NAOMI E. LEVIN

DEPARTMENT OF EARTH AND ENVIRONMENTAL SCIENCES
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RESEARCH INTERESTS

Ecosystem and landscape responses to climate change; triple oxygen isotope geochemistry; plant-animal-climate interactions; isotope hydrology; environmental context for human evolution; paleoclimate proxy development; rift basin evolution.

EDUCATION

Ph.D., Geology, University of Utah, 2008
Thesis Title: *Isotopic Records of Plio-Pleistocene Climate and Environments in Eastern Africa*
Advisor: Thure E. Cerling
M.S., Geology, University of Arizona, 2002
Thesis Title: *Isotopic Evidence for Plio-Pleistocene Environmental Change at Gona, Ethiopia*
Advisor: Jay Quade
B.S., Geology, Stanford University, 2000
B.A., Anthropological Sciences, Stanford University, 2000

PROFESSIONAL POSITIONS

Professor, Earth & Environmental Sciences and Program in the Environment, University of Michigan, 2023–present
Associate Professor, Earth & Environmental Sciences and Program in the Environment, University of Michigan, 2016–2023
Associate Chair Graduate Studies, Earth & Environmental Sciences, University of Michigan, 2018–2021
Assistant Professor, The Johns Hopkins University, 2009–2016
Postdoctoral Scholar, California Institute of Technology, 2008–2009
Research Assistant, University of Utah, 2004, 2006–2008
NSF GK12 Graduate Fellow, University of Utah, 2005–2006
Stokes Academic Scholar, University of Utah, 2003–2004
Technician, Paleomagnetics Laboratory, University of Arizona, 2003
NSF GK12 Graduate Fellow, University of Arizona, 2001–2002

AWARDS

'Best Professor' (Teaching) Award, University of Michigan Earth Geoclub, 2022
Fellow, Geological Society of America, 2014
Donath Medal Young Scientist Award, Geological Society of America, 2013
Subaru Outstanding Woman in Science, Geological Society of America, 2011
Outstanding Ph.D. Student, Department of Geology & Geophysics, University of Utah, 2008
Deans' Award for Academic Achievement, Stanford University, 2000

GRANTS

Balancing water needs amidst climate change: Mono Lake as a case study for communities and watersheds in the U.S., lead PI, *University of Michigan LSA Meet the Moment Research Initiative*, 8/15/2022–8/14/2024 (extended to 8/14/2026). Total award $249,855 (direct costs).
Disentangling the drivers of human evolution: tectonics, climate and habitat, co-PI, *W.M. Keck Foundation*, 8/1/2021–7/31/2024 (extended to 7/31/2026). Total award $1,200,000 direct costs (UM portion, $137,027).

Past

Digging into soil carbonate formation processes with triple oxygen isotopes, sole PI, *National Science Foundation Geobiology & Low-Temperature Geochemistry* (EAR 2122023), 9/1/2021–8/31/2023 (extended to 8/31/2024). Total award $360,667.

Development of precipitation, evaporation and temperature records from tropical lake sediments and cave deposits for the last 700,000 years, co-PI, *National Science Foundation P2C2* (EAR 2102843), 7/15/2021–6/30/2024 (extended to 6/30/2025). Total award $1,547,323 (UM portion, $331,413).

Tracking evaporation using a multi-material $\Delta^{17}O$ approach: expanding capabilities to gypsum, fluid inclusions and brines at UM, sole PI, *University of Michigan LSA Associate Professor Support Fund*, 7/1/2021–6/30/2024. Total award $74,941 (direct costs).

A Million Years of Climate Change in Eastern Africa, sole PI, *Johns Hopkins University Catalyst Award*, 2015–2016. Total award, $74,736 (direct costs).

Collaborative Research: Acheulean Hominin Behavior at Elandsfontein, South Africa, co-PI, *National Science Foundation Archaeology* (BCS 1219494), 2012–2015. Total award $116,951 (JHU portion $62,934).

Collaborative Research: Pliocene Geology, Geochronology, and Paleontology of Woranso-Mille, Ethiopia, co-PI, *National Science Foundation Physical Anthropology* (BCS 1125345), 2012–2015. Total award $580,927 (JHU portion $47,625).

Triple Isotope Water Analyzer for Extraplanetary Studies, sub-contract through Los Gatos Research, *National Aeronautics and Space Administration* (LGRI2013), 2013–2015. Total award: $100,000.

Variations in $^{17}O/^{16}O$ and $^{18}O/^{16}O$ of Meteoric Waters from the Conterminous USA, PI, *American Chemical Society, Petroleum Research Fund – Doctoral New Investigator Grant* (52642DNI2), 2012–2015. Total award: $100,000.

Geochronology of *Ardipithecus ramidus* fossil sites at Gona, Afar Rift, Ethiopia, PI, *National Geographic Research and Exploration Program* (#8891-11), 2012. Total award: $25,584.

Geological Society of America Student Grant, 2006.

Sigma Xi Student Grant, 2006.

Associated Students of the University of Utah Travel Grant, 2005.

International Association of Sedimentologists Student Grant, 2002.

Undergraduate Research Grant, Stanford University, 1998 & 1999.

PUBLICATIONS

Google Scholar, ORCID: orcid.org/0000-0001-5703-3717

graduate student direct advisee on the work; postdoc, direct advisee on the work;
*undergrad/tech in the lab involved in the work

Manuscripts in Review

Kelson JR, **Levin NE**, Huber DP, Jin L, Gutiérrez Jurado HA, Pierce JL, Triple oxygen and hydrogen isotopes of soil water across climates, seasons, and depths. *Submitted to EPSL* on 12/9/25

Peer-Reviewed Publications

71. Haile-Selassie Y, Schwartz GT, Prang TC, Saylor BZ, Deino AL, Gibert L, Ragni A **Levin NE**. 2025. New finds shed light on diet and locomotion in *Australopithecus deyiremeda*. Nature, doi.org/10.1038/s41586-025-09714-4.
70. Katz Sarah A., **Levin NE**, Rodbell DT, Abbott MB, Passey BH, *Katz Scott A. 2025. Orbital forcing drives both the South American monsoon and local water balance in the central Andes during interglacials, *Geophysical Research Letters*, 52, e2025GL116249, doi.org/10.1029/2025GL116249.

69. Kelson JR, Huth TE, *Andrews K, *Bartleson MN, Cerling TE, Jin L, *Salinas MP, **Levin NE**. 2025. Pedogenic carbonate as a transient soil component in a humid, temperate forest (Michigan, USA), *Quaternary Research* 1-16, doi.org/10.1017/qua.2024.41.
68. Katz SA, **Levin NE**, Abbott MD, Rodbell DT, Passey BH, DeLuca NM, Larsen DJ, Woods A, 2024. Holocene temperature and water stress in the Peruvian Andes: insights from lake carbonate clumped and triple oxygen isotopes, *Paleoceanography and Paleoclimatology*, 39, e2023PA004827, doi.org/10.1029/2023PA004827.
67. Hu H, Passey BH, Lehmann SB, **Levin NE**, Johnson BJ. 2023. Modeling and interpreting triple oxygen isotope variations in vertebrates, with implications for paleoclimate and paleoecology, *Chemical Geology*, 642: 121812, doi.org/10.1016/j.chemgeo.2023.121812.
66. Grim SL, Stuart DG, Aron P, **Levin NE**, Kinsman-Costello L, Waldbauer JR, Dick GJ. 2023. Seasonal shifts in community composition and proteome expression in a sulphur-cycling cyanobacterial mat. *Environmental Microbiology*, 25(11), 2516–2533, doi.org/10.1111/1462-2920.16480.
65. Kelson JR, Huth TE, Passey BH, **Levin NE**, Petersen SV, Ballato P, Beverly EJ, Breecker DO, Hoke GD, Hudson AM, Ji H, Licht A, Oerter EJ, Quade J. 2023. Triple oxygen isotope compositions of globally distributed soil carbonates reveal widespread evaporation of soil waters. *Geochimica et Cosmochimica Acta* 355: 138-160, doi.org/10.1016/j.gca.2023.06.034.
64. Stinchcomb GE, Quade J, **Levin NE**, Iverson N, Dunbar N, McIntosh W, Arnold LJ, Demuro M, Duval M, Grün R, Zhao J, White M, Hynek SA, Brown FH, Rogers M, Semaw S. 2023. Fluvial response to Quaternary hydroclimate in eastern Africa: evidence from Gona, Afar, *Quaternary Science Reviews* 309: 108083, doi.org/10.1016/j.quascirev.2023.108083.
63. Jimenez-Rodriguez S, Quade J, **Levin NE**, Campisano CJ, Stinchcomb GE, Roman DC, Bedaso Z. 2023. Environmental controls on the hydrogen isotopic composition of volcanic glass from the Southern Afar rift, eastern Ethiopia, *Chemical Geology*, 628, 121484, doi.org/10.1016/j.chemgeo.2023.121484.
62. Aron PG, Li S, Brooks JR, Welker J, **Levin NE**. 2023. Seasonal variations in triple oxygen isotope ratios of precipitation in the western and central United States, *Paleoceanography and Paleoclimatology* 38(4): e2022PA004458, doi.org/10.1029/2022PA004458
61. Katz SA, **Levin NE**, Rodbell DT, Gillikin DP, Aron PG, Passey BH, Tapia PM, Serrepe AR, Abbott MB. 2023. Detecting hydrologic distinctions among Andean lakes using clumped and triple oxygen isotopes. *Earth and Planetary Science Letters*, 602: 117927, doi.org/10.1016/j.epsl.2022.117927
60. **Levin NE**, Simpson SW, Quade J, Everett ME, Frost SR, Rogers MJ, Semaw S. 2022. The 6-million-year record of ecological and environmental change at Gona, Afar Region, Ethiopia. In S. Reynolds & R. Bobe (Eds.), *African Paleoecology and Human Evolution* (pp. 197-213). Cambridge: Cambridge University Press. doi.org/10.1017/9781139696470.017
59. Lehmann SB**, Levin NE,** Passey BH, Hu HT, Cerling TE, Miller JM, Arppe L, Beverly EJ, Huth TE, Kelson JR, Hoppe KA, Luyt J, Sealy J. 2022. Triple oxygen isotope distribution in modern mammal teeth and potential geologic applications, *Geochimica et Cosmochimica Acta*, 331: 105-122, doi.org/10.1016/j.gca.2022.04.033
58. Peaple MD, Beverly EJ, Garza B, Baker S, **Levin NE**, Tierney JE, Häggi C, Feakins SJ. 2022. Identifying the drivers of GDGT distributions in alkaline soil profiles within the Serengeti ecosystem. *Organic Geochemistry*, 169: 104433, doi.org/10.1016/j.orggeochem.2022.104433

57. Huth TE, Passey BH, Cole JE, Lachniet MS, McGee D, Denniston RF, **Levin NE**. 2022. A framework for triple oxygen isotopes in speleothem paleoclimatology. *Geochimica et Cosmochimica Acta*, 319: 191-219, doi.org/10.1016/j.gca.2021.11.002
56. Aron PG, Poulsen CJ, Fiorella RP, **Levin NE**, Acosta RP, Yanites BJ, Cassel EJ. 2021. Variability and controls on $\delta^{18}O$, d-excess, and $\Delta'^{17}O$ in southern Peruvian precipitation. *Journal of Geophysical Research Atmospheres*, 126, doi.org/10.1029/2020JD034009
55. Zhang D, Beverly EJ, **Levin NE,** Vidal E, Matia Y, Feakins SJ. 2021. Carbon isotopic composition of plant waxes, bulk organics and carbonates from soils of the Serengeti grasslands. *Geochimica et Cosmochimica Acta*, 311: 316-331, doi.org/10.1016/j.gca.2021.07.005
54. Beverly EJ, **Levin NE,** Passey BH, Aron PG, Yarian DA, Page M, Pelletier EM. 2021. Triple oxygen and clumped isotopes in modern soil carbonate along an aridity gradient in the Serengeti, Tanzania. *Earth and Planetary Science Letters*, 567: 116952. doi.org/10.1016/j.epsl.2021.116952
53. Aron PG, **Levin NE**, Beverly EJ, Huth TE, Passey BH, *Pelletier EM, Poulsen CJ, Winkelstern IZ, Yarian DA. 2021. Triple oxygen isotopes in the water cycle, *Chemical Geology,* 565, 120026. doi.org/10.1016/j.chemgeo.2020.120026
52. Braun, DR, Faith, JT, Douglass, MJ, Davies B, Power MJ, Aldeias V, Conrad NJ, Cutts R, DeSantis LRG, Dupont LM, Esteban I, Kandel AW, **Levin NE**, Luyt J, Parkington J, Pickering R, Quick L, Sealy J, Stynder D. 2021. Ecosystem engineering in the Quaternary of the West Coast of South Africa. *Evolutionary Anthropology*, 30: 50-62. doi.org/10.1002/evan.21886
51. Passey BH, **Levin NE**. 2021. Triple oxygen isotopes in meteoric waters, carbonates, and biological apatites: implications for continental paleoclimate reconstruction. *Reviews in Mineralogy & Geochemistry*, 86: 429-462. doi.org/10.2138/rmg.2021.86.13
50. Potts R, Dommain R, Moerman JW, Behrensmeyer AK, Deino AL, Riedl S, Beverly EJ, Brown ET, Deocampo D, Kinyanjui R, Lupien R, Owen RB, Rabideaux N, Russell JM, Stockhecke M, deMenocal P, Faith JT, Garcin Y, Noren A, Scott JJ, Western D, Bright J, Clark JB, Cohen AS, Keller CB, King J, **Levin NE**, Brady SK, Muiruri V, Renaut RW, Rucina SM, Uno K. 2020. Increased ecological resource variability during a critical transition in hominin evolution. *Science Advances*, 6, eabc8975. doi: 10.1126/sciadv.abc8975
49. Faith JT, Braun DR, Davies B, DeSantis LRG, Douglass MJ, Esteban I, Hare V, **Levin NE**, Luyt J, Pickering R, Power MJ, Sealy J, Deano S. 2020. Ecometrics and the paleoecological implications of Pleistocene faunas from the western coastal plains of the Cape Floristic Region, South Africa, *Journal of Quaternary Science*, 35: 4117-1020. doi.org/10.1002/jqs.3247
48. Frost SR, Simpson SW, **Levin NE**, Quade J, Rogers MJ, Semaw S. 2020. Fossil Cercopithecidae from the early Pliocene Sagantole Formation at Gona, Ethiopia. *Journal of Human Evolution*, 144: 102789. doi.org/10.1016/j.jhevol.2020.102789
47. Semaw S, Rogers MJ, Simpson, SW, **Levin NE**, Quade J, Dunbar N, McIntosh WC, Cáceres I, Stinchcomb GE, Holloway RL, Brown FH, Butler RF, Stout D, Everett M. 2020. Co-occurrence of Acheulian and Oldowan artifacts with *Homo erectus* cranial fossils from Gona, Afar, Ethiopia. *Science Advances*, 6(10): eaaw4694. doi.org/10.1126/sciadv.aaw4694
46. Bedaso ZK, DeLuca NM, **Levin NE**, Zaitchik BF, Waugh DW, Wu S-Y, Harman CJ, Shanko D. 2020. Spatial and temporal variation in the isotopic composition of Ethiopian precipitation. *Journal of Hydrology*, 585: 124364. doi.org/10.1016/j.jhydrol.2019.124364
45. Saylor BZ, Gibert L, Deino A., Alene, M, **Levin NE**, Melillo SM, Peaple MD, Feakins SJ, Bourel B, Barboni D, Novello A, Sylvestre F, Mertzman SA, Haile-Selassie Y, 2019. Age

and context of mid-Pliocene hominin cranium from Woranso-Mille, Ethiopia. *Nature*, 573: 220-224. doi.org/10.1038/s41586-019-1514-7

44. Simpson SW, **Levin NE**, Quade J, Rogers MJ, Semaw S. 2019. *Ardipithecus ramidus* postcranial fossils from the Gona Project Area, Afar Regional State, Ethiopia. *Journal of Human Evolution*, 129: 1-45. doi.org/10.1016/j.jhevol.2018.12.005
43. Potts R, Behrensmeyer AK, Faith JT, Tryon CA, Brooks AS, Yellen JE, Deino AL, Kinyanjui R, Clark JB, Haradon C, **Levin NE**, Meijer HJM, Veatch EG, Owen RB, Renaut RW. 2018. Environmental dynamics during the onset of the Middle Stone Age in eastern Africa. *Science* 360 (6384): 86-90. doi.org/10.1126/science.aao2200
42. Forrest FL, Stynder DD, Bishop LC, **Levin NE**, Lehmann SB, Patterson DB, Braun DR. 2018. Zooarchaeological reconstruction of newly excavated Middle Pleistocene deposits from Elandsfontein, South Africa. *Journal of Archaeological Science: Reports*, 17: 19-29. doi.org/10.1016/j.jasrep.2017.10.034
41. Lehmann SB, **Levin NE**, Braun DR, Stynder DD, Zhu M, le Roux P, Sealy J. 2018. Environmental and ecological implications of strontium isotope ratios in mid-Pleistocene fossil teeth from Elandsfontein, South Africa. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 490: 84-94. doi.org/10.1016/j.palaeo.2017.10.008
40. Blumenthal SA, **Levin NE**, Brown FH, Brugal J-P, Chritz, KL, Harris, JM, Jehle GE, Cerling TE, 2017. Aridity and hominin environments. *Proceedings of the National Academy of Sciences USA*, 114: 7331-7336. doi.org/10.1073/pnas.1700597114
39. Li S, **Levin NE**, Soderberg K, Dennis KJ, Caylor KK. 2017. Triple oxygen isotope composition of leaf waters in Mpala, central Kenya. *Earth and Planetary Science Letters*, 468: 38-50. doi.org/10.1016/j.epsl.2017.02.015
38. Haile-Selassie Y, Melillo SM, Ryan TM, **Levin NE**, Saylor BZ, Deino A, Mundil R, Scott G, Alene M, Gibert L. 2016. Dentognathic remains of *Australopithecus afarensis* from Nefuraytu (Woranso-Mille, Ethiopia): comparative description, geology, and paleoecological context. *Journal of Human Evolution*, 100: 35-53. doi.org/10.1016/j.jhevol.2016.08.003
37. Lehmann SB, Braun DR, Dennis KJ, Patterson DB, Stynder DD, Bishop LC, Forrest F, **Levin NE**. 2016. Stable isotopic composition of fossil mammal teeth and environmental change in southwestern South Africa during the Pliocene and Pleistocene, *Palaeogeography, Palaeoclimatology, Palaeoecology*, 457: 396-408. doi.org/10.1016/j.palaeo.2016.04.042
36. Patterson DB, Lehmann SB, Matthews T, **Levin NE**, Stynder D, Bishop LC, Braun DR. 2016. Stable isotope ecology of Cape dune mole-rats (*Bathyergus suillus*) from Elandsfontein, South Africa: implications for C_4 vegetation and hominin paleoecology in the Cape Floral Region. *Palaeogeography, Palaeoclimatology, Palaeoecology*. 457: 409-421. doi.org/10.1016/j.palaeo.2016.04.044
35. **Levin NE**, Haile-Selassie Y, Frost SR, Saylor BZ. 2015. Dietary change among hominins and cercopithecids in Ethiopia during the early Pliocene. *Proceedings of the National Academy of Sciences USA*, 112: 12304-12309. doi.org/10.1073/pnas.1424982112
34. Cerling TE, Andanje SA, Blumenthal SA, Brown FH, Chritz KL, Harris JM, Hart JA, Kirera F, Kaleme P, Leakey LN, Leakey MG, **Levin NE**, Manthi FK, Passey BH, Uno KT. 2015. Dietary changes of large herbivores in the Turkana Basin, Kenya from 4 to 1 million years ago. *Proceedings of the National Academy of Sciences USA*, 112: 11467-11472. doi.org/10.1073/pnas.1513075112
33. **Levin NE**. 2015. Environment and climate of early human evolution. *Annual Review of Earth and Planetary Sciences*, 43: 405-429. doi.org/10.1146/annurev-earth-060614-105310
32. Li S, **Levin NE**, Chesson LA. 2015. Continental scale variation in ^{17}O-excess of meteoric waters in the United States. *Geochimica et Cosmochimica Acta*, 164: 110-126. doi.org/10.1016/j.gca.2015.04.047

31. Haile-Selassie Y, Gibert L, Melillo SM, Ryan TM, Alene M, Deino A, **Levin NE**, Scott G, Saylor BZ. 2015. New species from Ethiopia further expands middle Pliocene hominin diversity, *Nature*, 521: 483-488. doi.org/10.1016/j.gca.2015.04.047
30. Simpson SW, Kleinsasser L, Quade J, **Levin NE**, McIntosh WC, Dunbar N, Semaw S, Rogers M. 2015. Late Miocene hominin teeth from the Gona Paleoanthropological Research Project area, Afar, Ethiopia. *Journal of Human Evolution*, 81: 68-82. doi.org/10.1016/j.jhevol.2014.07.004
29. **Levin NE**, Raub TD, Dauphas N, Eiler JM. 2014. Triple oxygen isotope variations in sedimentary rocks, *Geochimica et Cosmochimica Acta*, 139: 173-189. doi.org/10.1016/j.gca.2014.04.034
28. Passey BH, Hu H, Ji H, Montanari S, *Li S, Henkes GA, **Levin NE**. 2014. Triple oxygen isotopes in biogenic and sedimentary carbonates, *Geochimica et Cosmochimica Acta*, 141: 1-25. doi.org/10.1016/j.gca.2014.06.006
27. Simpson SW, Quade J, **Levin NE**, Semaw S. 2014. The female *Homo erectus* pelvis from Gona: Response to Ruff. 2010. *Journal of Human Evolution*, 68: 32-35. doi.org/10.1016/j.jhevol.2013.12.004
26. Eiler JM, Bergquist B, Bourg I, Cartigny P, Farquhar J, Gagnon A, Guo W, Halevy I, Hofmann A, **Levin N**, Schauble E, Stolper D. 2014. Frontiers of stable isotope geoscience. *Chemical Geology*, 372: 119-143. doi.org/10.1016/j.chemgeo.2014.02.006
25. Berman ESF, **Levin NE**, Landais A, Li S, Owano T. 2013. Measurement of $\delta^{18}O$, $\delta^{17}O$, and ^{17}O-excess in water by off-axis integrated cavity output spectroscopy and isotope ratios mass spectrometry. *Analytical Chemistry*, 85(21): 10392-10398. doi.org/10.1021/ac402366t
24. Braun DR, **Levin NE**, Stynder D, Herries AIR, Archer W, Forrest F, Roberts DL, Bishop LC, Matthews T, Lehmann SB, Pickering R, Fitzsimmons K. 2013. Mid-Pleistocene hominin occupation at Elandsfontein, Western Cape, South Africa. *Quaternary Science Reviews*, 82: 145-166. doi.org/10.1016/j.quascirev.2013.09.027
23. Feakins, SJ, **Levin NE**, Liddy HM, Sieracki A, Eglinton TI, and Bonnefille R. 2013. Northeast African vegetation change over 12 m.y. *Geology* 41: 295-298. doi.org/10.1130/G33845.1
22. Quade J and **Levin NE.** 2013. East African hominid paleoecology: isotopic evidence from paleosols. In: Early Hominin Paleoecology (eds. M Sponheimer, J Lee-Thorp, K Reed, P Ungar). University of Colorado Press, pp. 59-102. doi: 10.5876/9781607322252:C03
21. Zaitchik BF and **Levin NE**. 2013. Understanding the Dynamics of the Tropical African Climate. *Eos*, 94 (23): 209. doi.org/10.1002/2013EO230008
20. Haile-Selassie Y, Saylor BZ, Deino A, **Levin NE**, Alene M, and Latimer BM. 2012. A new hominin foot from Ethiopia shows multiple Pliocene bipedal adaptations. *Nature*, 483: 565-569. doi.org/10.1038/nature10922
19. **Levin NE**, Brown FH, Behrensmeyer AK, Bobe R, Cerling TE. 2011. Paleosol carbonates from the Omo Group: isotopic records of local and regional environmental change in East Africa. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 307: 75-89. doi.org/10.1016/j.palaeo.2011.04.026
18. Cerling TE, Wynn JG, Andanje SA, Bird MI, Korir DK, **Levin NE**, Mace W, Macharia AN, Quade J, and Remien CH. 2011. Woody cover and hominin environments in the past 6 million years, *Nature*, 476*:* 51-56. doi.org/10.1038/nature10306
17. Cerling TE, **Levin NE**, and Passey BH. 2011. Stable Isotope Ecology in the Omo-Turkana Basin, *Evolutionary Anthropology*, 20(6): 228-237. doi.org/10.1002/evan.20326
16. Passey BH, **Levin NE**, Cerling TE, Brown FH, and Eiler JM. 2010. High-temperature environments of human evolution in East Africa based on bond ordering in paleosol carbonates. *Proceedings of the National Academy of Sciences USA*, 107: 11245-11249. doi.org/10.1073/pnas.1001824107

15. Braun DR, Harris JWK, **Levin NE**, McCoy JT, Herries AIR, Bamford MK, Bishop LC, Richmond BG, Kibunjia M. 2010. Early hominin diet included diverse terrestrial and aquatic animals 1.95 Ma in East Turkana, Kenya. *Proceedings of the National Academy of Sciences USA*, 107: 10002-10007. doi.org/10.1073/pnas.1002181107
14. Cerling TE, **Levin NE**, Quade J, Wynn JG, Fox DL, Kingston JD, Klein RG, Brown FH. 2010 Comment on the Paleoenvironment of *Ardipithecus ramidus*. *Science*, 328: 1105-d. doi.org/10.1126/science.1185274
13. Cerling TE, Harris JM, Leakey MG, Passey BH, **Levin NE**. 2010. Stable carbon and oxygen isotopes in East African Mammals: modern and fossil, in Werdelin L, and Sanders WJ, eds., *Cenozoic Mammals of Africa*, University of California Press, p. 949-960. doi:10.1525/california/9780520257214.003.0048
12. **Levin NE**, Zipser EJ, Cerling TE. 2009. Isotopic composition of waters from Ethiopia and Kenya: insights into moisture sources for eastern Africa. *Journal of Geophysical Research - Atmospheres*, 114, D23306. doi.org/10.1029/2009JD012166
11. **Levin NE**, Simpson SW, Quade J, Cerling TE, Frost SR, 2008, Herbivore enamel carbon isotopic composition and the environmental context of *Ardipithecus* at Gona, Ethiopia, in Quade J, and Wynn JG, eds., *The Geology of Early Humans in the Horn of Africa: Geological Society of America Special Paper* 446, p. 215–234. doi.org/10.1130/2008.2446(10)
10. Quade J, **Levin NE**, Simpson SW, Butler R, McIntosh WC, Semaw S, Kleinsasser L, Dupont-Nivet G, Renne P, Dunbar N, 2008, The Geology of Gona, Ethiopia, in Quade J, and Wynn JG, eds., *The Geology of Early Humans in the Horn of Africa: Geological Society of America Special Paper* 446, p. 1-31. doi.org/10.1130/2008.2446(01)
9. Kleinsasser LL, Quade J, McIntosh WC, **Levin NE**, Simpson SW, Semaw S. 2008. Stratigraphy and geochronology of the late Miocene Adu-Asa Formation at Gona, Ethiopia, in Quade J, and Wynn JG, eds., *The Geology of Early Humans in the Horn of Africa: Geological Society of America Special Paper* 446, p. 33-65. doi.org/10.1130/2008.2446(02)
8. Simpson SW, Quade J, **Levin NE**, Butler R, Dupont-Nivet G, Everett M, Semaw S. 2008. A Female *Homo erectus* Pelvis from Gona, Ethiopia. *Science*, 322: 1089-1092. doi.org/10.1126/science.1163592
7. Cerling TE, Harris JM, Hart JA, Kaleme P, Klingel H, Leakey MG, **Levin NE**, Lewison RI, Passey BH. 2008. Stable Isotope Ecology of *Hippopotamus amphibius* in East Africa. *Journal of Zoology*, 276: 204-212. doi.org/10.1111/j.1469-7998.2008.00450.x
6. Passey BH, Cerling TE, **Levin NE**. 2007. Temperature dependence of oxygen isotope acid fractionation in modern and fossil tooth enamels. *Rapid Communications in Mass Spectrometry*, 21: 2853-2859. doi.org/10.1002/rcm.3149
5. **Levin NE**, Cerling TE, Passey BH, Harris JM, Ehleringer JR. 2006. A stable isotope aridity index for terrestrial environments. *Proceedings of the National Academy of Sciences, USA*, 103: 11201-11205. doi.org/10.1073/pnas.0604719103
4. Stout D, Quade J, Semaw S, Rogers MJ, **Levin NE**. 2005. Raw Material selectivity of the earliest stone toolmakers at Gona, Afar, Ethiopia. *Journal of Human Evolution*, 48: 365-380. doi.org/10.1016/j.jhevol.2004.10.006
3. Semaw S, Simpson SW, Quade J, Renne PR, Butler RF, McIntosh WC, **Levin N**, Dominguez-Rodrigo M, Rogers MJ. 2005. Early Pliocene hominids from Gona, Ethiopia. *Nature*, 433: 301-305. doi.org/10.1038/nature03177
2. **Levin NE**, Quade J, Simpson SW, Semaw S, Rogers MJ. 2004. Isotopic evidence for Plio-Pleistocene environmental change at Gona, Ethiopia. *Earth and Planetary Science Letters*, 219: 93-110. doi.org/10.1016/S0012-821X(03)00707-6
1. Quade J, **Levin N**, Semaw S, Stout D, Renne PR, Rogers MJ, Simpson SW. 2004. Paleoenvironments of the earliest stone toolmakers, Gona, Ethiopia. *Geological Society of America Bulletin*, 116 (11-12): 1529-1544. doi.org/10.1130/B25358.1

Perspectives

Cooke M, Breitbart M, Cooperdock E, **Levin N**, Niemi N, Bell C, Stevens L, Viskupic K., 2021. First-year graduate courses foster inclusion. *Nature Geoscience*, 14: 539-540. doi.org/10.1038/s41561-021-00800-6.

Data Compilations (not peer-reviewed)

Levin, NE. 2013. Compilation of East Africa Soil Carbonate Stable Isotope Data. Integrated Earth Data Applications. doi.org/10.1594/IEDA/100231

FIRST AUTHOR CONFERENCE PRESENTATIONS (invited talks are underlined)

Levin NE, Saylor BZ, Gibert L, Deino A, Alene, M, Melillo SM, Peaple MD, Feakins SJ, Bourel B, Barboni D, Novello A, Sylvestre F, Mertzman SA, Haile-Selassie Y, A wet basin during dry times: a new Pliocene lake record from the Afar region, Ethiopia. Session PP025-01, *American Geophysical Union Fall Meeting* (Virtual), December 1–17, 2020.

Levin NE, Beverly EJ, Katz SA, Passey BH, Pelletier EM, Poulsen CJ, Quade J, Rech JA. Triple oxygen isotopes, aridity and uplift: a case study from the Atacama. *American Geophysical Union Fall Meeting*, San Francisco, CA USA, December 2019.

Levin NE, Bedaso ZK, Beverly EJ, Cerling TE, Lehmann SB, Moerman JW, Passey BH, Quade J. Hotter, drier, and more open? Geochemical perspectives on 10 myr of environmental change and humane evolution in Africa. *Geological Society of America Annual Meeting*, Indianapolis, IN USA, November 2018. (Pardee keynote session)

Levin NE. A Ground-Level View of African Climate During the Pliocene. *American Geophysical Union Fall Meeting*, San Francisco, CA USA, December 2016.

Levin NE, DeLuca NM, Passey BH, Ji H, Abbott MB, Polissar P, Rodbell DT. Constraining Holocene Hydroclimate in the Tropical Andes Using Δ_{47} and $\Delta^{17}O$ in Lacustrine Carbonates. *American Geophysical Union Fall Meeting*, San Francisco, CA USA, December 2016.

Levin NE, Li S. Triple oxygen isotopic variation in continental waters and potential applications to paleoclimate research. *American Geophysical Union Fall Meeting*, San Francisco, CA USA, December 2014.

Levin NE. The Pleistocene expansion of C_4 grasses in eastern Africa and the role of atmospheric pCO_2. *Goldschmidt Conference,* Sacramento, CA USA, June 2014.

Levin NE, Haile-Selassie Y, Frost SR. Hominin and cercopithecid diet and niche partitioning at 3.8–3.2 Ma: new insights from Woranso-Mille, Ethiopia. *American Association of Physical Anthropologists Annual meeting*, Calgary, CA, April 2014.

Levin NE. Early human landscapes in eastern Africa amidst regional and global change. *Geological Society of America Annual Meeting*, Denver, CO, USA, October 2013.

Levin NE, Bedaso ZK, Passey BH, Quade J. Pliocene warmth and ecosystem change in eastern Africa. *Geological Society of America Annual Meeting*, Denver, CO, USA, October 2013.

Levin NE, Li S, Brooks JR, Welker JM. Variations in triple oxygen isotopes in precipitation and river waters in the continental U.S. *Goldschmidt Conference,* Florence, Italy, August 2013.

Levin NE, Raub TD, Dauphas N, Eiler JM. 2010. ^{17}O anomalies in sedimentary silica and oxides. *Goldschmidt Conference*, Knoxville, TN, USA, June 2010.

Levin NE, Cerling TE, Harris JM. Isotopic patterns in extant mammalian herbivore teeth from eastern Africa. *Geological Society of America Annual Meeting*, Portland, OR, USA, October 2009.

Levin NE, Simpson SW, Quade J, Cerling TE, Frost SR. Carbon isotope evidence for *Ardipithecus* habitat at Gona, Ethiopia. *Society of Vertebrate Paleontology Annual Meeting*, Cleveland, OH, USA, October 2008.

Levin NE, Manthi FK, Kaleme P, Cerling TE. Tiny teeth and the big picture: carbon and oxygen isotope ratios of micromammal teeth from eastern Africa. *The 6th International Conference*

on Applications of Stable Isotope Techniques to Ecological Studies, Honolulu, HI, USA, 2008.

Levin NE and Cerling TE. Getting to the source of the high isotopic values of Ethiopian precipitation. *American Geophysical Union Fall Meeting*, San Francisco, CA, USA. December 2007.

Levin NE, Cerling TE, Brown FH. A paleosol carbonate isotope record from the Shungura Formation, Ethiopia. *Geological Society of America Annual Meeting*, Salt Lake City, UT, USA, October 2005.

Levin NE, Quade J, Simpson SW, Semaw S. Early Pliocene environments at Gona, *Geological Society of America Annual Meeting*, Denver, CO, USA, November 2004.

Levin NE, Quade J, Semaw S, Simpson SW, Schick K, Toth N. Plio-Pleistocene environments of Gona Ethiopia: the isotopic record of pedogenic carbonate and fossil teeth. *Geological Society of America Annual Meeting*, Boston, MA, USA, November 2001.

INVITED SEMINARS

Department Environmental Science and Geology, Wayne State University, November 2025
Department of Marine Geosciences, University of Haifa (virtual), December 2024.
Department of Earth and Environmental Sci, University of Michigan (Smith Lecture), Dec 2023.
Bioanthropology Seminar, University of Michigan, November 2023.
Geological Society of India (virtual), April 2023.
Department of Earth and Planetary Sciences, Northwestern University, May 2022.
Department of Earth, Atmosphere and Environment, Northern Illinois University (virtual), Jan. 2022.
Department of Earth, Environmental, and Planetary Sciences, Case Western Reserve, Dec. 2021.
Department of Earth & Atmospheric Sciences, Indiana University (virtual), Nov. 202.
Sigma Xi University of Michigan Chapter, Annual Lecture (virtual), May 2021.
School of Earth and Space Exploration, Arizona State University (virtual), April 2021.
Department of Geology & Geophysics, University of Utah (virtual), Nov. 2020.
Department of Anthropology, Rutgers University, Nov. 2019.
Department of Geosciences, University of Arizona, Oct. 2019.
Department of Biology, Boise State University, Oct. 2018.
Department of Geological Sciences, University Colorado Boulder, Oct. 2018.
Department of Earth and Planetary Sciences, Johns Hopkins University, June 2018.
Department of Earth, Planetary, and Space Sciences, Univ. California Los Angeles, Dec 2017.
Department of Earth, Atmospheric, and Planetary Sciences, Purdue University, April 2017.
Department of Ecology and Evolutionary Biology, University of Michigan, Nov. 2016.
Gap in seminars in 2016 due to maternity leave and move to UM.
Department of Atmospheric, Oceanic and Earth Sciences, George Mason University, Nov. 2015.
Department of Geology and Planetary Science, University of Pittsburgh, October 2015.
Department of Earth and Planetary Sciences, University of New Mexico, September 2015.
Department of Earth, Atmospheric and Planetary Sciences, MIT, May 2015.
Department of Earth and Environmental Sciences, University of Michigan, January 2015.
Gap in seminars in 2014 due to maternity leave.
Department of Anthropology, Smithsonian Institution, November 2013.
Division of Biology and Paleo-Environment, Lamont-Doherty Earth Observatory, May 2013.
Department of Earth and Environmental Sciences, University of Michigan, October 2012.
Department of Geosciences, Princeton University, April 2012.
Department of Geosciences, Stony Brook University, April 2012.
Center for the Advanced Study of Hominid Paleobiology, George Washington Univ., Dec. 2011.
Department of Earth Sciences, University of Southern California, October 2011.
Geochemistry Seminar, University of Maryland, October 2011.

Department of Geological Sciences, University of North Carolina, September 2011.
Center for Functional Anatomy and Evolution, Johns Hopkins University, February 2011.
Geological Society of Washington, November 2010.
Department of Geology, University of Maryland, September 2010.
Department of Earth and Planetary Sciences, Rutgers University, March 2010.
Department of Geology, Baylor University, March 2010.
Department of Geology, SUNY Binghamton, November 2009.
Geophysical Laboratory, Carnegie Institution of Washington, July 2009.
Division of Geological and Planetary Sciences, California Institute of Technology, October 2007.
Department of Geology, University of Nairobi, February 2007.

WORKSHOPS

American Geophysical Union, *2021 Workshop for Heads and Chairs of Earth and Space Sciences Departments*, New Orleans, December 2021 (invited speaker)

American Geophysical Union, *Developing Onboarding Courses to Expose the Hidden Curriculum of Graduate School and to Increase Graduate Student Success*, online workshop December 2021 (convener, presenter).

National Association of Geoscience Teachers *Graduate student onboarding courses: Exposing the hidden curriculum to help your students succeed*, webinar March 2021 (presenter).

National Academies *Identifying New Community-Driven Science Themes for NSF's Support of Paleo Perspectives on Climate Change (P2C2): A Workshop*, zoom May 2021 (invited speaker, panelist)

NSF African Rift Valley Research Consortium Field Review workshop, Afar Regional State, Ethiopia, January 2019 (invited participant).

Cleveland Museum of Natural History, *The Paleobiology, Taxonomy, and Paleoecology of Early Australopithecus: A Collaborative Approach to Synthesizing the Evidence*, Cleveland, OH, September 2013 (invited participant).

LacCore, University of Minnesota, *Olorgesailie Core Sampling Workshop,* Minneapolis, MN, April 2013 (invited participant). *Science* magazine reported on this workshop: Pennisi E (2013) Out of the Kenyan Mud, an Ancient Climate Record *Science* 341: 476-479.

Johns Hopkins University, *Climate Dynamics of Tropical Africa: present understandings and future directions*, Baltimore, MD, November 2012 (co-organizer).

NSF GeoPRISMS Planning Workshop for the East African Rift Primary Site, Morristown, NJ, October 2012 (attendee).

Lamont-Doherty Earth Observatory, *Did Climate Change Shape Human Evolution?* Palisades, NY, April 2012 (invited speaker),

Turkana Basin Institute, *Climate and Human Evolution*, Turkana, Kenya, August 2011 (invited participant).

DOE BES Earth Science Council Workshop, *The chemistry of novel isotope effects in the geosciences*, San Francisco, CA, December 2010 (invited speaker).

NSF Paleoclimates and Human Evolution Workshop, Front Royal, VA, November 2005 (invited speaker).

FIELD EXPERIENCE

Olorgesailie, Kenya: mapping, stratigraphy, field course instruction, isotope geochemistry, and drilling project team member, 2002–present.

Woranso-Mille, Afar Region, Ethiopia: paleoecology and isotope geochemistry, 2011–present.

Elandsfontein, Western Cape Province, South Africa: mapping, stratigraphy, and sample collection for stable isotopic analysis, coordinating geological team, 2010–present.

Gona, Afar Region, Ethiopia: geological mapping, stratigraphy of archaeological and paleontological sites, and stable isotopic studies of fossil teeth and soil carbonates,

coordinating geological team, 2001–present.
Turkana Basin, northern Kenya and southern Ethiopia: isotopic studies of fossil teeth and soil carbonates, and stratigraphy of archaeological sites, 2002–present.
Oaxaca, Mexico: collection of Holocene soils for stable isotopic analysis, 2008.
Ethiopia and Kenya: collections of modern waters, plants, and mammal teeth for isotopic study, 2004–2008.
Korinth, Greece: mapping, Eastern Korinthia Archaeological Survey, 1999 & 2001.
Tobacco Root Mountains, Montana: Indiana University Field Camp, 2000.
Chavín de Huántar, Peru: archaeological excavations Stanford Chavín Project, 1998.

LABORATORY EXPERIENCE

Isotopologue Paleosciences Laboratory, University of Michigan: co-director of facility that operates two Nu Perspective mass spectrometers equipped to measure singly and multiply substituted isotopologues of CO_2 and O_2 gases. Peripherals include off-line vacuum extraction lines, a gas chromatograph, a common acid bath for extraction of CO_2 from carbonates, and a fluorination line for extraction of O_2 from water, and a reduction line to facilitate analysis of triple oxygen isotopes of CO_2 and CO_3, 2017–present.
Stable Isotope Laboratory, Johns Hopkins University: co-director of facility that operates a Thermo MAT 253 mass spectrometer equipped to measure singly and multiply substituted isotopologues of CO_2 and O_2 gases, 2009–2016.
Isotope Geochemistry Laboratory, Caltech: method development for precise ^{17}O measurements of silicates via laser fluorination, 2008–2009.
Cerling Stable Isotope Facility, University of Utah: student user and lab manager responsible for lab maintenance, on and off-line extractions, dual inlet and continuous flow IRMS measurements of carbonates, bioapatite, waters, gases and organics, 2004–2008.
Desert Laboratory & Environmental Isotope Laboratory, University of Arizona: on and off-line extractions and stable isotopic measurements of carbonates and bioapatites, 2000–2003.
Paleomagnetics Laboratory, University of Arizona: sample thermal demagnetization and magnetometer operation, 2003.

TEACHING

University of Michigan

EARTH 111/ENVIRON 112 Climate & Humankind – mini-course (F17, F18, W21, F21, W22, F23, W24)
EARTH 144 Climate Change in the Age of Humans – first year seminar (F17)
EARTH 202 Introduction to Environmental Science – field course Camp Davis (S19, S24, S25)
EARTH 296 Earth and Environmental Science Around Us – virtual field course (S20)
EARTH 331 Climate and Climate Change (F24, F25)
EARTH 467 Stratigraphy & Basin Analysis – upper level with lab (W17, W18, W19, W20, F21, F23)
EARTH 531 First Year Graduate Student Seminar (F18, F19, F20)

Johns Hopkins University

270.210 Environmental Field Methods (co-taught), Sp13
270.268 Field Seminar (co-taught), Sp13
270.311 Geobiology – F10, F12, Sp15
270.350 Sedimentary Geology – F09, F11, F13, F16
270.366 Advance Topics in Isotope Geochemistry (co-taught) – F10, F11, F12
270.377 Climates of the Past (co-taught) – Sp11
207.607 Topics in African Climate (co-taught) – Sp12
270.644 Physics of Climate Variability (co-taught) – F11

Guest lectures in Conversations with Earth (2011–2013) and Planets, Life & Universe (2011–2013, 2015).

Other Teaching

University of Utah: Stable Isotope Ecology Short Course, instructor, 2006, 2008, 2011–2013, 2015, 2017.

University of Utah: NSF GK12 Program, graduate fellow, 2005-2006.

Smithsonian Institution: Microstratigraphy and Taphonomy Field Course, Olorgesailie, Kenya, instructor, 2004.

Monterey, Carmel and Pacific Grove School Districts, California: High School Science and Math, substitute teacher, Fall 2002.

University of Arizona: NSF GK12 Program, graduate fellow, 2001-2002; Geologic Perspectives, teaching assistant, 2000-2001.

Stanford University: Outdoor Education Program, instructor, 1999-2000; Introduction to Prehistoric Archaeology, teaching assistant, 1999.

ADVISING

Graduate Advisees

Elena Lee, Ph.D. student UM 2023–present

Million Mengesha, Ph.D. student UM 2022–present

Jada Langston, Ph.D. student UM 2022–present

Sarah Katz (Ph.D. 2024, UM), Thesis title: *Andean Interglacial Climate and Hydrology Over the Last 650,000 Years*

Jada Langston (M.S. 2022, UM), Thesis title: *Elevated Temperatures in the Afar Rift: Perspectives from Carbonate Isotope Geochemistry*

Mara Page (M.S. 2020, UM), Thesis title: *Stable isotope ecology of mammals in the southern Kenyan Rift*.

Nicole DeLuca Ph.D. student JHU 2014–2016; Ph.D. JHU 2019 (did not move to UM, stayed at JHU, changed research focus). Currently postdoc at the EPA.

Sophie Lehmann (Ph.D. 2016, JHU), Thesis title: *Studies of Carbon, Oxygen and Strontium Isotopes in Tooth Enamel: Evaluating Paleoenvironmental Change in South Africa and Expanding the Paleoclimate Toolkit*. Currently postdoc at Pacific Northwest National Laboratory.

Shuning Li (Ph.D. 2015, JHU), Thesis title: *Triple Oxygen Isotope Distributions in Meteoric Waters, Plant Waters and Laboratory Precipitated Calcite*. Currently faculty, Peking University.

Rebecca Kraft (Ph.D. 2012, JHU), Thesis title: *Reconstruction of Holocene and Early Eocene Terrestrial Environments Using Multiple Stable Isotope Proxies*. Currently staff scientist at National Institute for Standards and Technology.

PhD Committees (not direct advisees)

in progress UM (EES): Tara Londsdorf, Jeronimo Morales Toledo

in progress UM (Anthropology): Ian Beggen, Georgia Oppenheim

2025: Daeun Lee, James Munene – University of Michigan

2024: Allison Curley, Lauren Pratt, Ethan Shirley, Alexandra Norwood - University of Michigan

2023: Jade Zhang, Fabian Hardy – University of Michigan

2022: Nikolas Midttun, Kyra Pazan - University of Michigan
Axelle Gardin (University of Poitiers, Paleontology), Amanda Leiss (Yale, Anthropology)

2021: Alexander Thompson, Kirk Townsend - University of Michigan

2020: Phoebe Aron, Molly Ng, Rebekah Stein, Xiaojing Du - University of Michigan

2019: Julia Krawielicki – Department of Earth Sciences, ETH Zürich; Irisa Arney – Anthropology, University of Michigan
2017: Amelia Villasenor – Department of Anthropology, George Washington University
2016: Haoyuan Ji – Earth and Planetary Sciences, Johns Hopkins University
2015: Chi-Han Chang – Earth and Planetary Sciences, Johns Hopkins University

Qualifying Exam Committees
University of Michigan
2025: Joelle Tanuputri, Georgia Oppenheim, Elena Lee; 2024: Katarina Keating; 2023: Jada Langston, Million Mengesha; 2021: Allison Curley; 2020: Sarah Katz; 2018: Rebecca Dzombak, Nikolas Midttun, James Saulsbury, Rebekah Stein, Alexander Thompson; 2017: Phoebe Aron, Andrew Vande Guchte, Molly Ng, Bian Wang

Johns Hopkins
2016: Nicole Deluca; 2015: Kristen Prufrock, Xu Yang, Kaya Zelazny; 2014: Se Jong Cho; 2013: Haoyuan Ji, Sophie Lehman, Kirby Runyon; 2012: Heather Ahrens; 2011: Scott Pitz; 2010: Shuning Li, Claire Patterson

Postdoctoral Advisees
Matthew Allen, 2024–2026, NSF-EAR Postdoctoral Fellow
Sarah Katz, 2024–2025, currently postdoc at Yale University
Axelle Gardin, Fulbright Scholar and Postdoc, 2024–present
Anne Fetrow, 2023–2025, NSF-EAR Postdoctoral Fellow, currently Assistant Professor at Colorado College
Julia Kelson, 2019–2023, Postdoc (NSF grant supported, PI Levin); NSF-EAR Postdoctoral Fellow, co-advised by Sierra Petersen & Ben Passey, currently Assistant Professor at Indiana University
Tyler Huth, 2019–2021, co-advised by Ben Passey
Emily Beverly, 2017–8, NSF-EAR Postdoctoral Fellow, currently Assistant Professor University of Minnesota.
Jessica Moerman, 2015–2017, NSF-AGS Postdoctoral Fellow, currently Vice President for Science & Policy, Evangelical Environmental Network.
Zelalem Bedaso, 2011–2013, currently Associate Professor, University of Dayton.

Visiting Scholars
Million Mengesha, Aug. 2021 – March 2022, University of Michigan African Presidential Scholars (UMAPS) scholar, African Studies Center, University of Michigan. Visiting from Addis Ababa University, Ethiopia).

PROFESSIONAL AFFILIATIONS
American Geophysical Union; Geological Society of America; Geochemical Society; Mineralogical Society of America; National Association of Geoscience Teachers.

SERVICE

University of Michigan

Earth & Environmental Sciences Departmental Activities

Alumni affairs committee, 2023–present
Camp Davis committee, 2025–present
Department Advocate 2023–present
Departmental Executive committee, 2017–2018, 2023–2025
Fall Preview Committee, 2016–2021, 2023
Member, Unlearning Racism in Geosciences pod, 2021–present
Member, EARTH Fall Preview Committee, 2016–2022
Associate Chair for Graduate Studies, 2018–2021
Member, Curriculum Committee, 2019–2021
GeoClub Advisor, 2019–2021
Member, Faculty Search Committee, 2019
Chair, Diversity, Equity and Inclusion Committee, 2017–2018
Faculty Ally, 2017–2018
Member, Graduate Admissions Committee, 2017, 2018–2021

Program in the Environment

Curriculum Committee, 2024–present

University Activities

Reviewer for Africa Studies Centers UMAPS, 2021–present
Affiliated faculty member, Africa Studies Center 2020–present
Internal reviewer for Blavatnik Awards for Young Scientists, 2021
Member, Faculty Transition Team, School of Environment and Sustainability, 2016–2017

Johns Hopkins University

Director, Undergraduate Studies E&PS, August 2012–2016
Faculty Advisor, JHU SGE honor society chapter, 2013–2016
Member, E&PS Faculty Search Committees, 2012–2013, 2014-2015
Member, Organizing Committee, Space Telescope Science Institute 2013 May Symposium
Speaker, Dean's Zelicof Dinner with Undergraduates, April 2013
Lecturer, Odyssey Program, Johns Hopkins University, May 2011
Contributor to white paper, Space Initiative working group, Johns Hopkins University, 2011

Profession

Reviewer for the journals *Am. J. Phys. Anthro., Basin Research, Biology Letters, Chemical Geology, Earth & Planetary Science Letters*, *Ecosphere, Frontiers in Earth Science, Functional Ecology, Geochimica et Cosmochimica Acta, Geology, Geophysical Research Letters, GSA Bulletin, J. Climate, J. Human Evolution, Nature Ecology & Evolution, Nature Geoscience, Oecologia, Palaeo3, Paleoanthropology, Paleobiology, Proc. Nat. Acad. Sci. USA, Proceedings of the Royal Society B, Quaternary Research, Quaternary Science Reviews*, *Science*, and *Sedimentology.*

Reviewer for funding agencies including the *National Science Foundation (programs Sedimentary Geology and Paleobiology, P2C2, Archaeology, EAR Major Research Instrumentation, Antarctic Glaciology), the Department of Energy, the Leakey Foundation, Petroleum Research Fund, and the National Geographic Society*.

Invited Participant, Technical Meeting to Review the Role of Triple Oxygen Isotopes as an Emerging Tracer in Hydrology and Climatology (EVT2404651), Vienna, Austria, May 2025.
Panelist for NSF Low Temperature Geochemistry & Geobiology Program, March 2023.
Editorial board member for *Geology* 2023–present.
Editorial advisory board member for *Quaternary Science Reviews* 2019–present.
Judge for Outstanding Student Paper Award, American Geophysical Union Fall Meeting, 2014, 2019, 2020.
Center for the Advanced Study of Hominid Paleobiology at George Washington University, resource faculty, 2012–2018.
NSF-funded Inter-university Training for Continental-scale Ecology (ITCE) initiative based at the University of Utah, affiliated faculty, 2012–2020.
African Rift Valley Research Consortium, member 2015–present.
Olorgesailie Drilling Project Scientific Advisory Team, member, 2015–present.
Geological Society of America Young Scientist Award Committee, member, 2016–2019.
Member of faculty group working on exposing the "Hidden Curriculum" of graduate school, 2020–present with activities that have included a GSA presentation (Oct 2020), a perspective piece in *Nature Geoscience*, a webinar (NAGT, March 2021), and AGU Fall Meeting workshops (virtual and in-person to the Heads & Chairs meeting, Dec. 2021).
Member of the UM Earth & Environmental Sciences URGE pod, 2021–present, including co-organizer and presenter of abstract at AGU: Rivera S, Levin N, Curley A, Howard C, Kelson J, Cook M, Friedman M, Sheldon N, Smith S, Johnson J. URGE Outcomes from University of Michigan's Earth & Environmental Sciences. Session U35A-2264: *American Geophysical Union Fall Meeting*, New Orleans, Louisiana, December 13–17, 2021.