

Daniel Enrique Ibarra

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1. EDUCATION

2018 Ph.D. Earth System Science, Stanford University.

Dissertation: *Paleoclimate constraints on terrestrial hydroclimate, silicate weathering, and the carbon cycle.*

2014 M.S. in Geological and Environmental Sciences, Stanford University.

Thesis: *Applying uranium-series isotope geochemistry and geochronology to Great Basin Pleistocene paleohydrology.*

2012 B.S. Civil and Environmental Engineering, Atmosphere/Energy Track, Stanford University.

2012 B.S. Geological and Environmental Sciences (with Honors), Stanford University.

Thesis: *An assessment of late Pleistocene to middle Holocene lake level fluctuations in Surprise Valley, California.*

2. PROFESSIONAL EXPERIENCE

A. Academic Appointments

Brown University, Providence, RI

07/23-Present Director of Diversity, Equity and Inclusion and Leadership Team Member, Institute at Brown for Environment and Society

02/23-Present Executive Committee Member, Initiative for Sustainable Energy

01/23-Present Manning Assistant Professor of Earth, Environmental and Planetary Sciences, and Environment and Society

07/21-12/22 Assistant Professor of Earth, Environmental and Planetary Sciences, and Environment and Society [*Parental Teaching Release in Spring 2022*]

04/19-06/21 Visiting Assistant Professor of Environment and Society

University of California Berkeley and Lawrence Berkeley National Laboratory, Berkeley, CA

07/19-06/21 Postdoctoral Scholar – Fellow, Earth and Planetary Science, Miller Institute Research Fellow and UC President’s Postdoctoral Fellow.

10/19-06/21 Postdoc Affiliate, Earth and Environmental Sciences, Lawrence Berkeley Laboratory.

2019 Visiting Scientist, National Institute of Geological Sciences and Institute of Environmental Science and Meteorology, University of the Philippines Diliman.

Stanford University, Palo Alto, CA

06/18-06/21 Postdoctoral Research Fellow (2018-19) and Visiting Postdoctoral Scholar (2019-21), Geological Sciences.

05/16-09/16 Visiting Scientist, Earth Surface Geochemistry Group, GFZ Helmholtz Centre Potsdam, Germany.

05/11-12/11 Sustainable Education Research Associate, MAP Royalty Inc., Palo Alto, CA and the Civil and Environmental Engineering Atmosphere/Energy Program.

B. Industry Consulting and Collaborations

Consulting Advisor and Technical Reviewer, Frontier Climate (carbon removal portfolio funded by Stripe, Alphabet, Shopify, Meta and McKinsey), 2024-Present

Consulting Collaborator, E3 Lithium, 2023-Present

Consulting Collaborator, Lithium Americas Corp., 2022-2024

Scientific Collaborator, Albermarle Corp., 2018-Present

3. PUBLICATIONS (* = equal contributions/joint first-authorship; **bold underline** = Ibarra lab member or former mentee at Brown University; underline = Ibarra external student collaborator/mentee) H-index: 25/25; Citations: 2,328/1,702 (Google Scholar/Web of Science)

A. Book Chapters

3. T Bhattacharya, **DE Ibarra**, R Feng, N Burls, 2024, Geochemical Approaches to Reconstructing Earth's Hydroclimates, *Treatise in Geochemistry, Reference Module in Earth Systems and Environmental Sciences* (3rd Edition, Elsevier). doi: 10.1016/B978-0-323-99762-1.00029-2
2. Y Gao, YF Gao, **DE Ibarra**, 2024, Core Investigations of the International Continental Drilling Program from the Cretaceous Songliao Basin (SK-1/SK-2/SK-3), NE China, in Field Trip Guidebook on Chinese Sedimentary Geology, edited by XM Hu, *Springer Singapore*, 31-119. doi: 10.1007/978-981-99-693604_2
1. AE Egger, **DE Ibarra**, R Weldon, RM Langridge, B Marion, J Hall, 2021, The influence of pluvial lake cycles on earthquake recurrence in the northwestern Basin and Range, USA, in From Saline to Freshwater: The Diversity of Western Lakes in Space and Time, edited by SW Starratt and MR Rosen, *Geological Society of America Special Papers Series 536-07*, 28. doi: 10.1130/2018.2536(07)

B. Peer Reviewed Journal Articles

Published and In Press/Accepted

87. A Arnold, J Mering, L Santi, V Petryshyn, B Mitsunaga, B Elliot, J Wilson, **DE Ibarra**, D Kaufman, A Cohen, R Dunbar, J Russell, S Lalonde, PD Roy, XQ Liu, FM Chang, RA Eagle, AK Tripathi, *In Press*, Comparative clumped isotope temperature relationships in freshwater carbonates, *Depositional Record*.
86. **CA Gagnon**, R Havel, J Chen, G Piccione, **DE Ibarra**, *Accepted*, Determination of KGa-1b and SHCa-1 $\Delta^{17}\text{O}$ and $\delta^{18}\text{O}$ via laser fluorination of lithium fluoride clay pellets, *Rapid Communications in Mass Spectrometry*.
85. C Emproto, TR Benson, **CA Gagnon**, W Baek, **DE Ibarra**, AC Simon, *In Press*, Clay Chemistry of the Thacker Pass Deposit, Nevada: Implications for the Formation of High-grade Volcano-sedimentary Lithium Resources, *Economic Geology*.
84. K Butler, LA Munk, DF Boutt, N Morris, J Kennedy, MR Blake, MJ Custado, **DE Ibarra**, *In Press*, The origin and enrichment of low-temperature geothermal lithium brines: a case study from the Devonian Leduc Formation, Alberta Basin, Canada, *Economic Geology*.
83. EB Hodgins, NL Swanson-Hysell, ARC Kylander-Clark, AC Turner, DA Stolper, **DE Ibarra**, MD Schmitz, YM Zhang, LM Fairchild, AJ Fuentes, 2024, One billion years of stability in the North American Midcontinent following two-stage Grenvillian structural inversion, *Tectonics* 43 (9), e2024TC008415.
82. **CA Gagnon**, KL Butler, K Robertson, C Emproto, P Gans, R Eden, **DE Ibarra**, TR Benson, *Accepted*, Volcano-sedimentary lithium occurrences in Barstow, CA and their related formation mechanisms determined by stable isotope analyses of carbonates and clays, *Economic Geology*.

81. F Putzolu, RN Armstrong, TR Benson, D Boutt, **KL Butler**, A Dolgoplova, RJ Herrington, **DE Ibarra**, LA Munk, *In Press*, Volcano-Sedimentary Deposits: Overview of an Emergent Type of Lithium Resource, *Economic Geology*.
80. **N Sekhon**, **A Gao**, **S Mallick**, JW Partin, MB Cardenas, **DE Ibarra**, *In Press*, Assessing matrix and non-matrix, single and multi-point calibration of trace elements using LA-ICP-MS on a tropical speleothem, *Rapid Communications in Mass Spectrometry*.
79. T Bhattacharya, PR Brennan, **DE Ibarra**, **CA Gagnon**, **KL Butler**, **A Terrazas**, **S Miller**, LA Munk, DF Boutt, R Feng, SN Bullinger, L Weisbeck, 2024, Pleistocene shifts in Great Basin hydroclimate seasonality govern the formation of lithium-rich paleolake deposits, *Quaternary Science Reviews* 335, 108747. doi: 10.1016/j.quascirev.2024.108747
78. **S Muñoz**, **J Jenckes**, **EJ Ramos**, LA Munk, **DE Ibarra**, 2024, Hydrologic and Landscape Controls on Rock Weathering Along a Glacial Gradient in South Central Alaska, USA, *Journal of Geophysical Research: Earth Surface* 129 (3), e2023JF007255. doi: 10.1029/2023JF007255
77. **J Jenckes**, **S Muñoz**, **DE Ibarra**, D Boutt, LA Munk, 2024, Geochemical Weathering Variability in High Latitude Watersheds, *Journal of Geophysical Research: Earth Surface* 129 (3), e2023JF007284. doi: 10.1029/2023JF007284
76. **EJ Ramos**, WJ Larsen, Y Hou, **S Muñoz**, PC Kemeny, JS Scheingross, MN Repasch, **DE Ibarra**, M Torres, 2024, Competition or collaboration: Clay formation sets the relationship between silicate weathering and organic carbon burial in soil, *Earth and Planetary Science Letters* 628, 118584. doi: 10.1016/j.epsl.2024.118584
75. ***DE Ibarra**, ***J Evaristo**, 2024, Soil pore water evaporation and temperature influences on clay mineral paleothermometry, *Communications Earth & Environment* 5 (21). doi: 10.1038/s43247-024-01201-4
74. Y Hou, H Long, S Tsukamoto, **DE Ibarra**, Z Lu, T Tamura, W Sun, J Zhang, L Gao, M Frechen, 2023, Sahara's surface transformation forced an abrupt hydroclimate decline and Neolithic culture transition in northern China, *The Innovation* 1005500. doi: 10.1016/j.xinn.2023.100550
73. AJ Smith, E Ito, N Burls, L Clarke, T Donders, R Hatfield, S Kuehn, A Koutsodendris, T Lowenstein, D McGee, P Molnar, A Prokopenko, K Snell, B Valero Garcés, J Werne, C Zeeden, and the **PlioWest Working Consortium**, 2023, Workshop report: PlioWest – drilling Pliocene lakes in western North America, *Scientific Drilling* 32, 61-72. doi: 10.5194/sd-32-61-2023
72. MK Lloyd, RA Stein, **DE Ibarra**, RS Barclay, SL Wing, DW Stahle, TE Dawson, DA Stolper, 2023, Isotopic composition of wood methyl groups reveals global patterns in plant photorespiration, *Proceedings of the National Academy of Sciences* 120 (46) e2306736120. doi: 10.1073/pnas.2306736120
71. T Kukla, **DE Ibarra**, KV Lau, JKC Rugenstein, 2023, All aboard! Earth system investigations with the CH2O-CHOO TRAIN v1.0, *Geoscientific Model Development* 16, 5515-5538. doi: 10.5194/gmd-16-5515-2023.
70. MB Weller, AJ Evans, **DE Ibarra**, AV Johnson, 2023, Venus's atmospheric nitrogen explained by ancient plate tectonics, *Nature Astronomy* 7, 1436–1444. doi: 10.1038/s41550-023-02102-w
69. ***DE Ibarra**, ***JG Dai**, ***Y Gao**, XH Lang, PZ Duan, ZJ Gao, JQ Chen, K Methner, LJ Sha, H Tong, X Han, DC Zhu, YL Li, JX Tang, H Cheng, CP Chamberlain, CS Wang, 2023, High-elevation Tibetan-Plateau before India-Eurasia collision recorded by triple oxygen isotopes, *Nature Geoscience* 16, 810-815. doi: 10.1038/s41561-023-01243-x
68. EM Leonard, BJC Laabs, EE Crawford, BT Mackall, **DE Ibarra**, MB Osman, MA Plummer, MW Caffee, 2023, Chronology and climate of the Last Glacial Maximum and the subsequent deglaciation in the northern Medicine Bow Mountains, Wyoming, USA, *Quaternary Science Advance* 12, 100109. doi: 10.1016/j.qsa.2023.100109
67. O Pourret, **DE Ibarra**, 2023, The rise of preprints in Earth Sciences, *F1000Research* 12, 156. doi: 10.12688/f1000research.133612.1

66. C de Wet, **DE Ibarra**, B Belanger, JL Oster, 2023, North American rainfall patterns during past warm states: A proxy network – model comparison for the Last Interglacial and the mid-Holocene, *Paleoceanography and Paleoclimatology* 38 (6), e2022PA004528. doi: 10.1029/2022PA004528.
65. J Jenckes, LA Munk, **DE Ibarra**, D Boutt, J Fellman, E Hood, 2023, Hydroclimate Drives Seasonal Riverine Export Across a Gradient of Glacierized High-Latitude Coastal Catchments, *Water Resources Research* 49 (4), e2022WR033305. doi: 10.1029/2022WR033305
64. **CA Gagnon**, **KL Butler**, **E Gaviria**, A Terrazas, **A Gao**, T Bhattacharya, DF Boutt, LA Munk, **DE Ibarra**, 2023, Paleoclimate controls on lithium enrichment in Great Basin Pliocene-Pleistocene lacustrine clays, *Geological Society of America Bulletin*. doi: 10.1130/B36572.1
63. EM Leonard, BJC Laabs, A Robertson, MA Plummer, **DE Ibarra**, MW Caffee, 2023, Late Pleistocene glaciation in the southernmost Sangre de Cristo Mountains, New Mexico – chronology and paleoclimate, *Quaternary Science Advances* 9, 100070. doi: 10.1016/j.qsa.2023.100070
62. CK Boyce, **DE Ibarra**, M D’Antonio, 2023, What we talk about when we talk about the long-term carbon cycle, *New Phytologist* (invited Tansley Insight) 237 (5), 1550-1557. doi: 10.1111/nph.18665.
61. *M D’Antonio, ***DE Ibarra**, CK Boyce, 2023, The preservation of cause and effect in the rock record, *Paleobiology* 49 (2), 204-214. doi: 10.1017/pab.2022.33.
60. CK Boyce, **DE Ibarra**, MP Nelsen, MP D’Antonio, 2023, Nitrogen-based symbioses, phosphorous availability, and accounting for a modern world more productive than the Paleozoic, *Geobiology* 21 (1), 86-101. doi: 10.1111/gbi.12519
59. T Kukla, J Rugenstein, E Driscoll, **DE Ibarra**, CP Chamberlain, 2022, The PATCH Lab: A database and workspace for Cenozoic terrestrial paleoclimate and environment reconstruction, *American Journal of Science* 322 (10), 1124-1158. doi: 10.2475/10.2022.02
58. O Pourret, P Anand, P Bots, E Cottrell, A Dosseto, DW Hedding, **DE Ibarra**, DE Irawan, K Johannesson, J Labidi, S Little, HY Liu, TV Makhubela, J Marin Carbonne, AP Fodich, A Riches, R Tartese, A Tripathi, 2022, Evolution of binary gender and geographical diversity in the editorial boards of Chemical Geology and Geochimica et Cosmochimica Acta, *European Science Editing* 48, e89470. doi: 10.3897/ese.2022.e89470.
59. S Menemenlis, SM White, **DE Ibarra**, JM Lora, 2022, A proxy-model comparison for mid-Pliocene warm period hydroclimate in the Southwestern US, *Earth and Planetary Science Letters*, 596, 117803. doi: 10.1016/j.epsl.2022.117803.
58. G Piccione, T Blackburn, S Tulaczyk, ET Rasbury, M Hain, **DE Ibarra**, K Methner, C Tinglof, B Cheney, P Northrup, K Licht, 2022, A Radiometrically Dated Record of Antarctic Ice Sheet Response to Millennial-Scale Climate Cycles during Glacials and Interglacials, *Nature Communications*, 13, 5428. doi: 10.1038/s41467-022-33009-1.
55. F von Blanckenburg, J Bouchez, JK Willenbring, **DE Ibarra**, JK Caves Rugenstein, 2022, There is no Neogene denudation conundrum, *Proceedings of the National Academy of Sciences of the United States of America*, 119 (35), e2202387119. doi: 10.1073/pnas.2202387119
54. J Chen, Y Gao, **DE Ibarra**, J Qin, C Wang, 2022, Mid-latitude precipitation in East Asia influenced by a fluctuating greenhouse climate during the latest Cretaceous through the earliest Paleogene, *Global Planetary Change*, 216, 103900. doi: 10.1016/j.gloplacha.2022.103900
53. **N Sekhon**, CPC David, **MCM Geronia**, **MJG Custado**, **DE Ibarra**, 2022, Investigating the response of hydrological processes to El Niño events using a 100-year dataset from the western Pacific Ocean, *Journal of Hydrology: Regional Studies*, 42, 101172. doi: 10.1016/j.ejrh.2022.101174

52. CP David, **MJ Custado**, **N Sekhon**, **DE Ibarra** (corresponding), 2022, Forecasting tropical ENSO-induced drought conditions using sea surface height in the Western Pacific, *All Earth*, 34 (1), 55-65. doi: 10.1080/27669645.2022.2089484
51. T Kukla, JK Caves Rugestein, **DE Ibarra**, MJ Winnick, CAE Stromberg, CP Chamberlain, 2022, Drier winters linked to Cenozoic open habitat expansion in North America, *AGU Advances* 3 (2), e2021AV000566. doi: 10.1029/2021AV000566
50. A Belem, T Bell, H Burdett, **D Ibarra**, N Kaushal, B Keenan, A Klimaszewski-Patterson, M Mette, S Naeher, O Onafeso, C Panmei, A Ratnayake, O Truax, 2022, Paleoclimatology and Paleooceanography Perspectives on Integrated, Coordinated, Open, Networked (ICON) Science, *Earth and Space Science* 9 (1), e2021EA002115. doi: 10.1002/essoar.10508554.1
49. **J Jenckes**, **DE Ibarra**, LA Munk, 2021, Concentration-Discharge Patterns Across the Gulf of Alaska Reveal Geomorphological and Glacierization Controls on Stream Water Solute Generation and Export, *Geophysical Research Letters* 49 (1), e2021GL095152. doi: 10.1029/2021GL095152
48. **DE Ibarra**, AG Yanchilina, MK Lloyd, KA Methner, CP Chamberlain, R Yam, A Shemesh, DA Stolper, 2022, Triple oxygen isotope systematics of diagenetic recrystallization of diatom opal-A to opal-CT to microquartz in deep sea sediments, *Geochimica et Cosmochimica Acta* 320 (1), 304-323. doi: 10.1016/j.gca.2021.11.027
47. **D Coffey**, LA Munk, **DE Ibarra**, **KL Butler**, DF Boutt, J Jenckes, 2021, Lithium Storage and Release from Lacustrine Clays: Implications for Lithium Enrichment and Sustainability in Continental Brines, *Geochemistry, Geophysics, Geosystems* 22 (12), e2021GC009916. doi: 10.1029/2021GC009916
46. X Tian, Y Gao, T Kukla, O Lenz, H Huang, **DE Ibarra**, SL Sun, CS Wang, 2021, Early Cretaceous solar cycles recorded in lacustrine laminations in North China, *American Journal of Science* 321 (9), 1308-1349. doi: 10.2475/09.2021.01
45. O Pourret, J Middleton, **DE Ibarra**, DE Irawan, A Rouff, P Anand, A Tripathi, AJV Riches, A Dossetto, 2021, Diversity among Editorial Boards of Elements and other selected Geochemistry, Cosmochemistry, Mineralogy and Petrology journals, *Elements* 17 (3), 152-154. doi: 10.2138/gselements.17.3.150
44. JK Caves Rugestein, **DE Ibarra**, S Zhang, NJ Planavsky, F von Blanckenburg, 2021, Isotope Mass Balance Constraints Preclude that Mafic Weathering Drove Neogene Cooling, *Proceedings of the National Academy of Sciences of the United States of America* 118 (30), e2026345118. doi: 10.1073/pnas.2026345118
43. H Huang, Y Gao, C Ma, MM Jones, C Zeeden, **DE Ibarra**, HC Wu, CS Wang, 2021, Non-linear orbital pacing of organic carbon burial by a ~173 kyr obliquity cycle in middle-high latitudes, *Science Advances* 7 (28), eabf9489. doi: 10.1126/sciadv.abf9489
42. O Pourret, DW Hedding, **DE Ibarra**, DE Irawan, HY Liu, J Tennant, 2021, International disparities in open access practices in the Earth Sciences, *European Science Editing* 47, e63663. doi: 10.3897/ese.2021.e63663. Preprint doi: 10.31223/X5HW2S
41. **DE Ibarra**, PLM Tolentino, CPC David, 2021, Technical Note: Evaluation and bias correction of an observations-based global runoff dataset using streamflow observations from small tropical catchments in the Philippines, *Hydrology and Earth System Sciences* 25, 2805-2820. doi: 10.5194/hess-25-2805-2021. Preprint doi: 10.5194/hess-2020-26.
40. CS Wang, Y Gao, **DE Ibarra**, HC Wu, PJ Wang, 2021, An Unbroken Record of Climate During the Age of Dinosaurs, *Eos* 102. doi: 10.1029/2021EO158455
39. Y Gao, YF Gao, **DE Ibarra**, XJ Du, T Dong, ZF Liu and CS Wang, 2021, Clay mineralogical evidence for mid-latitude terrestrial climate change from the latest Cretaceous through the earliest Paleogene in the Songliao Basin, NE China, *Cretaceous Research* 124, 104827. doi: 10.1016/j.cretres.2021.104827

38. CP Chamberlain, **DE Ibarra**, T Kukla, K Methner, Y Gao, 2021, Triple Oxygen Isotope Paleometry of Crystalline Rocks. *Frontiers in Earth Science* 9, 633687. doi: 10.3389/feart.2021.633687
37. **DE Ibarra**, T Kukla, KA Methner, A Mulch, CP Chamberlain, 2021, Reconstructing Past Elevations from Triple Oxygen Isotopes of Lacustrine Chert: Application to the Eocene Nevadaplano, Elko Basin, Nevada, USA, *Frontiers in Earth Science* 9, 628868. doi: 10.3389/feart.2021.628868
36. Y Gao, **DE Ibarra**, JK Caves Rugenstein, JQ Chen, T Kukla, K Methner, YF Gao, H Huang, ZP Lin, LM Zhang, DP Xi, HC Wu, AR Carroll, SA Graham, CP Chamberlain, CS Wang, 2021, Terrestrial climate in mid-latitude East Asia from the latest Cretaceous to the earliest Paleogene: A multiproxy record from the Songliao Basin in northeastern China, *Earth-Science Reviews* 103572. doi: 10.1016/j.earscirev.2021.103572
35. T Kukla, **DE Ibarra**, JKC Rugenstein, JT Gooley, CE Mullins, **S Kramer**, DY Moragne, CP Chamberlain, 2021, High-resolution stable isotope paleotopography of the John Day region, Oregon, USA. *Frontiers in Earth Science* 9, 635181. doi: 10.3389/feart.2021.635181
34. *DR Lowe, ***DE Ibarra**, N Drabon, CP Chamberlain, 2020, Constraints on surface temperature 3.4 billion years ago based on triple oxygen isotopes of cherts from the Barberton Greenstone Belt, South Africa, and the problem of sample selection, *American Journal of Science* 320 (9), 790-814. doi: 10.2475/11.2020.02
33. J Zhong, SL Li, **DE Ibarra**, H Ding, CQ Liu, 2020, Insights into solute production and transport processes in large Chinese rivers from concentration-discharge relationships, *Global Biogeochemical Cycles* 34 (9), e2020GB006541. doi: 10.1029/2020GB006541
32. DE Penman, JK Caves, **DE Ibarra**, and MJ Winnick, 2020, Silicate weathering as a feedback and forcing on Earth's climate and the carbon cycle, *Earth-Science Reviews* 209, 103298. doi: 10.1016/j.earscirev.2020.103298
31. *CP Chamberlain, ***DE Ibarra**, MK Lloyd, T Kukla, Y Gao D Sjostrom, ZD Sharp, 2020, Triple oxygen isotopes of meteoric hydrothermal systems – implications for paleometry, *Geochemical Perspectives Letters* 15, 6-9. doi: 10.7185/geochemlet.2026
30. *L Santi, *AJ Arnold, ***DE Ibarra**, C Whicker, JA Mering, JM Lora, A Tripathi, 2020, Clumped Isotope Constraints on Changes in Hydroclimate in the Northwest Great Basin: Lake Surprise, California, *Geological Society of America Bulletin*, 132 (11-12), 2669–2683. doi: 10.1130/B35484.1
29. H Huang, Y Gao, MM Jones, HF Tao, AR Carroll, **DE Ibarra**, HC Wu, CS Wang, 2020, Astronomical forcing of Middle Permian terrestrial climate recorded in a large paleolake in northwest China, *Palaeogeography, Palaeoclimatology, Palaeoecology* 550, 109735. doi: 10.1016/J.PALAEO.2020.109735
28. *MP D'Antonio, ***DE Ibarra**, CK Boyce, 2020, Land plant evolution decreased, rather than increased, weathering rates, *Geology*, 48 (1), 29-33. doi: 10.1130/G46776.1
27. L Santi, A Arnold, **DE Ibarra**, C Whicker, J Mering, CG Oviatt, A Tripathi, 2019, Lake Level Fluctuations in the Northern Great Basin for the Last 25,000 years in Exploring Ends of Eras in the eastern Mojave Desert, edited by DM Miller, *2019 Desert Symposium Field Guide and Proceedings*, 176-186. doi: 10.31223/osf.io/6as7t
26. **DE Ibarra**, JL Oster, MJ Winnick, JK Caves Rugenstein, MP Byrne, CP Chamberlain, 2019, Lake area constraints on past hydroclimate in the western United States: Application to Pleistocene Lake Bonneville, Reviewed Proceedings Volume: 2018 Lake Bonneville Conference & Short Course, edited by WR Lund, AP McKean and SD Bowman, *Utah Geological Survey Miscellaneous Publication* 170, 6. doi: 10.31223/osf.io/rk5pe
25. JL Oster and **DE Ibarra**, 2019, Glacial hydroclimate of western North America: insights from proxy-model comparison and implications for Lake Bonneville, Proceedings Volume: 2018 Lake

- Bonneville Conference & Short Course, edited by WR Lund, AP McKean and SD Bowman, *Utah Geological Survey Miscellaneous Publication* 170, 8. doi: 10.31223/osf.io/h75mw
24. T Narock, EB Goldstein, CA-L Jackson, AA Bubeck, AML Enright, JI Farquharson, A Fernandez, D Fernández-Blanco, S Girardclos, **DE Ibarra**, SK Lengger, AW Mackay, V Venema, B Whitehead, J-P Ampuero, 2019, Earth Science is Ready for Preprints. *Eos*, 100. doi: 10.1029/2019EO121347 and 10.31223/osf.io/kftsv
 23. J Lora and **DE Ibarra**, 2019, The North American hydrologic cycle through the last deglaciation, *Quaternary Science Reviews* 226, 105991. doi: 10.1016/j.quascirev.2019.105991
 22. JK Caves Rugenstein, **DE Ibarra**, F von Blanckenburg, 2019, Neogene cooling driven by land surface reactivity rather than increased weathering fluxes, *Nature* 571 (7767), 99-102. doi: 10.1038/s41586-019-1332-y
 21. TJ Kukla, MJ Winnick, K Maher, **DE Ibarra**, CP Chamberlain, 2019, The sensitivity of terrestrial $\delta^{18}\text{O}$ gradients to hydroclimate evolution. *Journal of Geophysical Research: Atmospheres* 124 (2), 563-582. doi: 10.1029/2018JD029571
 20. ***DE Ibarra**, *JK Caves Rugenstein, *A Bachan, A Baresch, KV Lau, DL Thomas, JE Lee, CK Boyce, CP Chamberlain, 2019, Modeling the consequences of land plant evolution on silicate weathering, *American Journal of Science* 319, 1-43. doi: 10.2475/01.2019.01
 19. **DE Ibarra**, JL Oster, MJ Winnick, JK Caves Rugenstein, MP Byrne, CP Chamberlain, 2018, Warm and cold wet-states in the western United States during the Pliocene-Pleistocene, *Geology*, 46 (4), 355-358. doi: 10.1130/G39962.1
 18. NW Hermann, JL Oster, **DE Ibarra**, 2018, Spatial Patterns and Driving Mechanisms of Mid-Holocene Hydroclimate in Western North America, *Journal of Quaternary Science*, 33 (4), 421-434. doi: 10.1002/jqs.3023
 17. MM Jones, **DE Ibarra**, Y Gao, BB Sageman, D Selby, CP Chamberlain, SA Graham, 2018, Evaluating Late Cretaceous OAEs and the influence of marine incursions on organic carbon burial in an expansive East Asian paleo-lake, *Earth and Planetary Science Letters*, 484, 41-52. doi: 10.1016/j.epsl.2017.11.046
 16. AS Wymore, RL Brereton, **DE Ibarra**, K Maher, WH McDowell, 2017, Critical zone structure controls concentration-discharge relationships and solute generation in forested tropical montane watersheds, *Water Resources Research*, 53 (7), 6279-6295. doi: 10.1002/2016WR020016
 15. **DE Ibarra**, S Moon, JK Caves, CP Chamberlain, K Maher, 2017, Concentration-discharge patterns of weathering products from global rivers, *Acta Geochemica*, 36 (3), 405-409. doi: 10.1007/s11631-017-0177-z
 14. JK Caves, BU Bayshashov, A Zhamangara, AJ Ritch, **DE Ibarra**, DJ Sjostrom, HT Mix, MJ Winnick, CP Chamberlain, 2017, Late Miocene uplift of the Tian Shan and Altai and reorganization of Central Asia climate, *GSA Today*, 17 (2). doi: 10.1130/GSATG305A.1
 13. Y Tong, **DE Ibarra**, JK Caves, T Mukerji, SA Graham, 2017, Constraining basin thermal history and petroleum generation using paleoclimate data in the Piceance Basin, Colorado, *Basin Research*, 29 (4), 542-553. doi: 10.1111/bre.12213
 12. JK Caves, DY Moragne, **DE Ibarra**, BU Bayshashov, Y Gao, MM Jones, A Zhamangara, AV Arzhannikova, SG Arzhannikov, CP Chamberlain, 2016, The Neogene de-greening of Central Asia, *Geology*, 44 (11), 887-890. doi: 10.1130/G38267.1
 11. **DE Ibarra**, JK Caves, S Moon, DL Thomas, J Hartmann, CP Chamberlain, K Maher, 2016, Differential weathering of basaltic and granitic catchments from concentration-discharge relationships, *Geochimica et Cosmochimica Acta*, 190, 265-293. doi: 10.1016/j.gca.2016.07.006
 10. HT Mix, **DE Ibarra**, A Mulch, SA Graham, CP Chamberlain, 2016, A hot and high Eocene Sierra Nevada, *Geological Society of America Bulletin*, 128 (3-4), 531-542. doi: 10.1130/B31294.1

9. Y Gao, **DE Ibarra**, JK Caves, CS Wang, CM Huang, CP Chamberlain, SA Graham, HC Wu, 2016, Mid-latitude terrestrial climate of East Asia linked to global climate in the Late Cretaceous: REPLY, *Geology*, 44 (2), e379. doi: 10.1130/G37574Y.1
8. **DE Ibarra** and CP Chamberlain, 2015, Quantifying closed-basin lake temperature and hydrology by inversion of oxygen isotope and trace element paleoclimate records, *American Journal of Science*, 315 (9), 781-808. doi: 10.2475/09.2015.01
7. Y Gao, CS Wang, ZF Liu, XJ Du, **DE Ibarra**, 2015, Diagenetic and paleoenvironmental controls on Late Cretaceous clay minerals in the Songliao Basin, northeast China, *Clays and Clay Minerals*, 63 (6), 469-484. doi: 10.1346/CCMN.2015.0630605
6. F von Blanckenburg, J Bouchez, **DE Ibarra**, K Maher, 2015, Stable runoff and weathering fluxes into the oceans over Quaternary climate cycles, *Nature Geoscience*, 8 (7), 538-542. doi: 10.1038/ngeo2452
5. JL Oster, **DE Ibarra**, MJ Winnick, K Maher, 2015, Steering of westerly storms over western North America at the Last Glacial Maximum, *Nature Geoscience*, 8 (3), 201-205. doi: 10.1038/ngeo2365
4. Y Gao, **DE Ibarra**, CS Wang, JK Caves, CP Chamberlain, SA Graham, HC Wu, 2015, Mid-latitude terrestrial climate of East Asia linked to global climate in the Late Cretaceous, *Geology*, 43 (4), 287-290. doi: 10.1130/G36427.1.
3. **DE Ibarra**, AE Egger, KL Weaver, CR Harris, K Maher, 2014, Rise and fall of late Pleistocene pluvial lakes in response to reduced evaporation and precipitation: Evidence from Lake Surprise, California, *Geological Society of America Bulletin*, 126 (11-12), 1387-1415. doi: 10.1130/B31014.1
2. K Maher, **DE Ibarra**, JL Oster, DM Miller, JL Redwine, MC Reheis, JH Harden, 2014, Uranium isotopes in soils as a proxy for past infiltration and precipitation across the western United States, *American Journal of Science*, 314 (4), 821-857. doi: 10.2475/04.2014.01
1. JL Oster, **DE Ibarra**, CR Harris, K Maher, 2012, Influence of eolian deposition and rainfall on the U-isotopic composition of soil water and soil minerals, *Geochimica et Cosmochimica Acta*, 88, 146-166. doi: 10.1016/j.gca.2012.04.004

Forthcoming

In Review/Revision

- C Marsh**, **N Sekhon**, T Beach, D McGee, **C Kong-Johnson**, **DE Ibarra**, *In Revision*, Late Holocene hydroclimate variability in the Tropical Andes from fast-growing stalagmites in the Eastern Cordillera of Colombia, *Paleoclimatology & Paleoceanography*.
- KA Methner, **DE Ibarra**, A Mulch, C Teyssier, CP Chamberlain, *In Revision*, Triple Oxygen Isotope Paleohydrology of the Kettle Metamorphic Core Complex (WA, USA), *Geochemistry, Geophysics, Geosystems*.
- MJ Custado**, **CA Gagnon**, B Belanger, **N Sekhon**, **J Bernstein-Schalet**, CW Kinsley, WD Sharp, JL Oster, **DE Ibarra**, *In Review*, Constraining the Modern Hydrological Balance of Bear Lake, Utah-Idaho: Insights from Stable Isotopes ($\delta^{18}\text{O}$ and $\delta^2\text{H}$), *Water Resources Research*.
- MK Lloyd, RA Stein, BE Wortham, RE Dunn, **DE Ibarra**, TE Dawson, DA Stolper, *In Review*, Isotopic evidence for elevated photorespiration in trees during past glacial periods.
- S Miller**, CW Kinsley, **CA Gagnon**, WD Sharp, JL Oster, **DE Ibarra**, *In Review*, Carbonate Clumped Isotopes Record Variable Carbonate Formation Depth in Response to Fluctuating Last Interglacial Lake Hydrology at Owens Lake, California, *Geochemistry, Geophysics, Geosystems*.
- K Taylor**, S Rauzi, TT Isson, B Kalderon-Asael, **DE Ibarra**, D Hulse, JL Payne, D Altiner, DJ Lehrmann, N Planavsky, MY Yu, KV Lau, *In Review*, Heterogeneous Li isotope records across the end-Permian mass extinction as an indicator for a highly perturbed Li cycle, *EPSL*.
- DA Stolper, **DE Ibarra**, A Bednarick, CE Bucholz, LA Coogan, KM Gillis, M Lloyd, JN Christensen, DJ DePaolo, *In Review*, The effect of seawater Sr concentration on the hydrothermal alteration of

oceanic crust: Sr isotopes in dikes of the Early Paleozoic Bay of Islands Ophiolite, *AGU Monograph*.

C. Other Publications and Conference Papers/Extended Abstracts

- N Sekhon, C Kong-Johnson**, B Belanger, S Tabujara, J Gatluda, **M Gerald**, **A Gao**, **J Custado**, MCM Geronia, CPC David, **DE Ibarra**, 2024, Tracking hydroclimate extremes from deep in the tropics. *Past Global Changes Horizons* 3, 13-19.
- AJ Irving, PK Carpenter, JS Boesenberg, K Ziegler, **DE Ibarra**, 2024, Reduced Ultramagnesian Augite-Rich Achondrites with Affinities to Aubrites. 86th Annual Meeting of the Meteoritical Society Meeting
- R Havel**, **DE Ibarra**, R. Bartoschewitz, G Budde, 2024, INTERROGATING LEACHING PROCEDURES OF METEORITES FOR TRIPLE OXYGEN ISOTOPE ANALYSES. Submitted to 55th Lunar and Planetary Science Conference.
- D Khan**, AJ Evans, **DE Ibarra**, SW Parman, MB Weller, 2023, THE HABITABILITY OF MERCURY SIZED EXOPLANETS WITH MOBILE AND STAGNANT LID TECTONIC REGIMES. 54th Lunar and Planetary Science Conference.
- AJ Irving, A Greshake, PK Carpenter, JS Boesenberg, **DE Ibarra**, 2023, EVIDENCE FOR A PREVIOUSLY UNRECOGNIZED NON-CARBONACEOUS CHONDRITIC PARENT BODY FROM PETROLOGIC AND OXYGEN ISOTOPE STUDIES OF UNGROUPED MG-RICH CHONDRITE NORTHWEST AFRICA 15468. 54th Lunar and Planetary Science Conference.
- JS Boesenberg, M Humayun, **DE Ibarra**, 2023, HASSI el BIOD 002: A PYROXENE PALLASITE FROM THE MANTLE OF THE IIAB IRON PARENT BODY. 54th Lunar and Planetary Science Conference.
- JS Boesenberg, M Humayun, AJ Irving, **DE Ibarra**, 2023, NEW PYROXENE PALLASITES: BORDJI BADJI MOKHTAR 001 AND GYARUB ZANGBO, AND A PLETHORA OF PALLASITE PARENT BODIES. 54th Lunar and Planetary Science Conference.
- T Kukla, KV Lau, **DE Ibarra**, JKC Rugenstein, 2022, Deterministic icehouse and greenhouse climates on million-year timescales. *EarthArXiv Preprint*.
- MB Weller, AJ Evans, **DE Ibarra**, AV Johnson, T Kukla, 2022, Atmospheric Evidence of Early Plate Tectonics on Venus. 53rd Lunar and Planetary Science Conference.
- O Pourret, K Bazdaric, L Besancon, M Gonzalez-Marquez, J Havemann, DW Hedding, A Hursthouse, DE Irawan, **DE Ibarra**, P Masuzzo, S Onie, J Owango, C Wien, 2021, Open Access Beyond Article Processing Charges (A comment on “For NGOs, article-processing charges sap conservation funds by Wood et al.). Preprint doi: 10.31235/osf.io/8brjg.
- SW Parman, AJ Evans, EG Alvarez, MB Weller, CT Reinhard, **DE Ibarra**, BA Anzures, 2021, Assessing the abundance of super-mercuries and their habitability. 52nd Lunar and Planetary Science Conference.
- MB Weller, AJ Evans, **DE Ibarra**, AV Johnson, T Kukla, 2020, Exploring the Evolution and Habitability of Planets: Coupling of the Mantle-Atmosphere System. 51st Lunar and Planetary Science Conference.
- SW Parman, AJ Evans, MB Weller, CT Reinhard, **DE Ibarra**, EC First, BA Anzures, 2020, Abundance and Habitability of super-Mercuries. 51st Lunar and Planetary Science Conference.
- JK Caves, MJ Winnick, **DE Ibarra**, CP Chamberlain, DJ Sjostrom, HT Mix, A Mulch, 2015, Combining back-trajectory modeling and measurements of water isotopes to understand the paleoclimatic record in Central Asia: The impact of seasonality and topography. Paper 223, 2015 International Symposium on Isotope Hydrology, IAEA, Vienna, Austria, 11-15 May.
- DE Ibarra**, AE Egger, K Maher, 2013, The late Pleistocene pluvial history of Surprise Valley, CA. 26th Pacific Climate Workshop. Pacific Grove, California, 3-6 March. *Quaternary International*, 387, 137. doi: 10.1016/j.quaint.2015.01.145

JL Oster, K Maher, **DE Ibarra**, 2011, Uranium isotopic variations in modern soils and dated soil minerals: calibrating a potential paleo-rainfall proxy. 25th Pacific Climate Workshop, Pacific Grove, California, 6-9 March. Quaternary International, 310, 239. doi: 10.1016/j.quaint.2013.07.099

For all conference presentations (n=221) please see my research group website:
<https://sites.brown.edu/ibarra-lab/research/presentations/>

D. Invited Seminars, Colloquiums, and Conference Talks (^ = virtual)

2025: Geological Society of London (*upcoming*).

2024: Stanford University; GSA Connects; AGU Fall Meeting (*upcoming*).

2023: ^University of Southern California; Washington University in St. Louis; Rocky Mountain Geobiology Symposium at the University of Colorado Boulder; UMass Amherst; Syracuse University; University of Utah; Utah State University; University of Kansas; Woods Hole Oceanographic Institute (Steinbach Visiting Scholar; 2x); American Institute of Chemical Engineers; Northwestern University; AGU Fall Meeting.

2022: Skidmore College (Lester W. Strock Lecture); ^University of Minnesota Duluth (Darwin Day Lecture); ^Colorado College; ^University of Texas at Arlington; ^James Madison University; ^Yale University (2x); ^Rutgers University; University of Connecticut; Massachusetts Institute of Technology; Columbia University; Penn State; GSA Annual Meeting (2x); AMQUA; ^International Sedimentological Conference (2x).

2021: ^China University of Geosciences; ^Institut de Physique du Globe de Paris; ^University of California, Davis; ^University of Nevada, Reno; ^Boston College; ^Caltech; ^UT Austin; ^University of Göttingen; Dartmouth College.

2020: University of California, Berkeley (Geography); University of Washington; ^University of California, Berkeley (Integrated Biology/UC Museum of Paleontology); ^University of Queensland; ^University of California, Santa Cruz; ^Yale University (2x); ^University of Wisconsin-Madison (2x); ^University of New Mexico; Goldschmidt.

2019: University of the Philippines Diliman (National Institute of Geological Sciences (2x) and Institute of Environmental Science and Meteorology (1x)); University of Alaska, Anchorage; University of Arizona; USGS Menlo Park; Goldschmidt; AGU Fall Meeting; GSA Annual Meeting; EGU General Assembly.

2018: Virginia Tech; Brown University; University of California, Los Angeles (Geochemistry Seminar); Vanderbilt University; San Francisco State University; Stanford University (Atmosphere, Ocean and Climate Dynamics Seminar); Lake Bonneville Geologic Conference.

2017: University of California, Berkeley (Isotope Geochemistry Seminar); University of California, Los Angeles (Tectonics Seminar); AGU Fall Meeting.

2016: GFZ Potsdam; Stanford University (Sedimentary Geology Seminar); AGU Fall Meeting, GSA Annual Meeting.

2015: San Jose State University; China University of Geosciences, Beijing

4. RESEARCH GRANTS AND SUPPORT

~\$1.3m external to Brown University as PI/co-PI, ~\$910k as lead Brown PI; ~\$3.7m total.

~\$510k external fellowships and grants to postdoctoral researchers and students with Ibarra as mentor.

~\$25k in industry-supported research/analyses and student internships.

~\$230k in internal seed grants and ~\$270k in internal fellowships at Brown University.

A. Pending Grants

DOE Carbon Ore, Rare Earth and Critical Minerals (CORE-CM) Initiative, *Regional assessment and characterization of conventional and unconventional emerging domestic lithium resources from U.S. Region 7*, PIs: KL Butler, **DE Ibarra**, LA Munk, D Boutt, M Whittaker, S Regan. \$1,777,215 (plus \$527,640 cost share) to Brown University, \$7,500,000 total (plus \$1,875,000 total cost share).

NSF Geobiology and Low-Temperature Geochemistry, *Collaborative Research: Quantifying the CO₂ Flux from Organic Carbon Oxidation Across a Spectrum of High Latitude Watersheds within the Gulf of Alaska*, PIs: J Jenckes, LA Munk, **DE Ibarra**. \$307,157 to Brown University, \$753,111 total.

Simons Foundation, Mathematics & Physical Sciences, *Surface Albedo Modification by Enhanced Rock Weathering*, PIs: B Marston, **DE Ibarra**. \$500,000.

B. Current Grants

External Funding as Brown PI/co-PI

Heising-Simons Foundation, “*Renewed support for paleoCAMP (Paleoclimate training in Climate Archives, Models, and Proxies): A multidisciplinary summer school for graduate students in paleoclimatology*”, 2025-2027. PI: J Tierney, co-PIs: **DE Ibarra**, KJ Anchukaitis, S Dee, K Johnson. \$450,000 total, \$47,081 to Brown University. (Note: pending finalized renewal in Sept. 2024)

NSF Paleoclimate, *Collaborative Research: RAPID: Characterizing the water isotope signature of an El Nino event for paleoclimate and hydroclimate studies*. PIs: JKC Rugestein, **DE Ibarra**. \$28,589 to Brown University, \$62,009 total.

DOE, Biological and Environmental Research, Earth and Environmental Systems Sciences Division, *Floodplains vs. hillslopes: Informing the timing and tempo of clay formation and organic matter stabilization across an alpine watershed*, PIs: M Torres, **E Ramos**, **DE Ibarra**, MJ Winnick, KH Williams. \$39,000 to Brown University, \$713,660 total (including significant analytical costs billed to Brown facilities).

Packard Foundation DEI Funding, *Augmenting paleoCAMP: A multidisciplinary summer school for graduate students in paleoclimatology*, PI: J Tierney, co-PIs: **DE Ibarra**, KJ Anchukaitis, T Bhattacharya, K Johnson. \$50,000 total.

NSF P4Climate, *Collaborative Research: Using a Combined Basin Analysis, Isotopic, and Modeling Approach to Reconstruct the LGM through Early Holocene Hydroclimate for Glacial Lake Mojave*. PIs: M Kirby, **DE Ibarra**, AN Daneshmand. \$565,669 total, \$272,434 to Brown University.

NSF ICER 2136141. “*GOLD-EN: EAGER: Collaborative Research: Enhancing Asian American and Pacific Islander Participation and Belonging in the Geosciences*”, NSF Geoscience Opportunities for Leadership in Diversity – Expanding the Network, 2021-2023. PI: **DE Ibarra**; co-PIs: KV Lau, D Ho, S Legg, S Kim, J Wang, RI Rutberg, S Ying. \$295,291 total, \$209,243 to Brown University.

NSF AGS 2102901, “*Collaborative Research: Western U.S. hydroclimate during the Last Interglacial: developing proxy records and using model intercomparison to glimpse the future*”, NSF Paleo Perspectives on Climate Change Program, 2021-2024. PIs: JL Oster, **DE Ibarra**, and WD Sharp. \$818,633 total, \$298,664 to Brown University.

Heising-Simons Foundation, “*PaleoCAMP (Paleoclimate training in Climate Archives, Models, and Proxies): A multidisciplinary summer school for graduate students in paleoclimatology*”, 2021-2024. PI: J Tierney, co-PIs: **DE Ibarra**, KJ Anchukaitis, T Bhattacharya, K Johnson. \$425,166 total, \$19,569 to Brown University.

Completed External Funding as Brown PI/co-PI

National Cave and Karst Research Institute (NCKRI) National Seed Grants Program, *Utilizing Stalagmites from the Philippines (USPS): Quantifying and understanding interannual hydroclimate variability in the Philippines through cave monitoring and stalagmite analyses*, 2021-2022. PIs: **DE Ibarra**, **N Sekhon**, \$24,991 to Brown University.

NSF EAR 2025125, “*Acquisition of a continuous flow isotope ratio mass spectrometer (IRMS) system for the Organic Geochemistry Core Facility at Brown University*”, NSF Earth Sciences: Instrumentation and Facilities, 2020-2022. PI: Y Huang; co-PIs: **DE Ibarra**, S Clemens, T Herbert, J Russell. \$387,476 to Brown University.

External Funding as Significant Collaborator

NSF EAR, *Conference: The 9th International Clumped Isotope Workshop (ICIW) at Stony Brook University*, PI: G Henkes (Ibarra as collaborator). \$49,500.

NSF MRI, *MRI Track 1: Acquisition of a replacement electron microprobe at Brown University*, PI: S Parman (Ibarra as collaborator). \$1,201,919.

NSF EAR 2243857. “*REU Site: Dynamic Earth in the 21st Century: Undergraduate Research on the Evolution of Earth’s Interior, Surface and Climate*”, 2023-2026. PIs: K Fischer, Taiese Bingham-Hickman (w/ **DE Ibarra** as collaborator on advisory group). \$291,598 to Brown University.

NASA Planetary Science Enabling Facilities, “*Brown University electron microprobe facility*”, 2023. PI S Parman (Ibarra as collaborator). \$581,576 to Brown University.

NASA SSERVI, *Lunar Structure, Composition, and Processes for Exploration LunaSCOPE*, PI: AJ Evans (w/ 35 other co-Is; co-I **DE Ibarra** as Inclusion, Diversity, Equity & Accessibility lead liaison). \$7,500,00 to Brown University.

Internal Funding as PI/co-PI

Investigating mineralogical, geochemical and thermodynamic mechanisms governing lithium enrichment in lake clay deposits and subsequent release into lithium-rich brine-aquifer systems. Initiative for Sustainable Energy Seed Research Grant. PI: **DE Ibarra**. \$50,000.

Ice, Coral, Dust and Pollen: Multidisciplinary Approaches to Climate History, Brown University Cogut Institute for the Humanities, Collaborative Humanities Course Award. PIs: B Lander, **DE Ibarra**, 2023-2024. \$30,000 (\$15,000 to Ibarra).

Tropical Weathering and the Fate of Anthropogenic Carbon Emissions, Brown University IBES Research Seed Fund Multi-Investigator Research Project. PIs: **DE Ibarra**, S Porder, 2022-2024. \$60,000.

Life Beyond Earth: Determining the Habitability of Exoplanets, Brown University Seed Funds. PIs: A Evans, S Parman, **D Ibarra**, G Tucker, 2022-2024. \$90,000.

C. Other Completed Grants

University of California President’s Postdoctoral Fellowship Program, “*Climate, Weathering and Erosion: How have glacial cycles influenced global sediment transport?*” 2019-2020. PI: **DE Ibarra**. \$13,000 for support of research and fellowship travel expenses.

Miller Research Fellowship, Miller Institute for Basic Research in Science, University of California, Berkeley, “*Reconstructing Water Cycle Changes in the American West*” 2019-2021. PI: **DE Ibarra**. ~\$152,000 for support of postdoctoral fellowship and research

Balik Scientist Program, Short-Term Category, Department of Science and Technology, Republic of the Philippines, 2018-2019. PI: **DE Ibarra**, Co-PI: CP David. ~\$10,000 USD for support of 30 days of field work, teaching and collaboration at the University of the Philippines, Diliman.

Heising-Simons Foundation, “*Acquisition of a Gas Isotope Ratio Mass Spectrometer for the Measurement of Rare Oxygen-17 Isotopes in Terrestrial Paleoclimate Archives*”, 2017-2019. PI: CP Chamberlain; co-PIs: **DE Ibarra**, P Blisniuk. \$526,212 to support acquisition of a Thermo Scientific 253 Plus 10kV Isotope Ratio Mass Spectrometer and one year of postdoc funding for Ibarra. (Note: *Proposal was primarily written by Chamberlain and Ibarra*)

NSF EAR-1423967 “*Collaborative Research: High-resolution Cretaceous terrestrial climate records of temperature, weathering and hydrologic response to hyperthermals in the Songliao Basin, China*” NSF SGP Program, 2014-2016. PI: CP Chamberlain, Co-PIs: SA Graham, BB Sageman, AR Carroll and BS Singer. \$195,505 total, \$73,073 to Stanford University to partially support Ibarra PhD research. (Note: *Proposal was primarily written by Chamberlain and Ibarra*)

D. Funded Student and Postdoc Grants and Fellowships

External Grants

DOE SCGSR award, “*Investigating geochemical and thermodynamic mechanisms governing lithium mineralization in volcano-sedimentary ore deposits*” to **CA Gagnon** (working with Michael Whittaker, Lawrence Berkeley National Laboratory), 2024-2025, ~\$15,000 + travel and analytical expenses.

NSF EAR 2052913, “*EAR-PF: Paleoelevation reconstruction in hyper-arid settings – integrating triple oxygen and clumped isotope techniques in the Salar de Atacama Basin, Chile (22-25S)*”. Earth Science Postdoctoral Fellowship to **KL Butler** (co-mentored by K Huntington, University of Washington), National Science Foundation, 2022-2024, \$174,000.

NSF EAR 2053056, “*EAR-PF: Controls of and connections between silicate weathering and organic carbon cycling in watersheds: A test case in the Upper Deschutes Basin, Oregon, USA*”. Earth Science Postdoctoral Fellowship to **E Ramos** (co-mentor with M Torres, Rice University), National Science Foundation, 2021-2023, \$174,000.

Geological Society of America, “*Stable isotope-based Pliocene to present hydroclimate reconstruction from Clayton Valley, NV*”. Continental Scientific Drilling Division Student Research Grant to **CA Gagnon**, 2021, \$2,400 + \$500 for Conference Travel.

Geological Society of America, “*Paleoelevation reconstruction in a hyper arid setting: a case study from the Salar de Atacama Desert, Chile*”. Farouk El-Baz Student Research Grant to **KL Butler**, 2021, \$2,200.

Internal Funds

“*From Streets to Streams: Deciphering urban imprints on terrestrial-aquatic carbon cycling*”, Voss Postdoctoral Fellowship to **D Kerins**, Brown University, 2024-2026, \$135,000.

“*Constructing a hydrological balance model for the Bear Lake Watershed, Utah and Idaho using stable isotope data*”, IBES Research Award to **J Custado**, 2024, \$4,954.

“*Filling in the Gaps: Soils as Recorders of Regional Hydrology Across the Planet*”, IBES Research Award to **T Bobik**, 2023, \$5,000.

“Hydroclimate in the southwestern Great Basin: Implications for economically viable lithium accumulation in lake clay deposits”, IBES Research Award to **CA Gagnon**, 2023, \$5,000.

“The Impacts of Forest Fires on Catchment-Scale Chemical and Physical Weathering”, IBES Voss Undergraduate Research Fellowship to **J Bernstein-Schalet**, 2023-2024, \$4,500 stipend and \$2,000 research funds.

“Effects of Wastewater Pollution on Cape Cod Estuaries Revealed by Stable Isotopic Analysis”, IBES Voss Undergraduate Research Fellowship to **M Benson**, 2023-2024, \$4,500 stipend and \$2,000 research funds.

“Temperature Dependent Dissolution Experiments of Basalt, Dacite and Pumice from The Little Deschutes River Valley, OR”, Research at Brown Grant to **J Miller**, \$500

Cascade Streams as indicators of changes to the Soil Organic Carbon Pool, IBES Research Award to **S Munoz**, 2023, \$4,720.

Watershed controls on rock weathering and soil carbon storage, IBES Research Award to **S Munoz**, 2022, \$4,450.

“Using rivers to decipher the coevolution of carbon cycling and silicate weathering”. IBES Research Award to **S Munoz**, 2022, \$1,600.

“Quantifying and understanding interannual climate variability in the Philippines”. Voss Postdoctoral Fellowship and Presidential Diversity Postdoctoral Fellowship to **N Sekhon**, Brown University, 2021-2023, ~\$130,500.

“Pliocene to present hydroclimate reconstructions from the Great Basin”. IBES Research Award to **CA Gagnon**, 2021, \$4,991.

E. Industry Supported Research and Contracts

Note: *due to non-disclosure agreements industry support and billed amounts are not disclosed

*E3 Lithium, silicate stable isotope analyses and strontium isotope analyses (billed to Brown geochemistry facilities), 2023-Present

*Lithium Americas student internship for **CA Gagnon**, summer 2023

*Lithium Americas, carbonate and silicate stable isotope analyses (billed to Brown geochemistry facilities), 2022-2024

*Albermarle Corporation, carbonate stable isotope analyses (billed to Brown geochemistry facilities), 2021-2022

Meteorite Identification by triple oxygen isotope analyses (billed to Brown geochemistry facilities), 2022-Present. Meteoritical Bulletin Classification contributions by my lab are listed here:

<https://sites.brown.edu/ibarra-lab/research/data-and-code-2/>

5. SERVICE

Departmental and University Service

Brown University

Advisory Committee, Honorary Degrees, 07/2024-Present

Engineering & Physical Sciences Cores Oversight Committee, 09/2024

Department Laboratory Safety Committee, 09/2023-07/2024

Chair, Diversity, Equity and Inclusion Committee (DIAC), IBES, 09/2023-Present
Ad Hoc Faculty Search Committee (Cryosphere/Physical Oceanography), 07/2023
Seed Grant Committee, Institute for Sustainable Energy, 06/2023
Second Year Advisor, 2023-24 (n=6)
Voss Undergraduate Fellowship Selection Committee, IBES, 03/2023 & 03/2024
First Year Advisor, 2022-23 (n=6, listed below)
ENVS Concentration Advisor, 04/2022-05/2024 (n=4, listed below)
Department Diversity, Equity and Inclusion Committee (DIAC), DEEPS, 09/2021-07/2024
Department Colloquium Committee, DEEPS, 07/2021-12/2022
Voss Postdoc Search Committee, IBES, 10/2021-03/2022 & 08/2024-Present

University of California, Berkeley & Stanford University as Graduate Student or Postdoc

Seminar Co-Organizer, Center for Isotope Geochemistry, UC Berkeley, 2020
Postdoc Representative to the Committee on Libraries (C-LIB), elected Stanford Faculty Senate appointment, Stanford University, 2018-2019
Community Engagement Board, California Alliance for Graduate Education & The Professoriate (NSF AGEP Program), 2018-2020
Mentor, EDGE (Enhancing Diversity in Graduate Education) Graduate Fellowship Program, Stanford University, 2015-2018.

Professional Service

Editorial Board

Handling Editor (Low-Temperature Geochemistry), *Advances in Geochemistry and Cosmochemistry*, 2025-Present (*upcoming*)
Associate Editor, *Frontiers in Earth Science*, 2022-Present
Editorial Board (Earth Science), *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 2022-Present
Associate Editor, *All Earth* (Taylor & Francis), 2021-Present
Associate Editor, *American Journal of Science* (Highwire Press/Yale), 2019-Present
Advisory Council and Moderator, *EarthArXiv*, Earth and Planetary Science preprint server, 2017-2020

Other Professional Service

Advisory Board and Mentor, GradMAP Philippines, 2022-2023
Member-at-Large, Geological Society of America Diversity in the Geoscience Committee, 2021-2024
Elderfield Award Committee, American Geophysical Union, 2021-2023
AGU Bridge Partner Selection Committee, American Geophysical Union, 2021-2023
Co-founder and Board of Directors, Paleoclimate Training in Climate Archives, Models, and Proxies (paleoCAMP) summer school, 2021-Present
Member, National Research Council of the Philippines, Department of Science and Technology, 2020-Present

Conference Session Convener/Co-Convener

- *Hydroclimate Lessons from Cenozoic Paleoclimates*, 2021 and 2023 AGU Fall Meeting
- *Do Carbon Sources or Sinks Drive the Phanerozoic Carbon Cycle?: Understanding Geobiologic Forcings and Feedbacks*, 2022 and 2023 GSA Annual Meeting
- *Asian Americans and Pacific Islanders in Geosciences Town Hall*, 2021 AGU Fall Meeting
- *Novel and Quantitative Methods for Reconstructing Continental Palaeoenvironments and Palaeohydrology*, 2021 AGU Fall Meeting
- *Global Geochemical Cycles and Earth's Climate over Geologic Time*, 2020 AGU Fall Meeting
- *Marine-terrestrial Connections between the Pacific and the Americas*, 2020 AGU Fall Meeting

- *Recent Advances in Lakes and Lacustrine Material: Responses to Regional Climate and Environmental Change*, 2016 AGU Fall Meeting

Manuscript Reviewer (n=138 reviews, since 2012), including but not limited to: *Nature; Science Advances; Nature Geoscience; Nature Communications; Earth and Planetary Science Letters; Geophysical Research Letters; Geology; Geochimica et Cosmochimica Acta; Water Resources Research; Paleoceanography and Paleoclimatology; Earth Surface Dynamics; Quaternary Science Review; Climate of the Past.*

My complete review record can be found here: <https://www.webofscience.com/wos/author/record/E-6141-2013>

Proposal Panelist (n=5, since 2020): *National Science Foundation* (multiple programs).

Proposal Reviewer (n=36, since 2018): *National Science Foundation* (multiple programs); *Austrian Science Fund; Earth Observatory of Singapore; Israel Science Foundation; German Research Foundation; American Chemical Society.*

Additional Reviews: *IPCC AR6 WG1 Expert Reviewer (2019)*

Community Service and Outreach

Every Rock Has a Story YouTube Channel, Ethan Baxter, Boston College, Featured Host, 2022

Miller Research Institute Outreach at El Cerrito High School Science Department, El Cerrito, California, 2020-2021

- Lead coordinator for outreach program focused on promoting interest in STEM fields with historically underrepresented groups (school is 28% Hispanic, 17% African American and 22% Asian American and Pacific Islander; 43% qualify for Free/Reduced Lunch)

Independent Schools Foundation (ISF) Academy, Hong Kong, Shuyuan Discovery Science Program, 2013–2021

- External Science Advisor, 2013–2021
- Presentation: *Preparing an AGU Bright STaRS poster*, 2014, 2016, 2020 and 2021
- Designed spatial mapping project on history of science in China using QGIS/ArcGIS carried out at the Needham Research Institute, Cambridge University, 2016

Gear up for Scientific & Technical Publishing, Stanford Libraries, 2018.

Presentation: *Preprints and preprint servers for all disciplines: lessons from the creation of EarthArXiv.*

Understanding Global Change Teacher Workshop, University of California Museum of Paleontology and Stanford School of Earth, Energy and Environmental Sciences, 2015. Presentation: *Ice Age evidence for dramatic regional and global changes in the terrestrial water cycle*

History of Life High School Intern Program, Stanford School of Earth, Energy and Environmental Sciences, 2015. Presentation: *The Ice Age water cycle.*

Geographic Information Systems (GIS) Day, Branner Earth Sciences Library, Stanford University, 2012. Presentation: *Enhancing paleo-lake level records of an internally draining watershed: Surprise Valley, CA*

6. ACADEMIC HONORS AND AWARDS

Graduate School Faculty Award for Advising and Mentoring, Brown University, 2024

H. Burr Steinbach Visiting Scholar, Marine Geology and Geophysics, Woods Hole Oceanographic Institute, 2023

Best Paper, European Association of Science Editors (EASE), for Pourret et al. *International disparities in open access practices in the Earth Sciences*, 2022

Elected Member, Earth and Space Sciences Division, National Research Council of the Philippines, Department of Science and Technology, Republic of the Philippines, 2021

Elected Full Member, The Philippine-American Academy of Science and Engineering (PAASE), 2021

Balik Scientist (Short-Term Category), Republic of the Philippines, Department of Science and Technology, 2018

Graduate Student Award for Scholarly and Research Achievement (awarded to the top graduating Ph.D. student in the department), Earth System Science, Stanford University, 2018

Editor's Citation for Excellence in Refereeing, Geophysical Research Letters, American Geophysical Union, 2017

Centennial Teaching Assistant Award, Stanford University, 2016

NSF USSP, Urbino Summer School in Paleoclimatology NSF Scholarship, 2014

On to The Future Diversity Program, Geological Society of America, 2013

Hoefer Fund Partnership Award for Excellence in Mentoring Undergraduate Writing, Stanford University, 2013

Graduate Climate Conference Travel Scholarship, University of Washington, 2012

Firestone Medal for Excellence in Undergraduate Research, Stanford University, 2012

Dean's Award for Outstanding Academic Achievement, Stanford University, 2012

Outstanding Senior in Geological and Environmental Sciences, Stanford University, 2012

David E. Lumley Young Scientist Scholarship for Energy and Environmental Science, American Geophysical Union, 2011

Barry M. Goldwater Scholarship, Honorable Mention, 2011

7. FELLOWSHIPS

Junior Faculty Teaching Fellow, Sheridan Center for Teaching and Learning, Brown University, 2024

University of California President's Postdoctoral Fellow, University of California, Berkeley, 2019

Miller Research Fellow, Miller Institute for Basic Research in Science, University of California, Berkeley, 2019

National Science Foundation Earth Science Postdoctoral Fellow (EAR-PF), 2019 (award declined)

Enhancing Diversity in Graduate Education (EDGE) Fellowship, Stanford University, 2013

Thomas D. and Janice H. Barrow Fellowship, Stanford University, 2012-2013

8. TEACHING AND MENTORING

Teaching

Brown University Teaching

Terrestrial Biogeochemistry, Ecosystems and the Global Carbon Cycle, EEPS/ENVS 1300, Fall 2024
(27 Undergraduates)

Ice, Coral, Dust and Pollen: Multidisciplinary Approaches to Climate History, ENV5 1917, co-taught with Brian Lander, Spring 2024 (9 Undergraduates)

Terrestrial Paleoclimatology Seminar, EEPS 2910U, Spring 2024 (9 Graduate Students, 2 Postdocs)

Brown Environmental Leadership Lab: Eastern Sierras, CEES0945, co-taught with Catherine Gagnon and Manuel Justin Custado, Summer 2023 (24 pre-college students)

Environmental Stable Isotopes, EEPS 1380, co-taught with Yongsong Huang, Spring 2023 (6 Undergraduates, 7 Graduate Students)

Seminar in Analytical Geochemistry, EEPS 1960N, co-taught with Yongsong Huang, Spring 2023 (4 Undergraduates, 6 Graduate Students)

Historical Climatology and Global Climate Change, ENV5 0070G (First-Year Seminar), co-taught with Natasha Sekhon, Fall 2022 (18 First-Year Undergraduates)

Notes: Contracted teaching releases in Fall 2021 and Fall 2023; Parental release in Spring 2022.

Invited Class Lectures

Terrestrial Biogeochemistry, Methods for Interdisciplinary Environmental Research (ENV5 1920), Brown University, 2022.

Stable Isotope Geobiology, Fundamental of Geobiology (ESS 205/Geosci 205), Stanford University, 2020.

Warm and cold wet states in the western United States during the Pliocene-Pleistocene, Lehigh University, 2020.

Clumped and Triple Oxygen Isotopes: Theory and Applications, Environmental Isotope Geochemistry (GEOL 1380), Brown University, 2020.

Diversity and Inclusion in the Geosciences (Earth 203), Stanford University, 2020.

Quantifying Weathering and Erosion Using Rivers, University of the Philippines, 2019.

Formulating a MS research topic, University of the Philippines, 2019.

A geobiological view of weathering and erosion, Fundamental of Geobiology (ESS 205/Geosci 205), Stanford University, 2018.

Constraining past mid-latitude circulation changes using paleoclimate models and proxies, Atmosphere Ocean and Climate Dynamics Group, Stanford University, 2018.

Western United States Climate During the Last Glacial Maximum, Atmosphere, Ocean and Climate Dynamics (ESS 246A), Stanford University, 2016.

Figure making and dataset visualizing in the Earth sciences, Senior Seminar: Issues in Earth Sciences (Geophys 199/Geosci 150), Stanford University, 2014 and 2016.

Mentoring

Postdoctoral Researchers and Affiliate Postdocs

- Dr. Devon Kerins, Voss Postdoctoral Fellow, DEEPS & IBES, Brown University, 2024-Present
- Dr. Gavin Piccione, DEEPS, Brown University (funded on collaborative P4Climate grant and internal funds), 2023-Present
- Dr. Kristina L. Butler, NSF Earth Science Postdoctoral Fellow, DEEPS, Brown University & Earth and Space Sciences, University of Washington (co-mentor with K Huntington), 2022-2023
 - o Secured tenure-track faculty position at University of Texas Dallas, 12/2023.
- Dr. Dean Kahn, DEEPS, Brown University (co-mentor with AJ Evans (lead) and S Parman funded on internal seed grant and NASA grant), 2022-Present.
- Dr. Christopher Kinsley, Berkeley Geochronology Center (external co-mentor with W Sharp and JL Oster funded on collaborative P2C2 NSF grant), 2022-2023.
- Dr. Natasha Sekhon, Voss Postdoctoral Fellow and Presidential Diversity Postdoctoral Fellow, DEEPS & IBES, Brown University, 2021-2023.
 - o Nominated to and awarded Brown University Postdoctoral Research Award, 2022,
 - o Wrote and was awarded NCKRI grant during postdoc (\$24,991 to Brown University),

- Wrote NSF P4Climate Proposal during postdoc.
- Supported nomination package for GSA Karst Division Early Career Award, 2023
- Secured tenure-track faculty position at Occidental College, 01/2024.
- Dr. Evan Ramos, NSF Earth Science Postdoctoral Fellow, DEEPS, Brown University & Earth, Environmental and Planetary Sciences, Rice University (co-mentor with M Torres), 2021-2024
 - Wrote and was awarded a large DOE grant during postdoc (\$39,000 to Brown University, \$713,660 total).
 - Secured tenure-track faculty position at the University of Pittsburg starting 07/2024

Graduate Students

Brown University Primary Advisor

Ongoing

- Monica Gerald Vega, Sc.M./Ph.D., DEEPS, Brown University, 2023-Present. (co-advised by K Cobb)
- Justin Custado, Sc.M./Ph.D., DEEPS, Brown University, 2022-Present.
- Sebastian Muñoz, Sc.M./Ph.D., DEEPS, Brown University, 2021-Present. (co-advised by L Smith)
 - National Science Foundation Graduate Student Research Fellowship
 - Nominated to and awarded Brown University Graduate School's Presidential Fellowship
- Catherine A. Gagnon, Sc.M./Ph.D., DEEPS, Brown University, 2020-Present.
 - Secured Lithium Americas Internship funding, summer 2023
 - Department of Energy Office of Science Graduate Student Research Program

Completed

- Theodore Bobik, Sc.M., DEEPS, Brown University, 2022-2023.

Brown University Committee Member¹ and/or Collaborator²

Ongoing

- ^{1,2}Kaiyuan Wang, M.S., DEEPS, Brown University, 2024-Present (advised by EB Hodgin).
- ¹Cesar Bucheli, M.S./Ph.D., DEEPS, Brown University, 2023-Present (advised by E Cooperdock).
- ¹Ellen Jorgenson, M.S./Ph.D., DEEPS, Brown University, 2023-Present (advised by J Russell).
- ¹Chandler Morris, M.S./Ph.D., DEEPS, Brown University, 2023-Present (advised by K Cobb).
- ^{1,2}Riley Havel, M.S./Ph.D., DEEPS, Brown University, 2022-Present (advised by G Budde).
- ¹Xi Chen, M.S./Ph.D., DEEPS, Brown University, 2022-Present (advised by JE Lee).
- ¹Vivien Chen, M.S./Ph.D., DEEPS, Brown University, 2022-Present (advised by M Hastings).
- ¹Dan Razionale, M.S./Ph.D., DEEPS, Brown University, 2022-Present (advised by G Budde).
- ¹Heejeong Kim, M.S./Ph.D., DEEPS, Brown University, 2022-Present (advised by M Hastings).
- ¹Andrea Mason, M.S./Ph.D., DEEPS, Brown University, 2021-Present (advised by J Russell).
- ^{1,2}Jared Nirenberg, M.S./Ph.D., DEEPS, Brown University, 2020-Present (advised by T Herbert).

Completed

- ¹Sloan Garelick, Ph.D., DEEPS, Brown University, 2022 (advised by J Russell).

External Committee Member or Examiner

- Bryce Belanger, M.S./Ph.D., Earth and Environmental Sciences, Vanderbilt University, 2022-Present. (External Committee Member and Collaborator, funded on collaborative P2C2 grant)
- Anupam Samanta, Ph.D., Indian Institute of Science Education and Research, Pune, 2022.
Weathering and climate linkage at seasonal to kilo-year timescales: Evidence from water and sediment chemistry. (Ph.D. Examiner)
- Dainty Clarice V. Rabang, M.S., Geology, University of the Philippines, Diliman, 2020-Present.
Hydrogeochemical assessment of ultramafic watersheds and its implications on chemical weathering rates and CO₂ consumption. (External Committee Member and Collaborator)

- Daniel M. Coffey, M.S., Geological Sciences, University of Alaska Anchorage, 2018–2020. *Lithologic sources and release mechanisms for lithium into the aquifer system of Clayton Valley, NV.* (External Committee Member and Collaborator, funded by Albermarle Inc.)

Undergraduate and High School Student Researchers and Mentees

Researchers

- Emma Louthain, Chemistry, Undergraduate Researcher, 2024-Present
- Sarah Levine, DEEPS, Undergraduate Researcher, 2024-Present
 - o Fall 2024 SPRINT | UTRA
- Claire Xu, DEEPS, Undergraduate Researcher, 2024-Present
 - o Fall 2024 SPRINT | UTRA
- Eleanor Barth Wu, Undergraduate Researcher, 2024-Present
- Tee Gotsch, DEEPS, Undergraduate Researcher, 2024
 - o Summer 2024 SPRINT | UTRA
- Erin Alejandra Torres, DEEPS Leadership Alliance REU, 2024
- Maira Rojas-Tineo, ENGN, Undergraduate Researcher, 2023.
 - o Fall 2023 SPRINT | UTRA
- Brooke Wangenheim, Undergraduate Researcher, 2023-2024.
 - o Fall 2023 SPRINT | UTRA
- Marina Benson, DEEPS, Undergraduate Researcher, 2023-2024.
 - o IBES Voss Undergraduate Research Fellowship, 2023-2024
- Daniel Graves, ENVS, Undergraduate Researcher, 2023-2024.
 - o IBES ENVS Summer Research & Internship Award 2023
- Jonah Bernstein-Schalet, DEEPS, Undergraduate Researcher, 2023-2024.
 - o IBES Voss Undergraduate Research Fellowship, 2023-2024
- Whitney Vieira Ribeiro, DEEPS, Undergraduate Researcher, 2023-2024.
- Anna Dubey, BIOL, Undergraduate Researcher, 2022-Present.
 - o University of Maine Darling Marine Center summer internship program, 2023
- Mia Prausnitz-Weinbaum, ENVS, Undergraduate Researcher, 2022.
- Celia Kong-Johnson, DEEPS, Undergraduate Researcher, 2022-Present.
 - o Fall 2023 SPRINT | UTRA
 - o Caltech RSI-WAVE Fellow Program, summer 2023
 - o UCAR SOARS Program, summer 2024
- Christina Marsh (Pomona College), DEEPS Leadership Alliance REU and Remote Undergraduate Researcher, Summer 2022 to Summer 2023.
 - o Presented work at the Leadership Alliance National Symposium, Brown Summer Research Symposium and presentation at the 2022 Geological Society of America Annual Meeting: *Late Holocene hydroclimate changes recorded in $\delta^{18}O$ of a stalagmite from Cueva De La Fabrica, Colombia.*
- Shaw Miller, DEEPS, Undergraduate Researchers, 2022-2024.
 - o Summer 2022 SPRINT | UTRA, Summer 2022. Presented work at the Brown Summer Research Symposium: *Stable Isotopes show millennial-scale variations in lake water balance in Owen's Lake, CA.*
 - o DOE SULI program to work at the Molecular and Nanogeochemistry group at Lawrence Berkeley National Lab.
 - o Nominated for and awarded 2023 Sarah LaMendola Undergraduate Research Award for Senior Thesis work, \$1,000.

- Senior thesis: *Identifying drivers of hydroclimate change during MIS 5 in Owens Valley, California using carbonate clumped isotopes*
- Natalie Chang, DEEPS, Summer 2022 SPRINT | UTRA, Summer 2022.
 - Presented work at the Brown Summer Research Symposium: *Late Quaternary climate reconstruction of Silver Lake through oxygen and carbon isotopes in ostracod carbonate.*
- Jesse Miller, DEEPS, Independent Study and Undergraduate Researcher, Fall 2021 to Spring 2023
 - Summer 2022 SPRINT | UTRA
 - Presentation at the 2023 NE/SE Geological Society of America Sectional Meeting: *Temperature Dependent Dissolution Experiments of Basalt, Dacite and Pumice from The Little Deschutes River Valley, OR.*
 - Senior thesis: *Temperature dependent dissolution experiments of basaltic andesite, dacite and pumice from the Little Deschutes River Valley, Oregon*
- Annabelle Gao, Academic Year Undergraduate Researcher, DEEPS, Fall 2021 to Summer 2023.
 - Caltech WAVE Program, summer 2022
- Elizabeth Gaviria (Rice University), DEEPS Leadership Alliance REU and Remote Undergraduate Researcher, Summer 2021 to Spring 2022.
 - Presented work at the Leadership Alliance National Symposium and the American Meteorological Society Annual Meeting: *Modeling seasonal and interannual climate variability in modern precipitation pathways across western North America using air parcel trajectories.* Now grants analyst at Tennessee Department of Environment and Conservation.
- Chloe Whicker, UCLA CARE Fellows and CAMP Programs, 2017–2018.
 - Presented work at 2017 GSA: *Clumped isotope thermometry constraints on late Pleistocene hydroclimates for Lake Surprise, California.* Now PhD student in Climate and Space Sciences and Engineering at University of Michigan.
- Samuel Kramer, Stanford Earth Undergraduate Research Program (SESUR), 2015 (co-advised with Jeremy Caves Rugestein).
 - Awarded a Stanford undergraduate research prize for research on: *Quantifying primary productivity in Cenozoic soil carbonates from mid-latitude regions.* Now consultant at Energy and Environmental Economics Consulting.
- Alex Beroza (Gunn High School, Palo Alto), Stanford Earth Young Investigators, 2012 (co-advised with Miguel Cruz).
 - Presented work at AGU Bright STaRS session: *An evaluation of uranium isotopes in speleothems as a complementary tool for paleoclimate reconstruction.* Now Lifecycle Marketing Associate at Crexi.

Academic Mentees

Data Science Fellows

- Sophie Blumenstein, 2022

Undergraduate Concentration Advisees

- Xiaokang Xue, Sc.B. ENVS, Sustainability in Development, 2022-Present
- Carla Losada, A.B. ENVS, Air, Climate & Energy, 2022-2024
- Anthony Bishop-Gyls, Sc.B. ENVS, Air, Climate & Energy, 2022-2024
- Mia Prausnitz-Weinbaum, A.B. ENVS, Environment and Inequality, 2022-2024

First/Second Year Undergraduate Advisees

- Alicia Chandler, 2022-2024
- Alexandra Coia, 2022-2024
- Bailey Smoko, 2022-2024
- William Yu, 2022-2024
- Yingshen (Karen) Zhang, 2022-2024

- Cameron Zytkevicz Ray, 2022-2024

Significant External Graduate Student Collaborators

- Emily Nigro, Ph.D., Stanford University, 2024-Present (advised by CP Chamberlain).
- Xueyao Cheng, Ph.D., Stanford University, 2023-Present (advised by CP Chamberlain).
- Alexa Terrazas, Ph.D., UCLA, 2021-Present (advised by AE Tripathi).
- Jordan Jenckes, Ph.D., University of Alaska Anchorage, 2019-2023 (advised by LA Munk).
- Larry Taylor, Ph.D., UC Berkeley, 2019-2021 (advised by S Finnegan).
- Alexandra Arnold, Ph.D., UCLA, 2017-2024 (advised by AE Tripathi).
- Cameron de Wet, M.S./Ph.D., Vanderbilt University, 2016-2023 (advised by JL Oster).
- Lauren Santi, M.S., UCLA, 2017-2019 (advised by AE Tripathi).
- Jennifer Hall, M.S., Central Washington University, 2015–2017 (advised by AE Egger).
- Nicholas Hermann, M.S., Vanderbilt University, 2014–2016 (advised by JL Oster).
- Brian Marion, M.S., Central Washington University, 2014–2016 (advised by AE Egger).

Lab Visitors

- Emily Nigro, Ph.D. Student, Stanford University, March 2024
- Xueyao Cheng, Ph.D. Student, Stanford University, March 2024
- Chris Emproto, Ph.D. Candidate, University of Michigan, Fall 2023
- Jiquan Chen, Ph.D. Candidate, China University of Geosciences (Beijing), Fall 2023 to Present
- Bryce Belanger, Ph.D. Candidate, Vanderbilt University, Summer 2023
- Dr. Jaivime Evaristo, Assistant Professor, Utrecht University, Spring 2023