant — Rhodolith Beds at Catalina Island — 2010–2011 — Total \$34,800 — co-PI: Ivano Aiello (PI: D. Steller)
- NOAA Recovery Act — Restoration of Elkhorn Slough — 2010–2011 — Project total \$3.9M — co-PI: Ivano Aiello (with B. Largay)
- SFEI — RMP Grain-Size Analysis (S&T) — 2010 — Total \$5,572–\$6,758 (two line items) — PI: Ivano Aiello
- NSF-MRI #0923446 — Hitachi S-3400N-II SEM & INCA E250 EDX — 2009–2010 — Total \$204,485 — PI: Ivano Aiello (with M. Graham, J. Geller, K. Coale)
- Ocean Leadership — IODP Bering Sea Expedition — 2009 — Total \$23,475 — PI: Ivano Aiello
- CICEET — Rapid Paleoecological Assessments & Geospatial Modeling for Salt-Marsh Conservation — 2009–2011 — Total \$280,615 — co-PI: Ivano Aiello (with Watson, Wasson, Van Dyke, Wheatcroft, Largay)
- Monterey Peninsula Water Management District — Los Padres Reservoir High-Resolution Topographic Survey — 2008–2009 — Total \$16,000 — PI: Ivano Aiello
- The Nature Conservancy #5076 — TLS to Document Wildfire Effects on Slope Stability/Stream Morphology — 2009–2010 — Total \$9,500–\$10,000 — PI: Ivano Aiello
- ACS-PRF #45387-B2 — Neogene Seep Structures & Fluid Flow/Tectonics in a Transform Margin — 2006–2010 — Total \$35,649–\$50,000 — PI: Ivano Aiello
- ACS-PRF (Type-G) #40226-GB2 — Sedimentary “Habitats” for Microbial Activity (EEP & Peru Margin) — 2003–2005 — Total \$35,000 — PI: Ivano Aiello
- JOI/USSSP #F001716 — Lithologic Variability & Microbial Activity (ODP Leg 201) — 2002 — Total \$15,300–\$15,291 — PI: Ivano Aiello

Gifts/Donations (SJSU Tower Foundation)

- Battery-fire rapid response (Elkhorn Slough monitoring) — Jan–Mar 2025 — Donations >\$200,000 to support immediate post-fire monitoring and team assembly

Publications

- 2025 — Aiello, I.W., Höfig, T.W., Riboulleau, A., Teske, A.P., Lizarralde, D., Ash, J.L., Bojanova, D.P., Buatier, M.D., Edgcomb, V.P., Galerne, C.Y. and Gontharet, S., 2024. Mineralization kinetics of biosiliceous sediments in hot subseafloors. *Geochimica et Cosmochimica Acta*, 380, pp.71-82.
<https://doi.org/10.1016/j.gca.2024.07.005>
- 2025 — Mara, P., Beaudoin, D., Aiello, I., Morono, Y., Geller-McGrath, D., Edgcomb, V.P. and Teske, A., 2024. Deep subseafloor sediments in Guaymas Basin harbor cosmopolitan microbiota and traces of hydrothermal populations. *Communications Earth & Environment*, 5(1), p.505.
<https://doi.org/10.1038/s43247-024-01662-7>
- 2025 — Galerne, C., Cheviet, A., Kahl, W.A., Wiggers, C., Bach, W., Neumann, F., Buatier, M., Höfig, T.W., Lizarralde, D., Teske, A., Peña-Salinas, M., Karstens, J., Böttner, C., Berndt, C., Aiello, I.W., Marsaglia, K.M., Gontharet, S., Kuhnert, H., Stock, J., Negrete-Aranda, R., Zhang, J., Kopf, A. Sill stacking in subseafloor unconsolidated sediments and control on sustained hydrothermal systems: evidence from IODP drilling in the Guaymas Basin, Gulf of California. *Journal of Geophysical Research: Solid Earth* 130(3): e2024JB030354. <https://doi.org/10.1029/2024JB030354>
- 2024 — Höfig, T.W., Riboulleau, A., Teske, A.P., Lizarralde, D., Ash, J.L., Bojanova, D.P., Buatier, M.D., Edgcomb, V.P., Galerne, C.Y., Gontharet, S., Aiello, I.W. Mineralization kinetics of biosiliceous sediments in

hot subseafloors. *Geochimica et Cosmochimica Acta* 380: 71–82.

<https://doi.org/10.1016/j.gca.2024.07.005>

- 2024 — Mara, P., Beaudoin, D., Aiello, I., Morono, Y., Geller-McGrath, D., Edgcomb, V.P., Teske, A. Deep subseafloor sediments in Guaymas Basin harbor cosmopolitan microbiota and traces of hydrothermal populations. *Communications Earth & Environment* 5: 505. <https://doi.org/10.1038/s43247-024-01662-7>
- 2023 — Greene, H.G., Maher, N., Endris, C., Aiello, I. Mapping offshore anthropogenic infrastructure associated with Cannery Row, Monterey Peninsula, California, USA. *Continental Shelf Research* 266: 105068. <https://doi.org/10.1016/j.csr.2023.105068>
- 2023 — Cheviet, A., Buatier, M., Choulet, F., Galerne, C., Riboulleau, A., Aiello, I., Marsaglia, K.M., Höfig, T.W. Contact metamorphic reactions and fluid–rock interactions related to magmatic sill intrusion in the Guaymas Basin. *European Journal of Mineralogy* 35(6): 987–1007. <https://doi.org/10.5194/ejm-35-987-2023>
- 2023 — Gong, L., Holbourn, A., Kuhnt, W., Opdyke, B., Zhang, Y., Ravelo, A.C., Zhang, P., Xu, J., Matsuzaki, K., Aiello, I., Beil, S. Middle Pleistocene re-organization of the Australian Monsoon. *Nature Communications* 14: 2002. <https://doi.org/10.1038/s41467-023-37639-x>
- 2023 — Zhang, Y., Andrade, T., Ravelo, A.C., Gong, L., Holbourn, A., Connock, G., Liu, X.L., Aiello, I.W. Aridification of northwest Australia and nutrient decline in the Timor Sea during the 40 kyr world. *Paleoceanography and Paleoclimatology* 38(10): e2023PA004683.
- 2022 — Neumann, F., Negrete-Aranda, R., Harris, R.N., Contreras, J., Galerne, C.Y., Peña-Salinas, M.S., Zhuang, G., Aiello, I.W. Heat flow and thermal regime in the Guaymas Basin, Gulf of California: estimates of conductive and advective heat transport. *Basin Research* 34(6): 2299–2320. <https://doi.org/10.1111/bre.12755>
- 2022 — Drake, M.K., Aiello, I.W., Ravelo, A.C. Gamma-ray attenuation bulk density as an indicator of diatom valve abundance and fragmentation in Pleistocene biosiliceous sediments of the Bering Sea. In: *Understanding the Monterey Formation and Similar Biosiliceous Units across Space and Time (GSA SP 556)*, 301–321. [https://doi.org/10.1130/2022.2556\(13\)](https://doi.org/10.1130/2022.2556(13))
- 2022 — Donham, E.M., Hamilton, S.L., Aiello, I., Price, N.N., Smith, J.E. Consequences of warming and acidification for the temperate articulated coralline alga *Calliarthron tuberculosum*. *Journal of Phycology* 58(4): 517–529. <https://doi.org/10.1111/jpy.13272>
- 2021 — Peng, N., Dang, H., Wu, J., Aiello, I.W., Jian, Z. Tectonic and climatic controls on the Plio-Pleistocene evolution of sediment discharge from Papua New Guinea. *Marine Geology* 441: 106627. <https://doi.org/10.1016/j.margeo.2021.106627>
- 2021 — Knudson, K.P., Ravelo, A.C., Aiello, I.W., Knudson, C.P., Drake, M.K., Sakamoto, T. Causes and timing of recurring subarctic Pacific hypoxia. *Science Advances* 7(23): eabg2906. <https://doi.org/10.1126/sciadv.abg2906>
- 2018 — Fildani, A., Clark, J., Covault, J.A., Power, B., Romans, B.W., Aiello, I.W. Muddy sand and sandy mud on the distal Mississippi fan: implications for lobe depositional processes. *Geosphere* 14(3): 1051–1066.
- 2014 — Meister, P., Chaplign, B., Picard, A., Meyer, H., Rettenwander, D., Vogt, C., Aiello, I.W. Early diagenetic quartz formation at a deep iron oxidation front in the Eastern Equatorial Pacific—A modern analogue for banded iron/chert formations? *Geochimica et Cosmochimica Acta* 137: 188–207. <https://doi.org/10.1016/j.gca.2014.03.035>

- 2013 — Schlung, S.A., Ravelo, A.C., Aiello, I.W., Andreasen, D.H., Cook, M.S., Drake, M., Takahashi, K. Millennial-scale climate change response in the subarctic NW Pacific. *Paleoceanography* 28(3): 579–593. <https://doi.org/10.1002/palo.20012>
- 2012 — Aiello, I.W., Ravelo, A.C. Evolution of marine sedimentation in the Bering Sea since the Pliocene. *Geosphere* 8(6): 1231–1253. <https://doi.org/10.1130/GES00710.1>
- 2011 — Gamage, K., Screaton, E.J., Bekins, B.A., Aiello, I.W. Permeability–porosity relationships of subduction zone sediments. *Marine Geology* 279: 19–36. <https://doi.org/10.1016/j.margeo.2010.10.010>
- 2011 — Takahashi, K., Ravelo, A.C., Zarkian, C.A., Aiello, I.W., IODP Expedition 323 Scientists. IODP Expedition 323—Pliocene and Pleistocene paleoceanographic changes in the Bering Sea. *Scientific Drilling* 11: 4–13. <https://doi.org/10.2204/iodp.sd.11.01.2011>
- 2010 — Aiello, I.W., Bekins, B.A. Milankovitch-scale correlations between deeply buried microbial populations and biogenic ooze lithology. *Geology* 38(1): 79–82. <https://doi.org/10.1130/G30207.1>
- 2010 — Paull, C.K., Ussler III, W., Holbrook, W.S., Hill, T.M., Hafliadason, H., Winters, W., Lorenson, T., Aiello, I., Johnson, J.E., Lundsten, E. The tail of the Storegga Slide. *Sedimentology* 57(6): 1409–1429. <https://doi.org/10.1111/j.1365-3091.2010.01150.x>
- 2010 — Reed-Sterrett, C.D., Dekens, P.S., White, L.D., Aiello, I.W. Cooling upwelling regions along the California margin during the early Pliocene. *Stratigraphy* 7(2–3): 141–150.
- 2010 — Ravelo, A.C., Takahashi, K., Aiello, I.W., Expedition 323 Science Party. IODP Preliminary Report 323: Bering Sea Paleoceanography. <https://doi.org/10.2204/iodp.pr.323.2010>
- 2009 — Meister, P., Bernasconi, S., Aiello, I.W., Vasconcelos, C., McKenzie, J.A. Depth and controls of Carboxite precipitation in bioturbated sediments (ODP Leg 201; DSDP Leg 68). *Sedimentology*.
- 2008 — Aiello, I.W., Hagstrum, J.T., Principi, G. Peri-equatorial paleolatitudes for Jurassic radiolarian cherts of Greece. *Tectonophysics* 448: 33–48.
- 2007 — Aiello, I.W. Post-Glacial Evolution of Coastal Environments. In: *California Prehistory* (Jones & Klar, eds.). Altamira Press.
- 2006 — Aiello, I.W., Kellett, K., Jørgensen, B.B. Sedimentology of open-ocean biogenic sediments from ODP Leg 201 (Sites 1225, 1226). In: *ODP Scientific Results 201*.
- 2005 — Aiello, I.W. Fossil seep structures of the Monterey Bay region and tectonic/structural controls on fluid flow in an active transform margin. *Palaeogeography, Palaeoclimatology, Palaeoecology* 227: 124–142. <https://doi.org/10.1016/j.palaeo.2005.04.027>
- 2005 — Parkes, R.J., Webster, G., Barry, A.C., Weightman, A.J., Newberry, C.J., Ferdelman, T., Kallmeyer, J., Jørgensen, B.B., Aiello, I.W., Fry, J.C. Deep sub-seafloor prokaryotes stimulated at interfaces over geological time. *Nature* 436: 390–394.
- 2004 — D'Hondt, S., Jørgensen, B.B., Miller, D.J., Aiello, I.W., ODP Leg 201 Scientists. Distributions of metabolic activities in deep subseafloor sediments. *Science* 306: 2216–2221.
- 2001 — Aiello, I.W., Garrison, R.E., Moore, J.C., Kastner, M., Stakes, D.S. Anatomy and origin of carbonate structures in a Miocene cold-seep field. *Geology* 29(12): 1111–1114. [https://doi.org/10.1130/0091-7613\(2001\)029<1111:AAOCS>2.0.CO;2](https://doi.org/10.1130/0091-7613(2001)029<1111:AAOCS>2.0.CO;2)

Books / Edited Volumes

- 2022 — Aiello, I.W., Barron, J.A., Ravelo, A.C. (eds.). *Understanding the Monterey Formation and Similar Biosiliceous Units across Space and Time*. Geological Society of America Special Paper 556. <https://doi.org/10.1130/2022.2556>

Technical Reports & Field Guides

- 2014 — Heuer, V.B., Aiello, I.W., Elvert, M., et al. Report & preliminary results of R/V POSEIDON cruise POS450 (DARCSEAS II). MARUM Reports 305, Univ. Bremen, 42 pp.
- 2013 — Aiello, I.W., Behl, R. The Monterey Formation in the Monterey–Carmel Valley area, California. Pacific Sections AAPG/SEPM/SPE field guide.
- 2012 — Wasson, K., Watson, E.B., Van Dyke, E., Hayes, G., Aiello, I.W. Rapid paleoecological assessments & geospatial modeling for marsh conservation. Elkhorn Slough Technical Report Series 2012:1.
- 2012 — Aiello, I.W., Endris, C. High-resolution geomorphologic surveys of estuarine habitats at Elkhorn Slough, California. ESNERR technical report.

Cruise Reports & Expedition Volumes

- Proceedings of the IODP, Volume 385 — Guaymas Basin: Tectonics & Biosphere (Expedition 385) — Expedition Report. Shipboard Science Party including I.W. Aiello (Expedition: Sept–Nov 2019)
- Proceedings of the IODP, Volume 363 — Western Pacific Warm Pool (Expedition 363) — Expedition Report. Shipboard Science Party including I.W. Aiello (Expedition: Oct–Dec 2016)
- IODP Preliminary Report 323 — Bering Sea Paleooceanography (Expedition 323) — Science Party including I.W. Aiello (Expedition: Jul–Sep 2009)
- ODP Leg 201 — Peru Margin & Eastern Equatorial Pacific — Initial Reports / Scientific Results volumes; contributions as Shipboard Sedimentologist I.W. Aiello (Leg sailed Jan–Mar 2002)
- IODP Expedition 337 — Shimokita Coalbed System — Expedition report/summary volume; I.W. Aiello among report contributors
- 2014 — R/V POSEIDON POS450 (DARCSEAS II) — Cruise report co-author (MARUM Reports 305, Univ. Bremen)
- 2012 — GEOMAR / DFG Senatskommission synthesis — Zabel, M., Aiello, I.W., Becker, K., et al. Multi-cruise synthesis report

Courses Taught

- MS 141/241 — Geological Oceanography / Advanced Geological Oceanography: 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2015, 2016, 2017, 2020, 2021, 2022, 2023, 2024, 2025
- MS 248 — Marine Benthic Habitat Mapping Techniques: 2017, 2018
- MS 273 — Marine Environmental Studies of the Gulf of California (Baja class): 2018, 2022
- MS 274 — Coastal Dynamics: 2006, 2008, 2010
- MS 274 — Advanced Topics: Marine Sedimentation: 2008, 2012, 2013, 2017, 2021
- MS 274 — Advanced Topics: Early Diagenesis in Marine Sediments: 2012
- MS 274 — Advanced Topics: Science Communication: 2019, 2020, 2021
- MS 274 — Advanced Topics: Scanning Electron Imaging & X-ray Analysis Techniques: 2022, 2023
- MS 274 — SEM Class: 2025
- MS 281 — Coastal Dynamics: 2022, 2023
- MS 285 — Frontiers in Geobiology: 2007
- MS 285 — Paleooceanography of the North Pacific Ocean: 2011
- MS 285 — Seminar: Climate Change: 2017, 2018, 2019, 2021

- MS 285 — Seminar: Climate Change & Communication: 2022, 2023
- MS 285 — Climate Change Seminar: 2024
- MS 286 — Geological Hazards: 2005

Graduate Students — Primary Advisor

- Marcel Peliks — M.S. 2025 — Assembly and field testing of a shallow-water multibeam system for high-frequency, high-resolution bathymetric surveys: Monterey Canyon head case study
- Rachel W. Clifford — M.S. 2024 — Analysis of solid-phase mineralogy to explore past biogeochemical conditions of the deep biosphere (IODP Exp. 385, Guaymas Basin)
- Victoria Dickey — M.S. 2022 — The distribution of microplastics in marshlands surrounded by agriculture fields — Elkhorn Slough, CA
- Tyler Barnes — M.S. 2019 — Assessing high-frequency variability of a beach adjacent to a submarine canyon (Moss Landing Beach, Monterey Bay, CA)
- Christine M. Mann — M.S. 2017 — Temporal and spatial impacts of water control structures on the benthic infaunal community of a tidally restricted wetland in Elkhorn Slough, CA
- Vera Jesser Lawson — M.S. 2016 — Tracking icebergs and sea ice in the mid-Pleistocene Bering Sea: implications for ice-sheet growth
- Melinda J. Tanner — M.S. 2016 — Sedimentological analysis of the siliciclastic fraction in Pliocene core sediments from Bowers Ridge, Bering Sea (IODP Exp. 323)
- Ashley N. Wheeler — M.S. 2015 — Multi-scale geomorphologic expressions of outcrop lithology in rocky intertidal habitats in central-northern California
- Michelle K. Drake — M.S. 2013 — Connections between Pleistocene millennial climate and sediment variability in the Pacific Sub-Arctic
- Justin R. Peglow — M.S. 2013 — Relationships between community structure and rugosity in the rocky intertidal using terrestrial laser scanning
- Eric Niven — M.S. 2013 — Geological controls on seacliff erosion in northern Monterey Bay, California
- Jennifer Desiree Dreyer — M.S. 2011 — Origin and paleoceanographic significance of laminations in hemipelagic biosiliceous sediments (Peru Margin; Monterey Formation)
- Briar D. Kitaguchi — M.S. 2011 — Trawling impact on benthic community structure on the outer continental shelf of Morro Bay, CA
- Elsie D. Tanadjaja — M.S. 2010 — Mechanical and chemical processes in rhodalgial sediment production and implications for ocean acidification (Baja California, Mexico)
- Charles A. Endris — M.S. 2009 — Monitoring change: application of a terrestrial laser scanner in a California estuary

Doctoral Committees (UCSC) — Member

- Yan Zhang — Ph.D., Ocean Sciences, UC Santa Cruz — 2025
- Michelle Drake — Ph.D., Ocean Sciences, UC Santa Cruz — 2021
- K. P. (Karla Phan) Knudson — Ph.D., Earth & Planetary Sciences, UC Santa Cruz — 2015

Professional service

- United States Advisory Committee for Scientific Ocean Drilling (USAC/IODP) — Member (2011–2014)

- USSSP / Consortium for Ocean Leadership — Distinguished Lecturer (2010–2011)
- Editor, Geological Society of America Special Paper 556: Understanding the Monterey Formation and Similar Biosiliceous Units across Space and Time (2022)
- Proposal reviewer (NSF OCE and related programs; years vary)

Journal peer-review (ad hoc)

Geology; Geochimica et Cosmochimica Acta; Marine Geology; Basin Research; Continental Shelf Research; Nature Communications; Science Advances; Journal of Phycology; Paleoceanography & Paleoclimatology (and others)

Professional memberships

AGU (American Geophysical Union); GSA (Geological Society of America)

Research Interests

- Marine geology & sedimentology of biosiliceous systems — opal-A→opal-CT transformation; silica diagenesis under elevated temperature/sedimentation rates (Guaymas Basin)
- Paleoceanography & climate variability — microfossil/physical-properties proxies in the subarctic Pacific & Bering Sea; links to hypoxia and monsoon dynamics
- Seafloor mapping & coastal morphodynamics — multibeam bathymetry and nearshore change detection (Monterey Canyon head; beach–surf zone processes)
- Early diagenesis & porewater redox — geochemical tracers (e.g., boron isotopes), XRD mineralogy, GRA density, SEM–EDS/EBSD imaging
- Anthropogenic impacts — lithium-ion battery fire contamination and heavy-metal deposition in coastal wetlands; monitoring & risk assessment
- Habitat mapping & marine conservation — benthic habitat classification and geospatial analyses to support management
- Methods & facilities — SEM–EDS/EBSD, XRD, multibeam sonar, TLS/UAS topographic surveys; quantitative data synthesis and model–data integration