Nathan D. Brown

Department of Earth and Environmental Sciences
University of Texas at Arlington
Arlington, TX 76019

Phone: (817) 272-2733 (Office)
Office: Geoscience 220
Email: nathan.brown@uta.edu

Personal website
Faculty website
Google Scholar

Appointments

Assistant Professor, Department of Earth and Environmental Sciences, University of Texas at Arlington (**2020 - present**)

NSF Postdoctoral Fellow, UC Berkeley and Berkeley Geochronology Center
Advisor: David Shuster (**2019 - 2020**)

Postdoctoral Fellow, UCLA
Advisor: Seulgi Moon **(2017 - 2019)**

Education

Ph.D., Geology, 2017, University of California, Los Angeles (UCLA)
Advisors: Edward J. Rhodes and T. Mark Harrison
Dissertation title: Using luminescence signals from bedrock feldspars for low-temperature thermochronology

M.S., Earth and Environmental Sciences, 2011, University of Illinois at Chicago (UIC)
Advisor: Steven L. Forman
Thesis title: Testing a simplified SAR TT-OSL protocol for loess deposits in the midcontinental United States

B.S., Geology, 2009, Wheaton College, IL
Minor in Mathematics

Awards

UTA Research Enhancement Award (**2021**)

University of Texas Rising STARs Award (**2020**)

NSF Earth Sciences Postdoctoral Fellowship (**2018**)

Martin Aitken Prize for best oral presentation on fundamental research at the International Conference on Luminescence and Electron Spin Resonance Dating (**2017**)

W. Gary Ernst Fellowship (**2016**)

Harold and Mayla Sullwood Scholarship in recognition of academic performance and outstanding original research by a Ph.D. candidate (**2016**)

Excellence in Teaching Award, Department of Earth, Planetary, and Space Sciences, UCLA (**2013, 2014, 2015, 2016**)

Publications

(* indicates supervised graduate student)

1. *Cordero, K., **Brown, N. D.**, Harrison, L.N., Hurwitz, S., **2026**. Luminescence dating of hydrothermal explosions in the Yellowstone Plateau volcanic field. *Quaternary Research*. **10.1017/qua.2025.10061**

2. **Brown, N. D., 2026**. Introducing a MATLAB-based app for simulating luminescence sample histories. *Quaternary Research*.
10.1017/qua.2025.10047

3. Walcott-George, C.K., **Brown, N. D.**, Briner, J.P., Balter-Kennedy, A., Young, N.E., Kuhl, T., Moravec, E., Anandakrishnan, S., Stevens, N.T., Keisling, B., DeConto, R., Gkinis, V., MacGregor, J.A., Schaefer, J.M., **2026**. Holocene deglaciation of Prudhoe Dome, northwestern Greenland. *Nature Geoscience*.
10.1038/s41561-025-01889-9

4. Geyman, E.C., Ke, Y., Magyar, J.S., Reahl, J.N., Soldano, V., **Brown, N. D.**, West, A.J., Fischer, W.W., Lamb, M.P., **2025**. Scaling laws for sediment storage and turnover in river floodplains. *Science Advances* 11, eadu8574.
10.1126/sciadv.adu8574

5. Antinao, J.L., Maldonado, A., Díaz, L., Negrini, R.M., Tiner, R., Flores-Aqueveque, V., Maris Moreiras, S., **Brown, N. D.**, McDonald, E., **2025**. Late Quaternary alluvial fan stratigraphy and chronology, Elqui, Turbio and Claro valleys, semiarid Andes of Chile. *Quaternary International* 727, 109765.
10.1016/j.quaint.2025.109765

6. **Brown, N. D., 2025**. Luminescence and ESR dating applied to cobbles and bedrock. *Encyclopedia of Quaternary Science, 3rd Edition*.
10.1016/B978-0-323-99931-1.00243-9

7. Douglas, M., Li, G.K., West, A.J., Ke, Y., Rowland, J.C., **Brown, N. D.**, Schwenk, J., Kemeny, P.C., Piliouras, A., Fischer, W.W., Lamb, M.P., **2024**. Permafrost Formation in a Meandering River Floodplain. *AGU Advances* 5, e2024AV001175.
10.1029/2024AV001175

8. Argueta, M.O., Moon, S., Blisniuk, K., **Brown, N. D.**, Corbett, L.B., Bierman, P.R., Zimmerman, S.R.H., **2023**. Examining the influence of disequilibrium landscape on millennial-scale erosion rates in the San Bernardino Mountains, California, USA. *Geological Society of America Bulletin* b36734.
10.1130/B36734.1

9. †Balco, G., †**Brown, N. D.**, †Nichols, K., †Venturelli, R.A., Adams, J., Braddock, S., Campbell, S., Goehring, B., Johnson, J.S., Rood, D.H., Wilcken, K., Hall, B., Woodward, J., **2023**. Reversible ice sheet thinning in the Amundsen Sea Embayment during the Late Holocene. *The Cryosphere*.
10.5194/tc-2022-172
†Authors contributed equally

10. Mahan, S.A., Rittenour, T.M., Nelson, M.S., Ataee, N., **Brown, N. D.**, DeWitt, R., Durcan, J., Evans, M., Feathers, J., Frouin, M., Guérin, G., Heydari, M., Huot, S., Jain, M., Keen-Zebert, A., Li, B., López, Spencer, J.Q.G., Thomsen, K., **2023**. Guide for interpreting and reporting luminescence dating results. *Geological Society of America Bulletin* b36404.
10.1130/B36404.1

11. **Brown, N. D.**, Rhodes, E. J., **2022**. Developing an internally consistent methodology for K-feldspar MAAD TL thermochronology. *Radiation Measurements* 153, 106751.
10.1016/j.radmeas.2022.106751

12. †Higa, J. T., †**Brown, N. D.**, Moon, S., Stock, J. M., Sabbeth, L., Bennett, S. E. K., Martin-Barajas, A., Argueta, M. O., **2022**. Microcontinent breakup and links to possible plate boundary reorganization in the northern Gulf of California, Mexico. *Tectonics* 41, e2021TC006933.
10.1029/2021TC006933
†Authors contributed equally

13. Goehring, B. M., **Brown, N. D.**, Blisniuk, K., Moon, S., **2021**. The transport history of alluvial fan sediment inferred from multiple geochronometers. *Journal of Geophysical Research: Earth Surface* 126, e2021JF006096.
10.1029/2021JF006096

14. Zinke, R., Dolan, J. F., Rhodes, E. J., Van Dissen, R. J., Hatem, A. E., McGuire, C. P., **Brown, N. D.**, Grenader, J. R., **2021**. Latest Pleistocene-Holocene incremental slip rates of the Wairau fault: Implications for long-distance and long-term coordination of faulting between North and South Island, New Zealand. *Geochemistry, Geophysics, Geosystems* 22, e2021GC009656.
10.1029/2021GC009656

15. Pagonis, V., **Brown, N. D.**, Peng, J., Kitis, G., Polymeris, G.S., **2021**. On the deconvolution of promptly measured luminescence signals in feldspars. *Journal of Luminescence* 239, 118334.
10.1016/j.jlumin.2021.118334

16. Saha, S., Moon, S., **Brown, N. D.**, Rhodes, E.J., Scharer, K.M., McPhillips, D., McGill, S.F., Castillo, B.A., **2021**. Holocene depositional history inferred from single-grain luminescence ages in southern California, North America. *Geophysical Research Letters* e2021GL092774.
10.1029/2021GL092774

17. Castillo, B., McGill, S. F., Scharer, K. M., Yule, D. J., McPhillips, D., McNeil, J., Saha, S., **Brown, N. D.**, Moon, S., **2021**. Prehistoric Earthquakes on the Banning Strand of the San Andreas Fault, North Palm Springs, California. *Geosphere* 17, 1-26.
10.1130/GES02237.1

18. Hatem, A. E., Dolan, J. F., Zinke, R. W., Langridge, R. M., McGuire, C. P., Rhodes, E. J., **Brown, N. D.**, Van Dissen, R. J., **2020**. Holocene to latest Pleistocene incremental slip rates from the east-central Hope fault (Conway segment) at Hossack Station, Marlborough fault zone, South Island, New Zealand: Towards a dated path of earthquake slip along a plate boundary fault. *Geosphere* 16, 1-27.
10.1130/GES02263.1

19. **Brown, N. D.**, **2020**. Which geomorphic processes can be informed by luminescence measurements? *Geomorphology* 367, 107296.
10.1016/j.geomorph.2020.107296

20. Peltzer, G., **Brown, N. D.**, Meriaux, A. S. B., van der Woerd, J., Rhodes, E. J., Finkel, R. C., Ryerson, F. J., Hollingsworth, J., **2020**. Stable rate of slip along the Karakax section of the Altyn Tagh Fault from observation of inter-glacial and post-glacial offset morphology and surface dating. *Journal of Geophysical Research: Solid Earth* 125, e2019JB018893.
10.1029/2019JB018893

21. **Brown, N. D.**, Moon, S., **2019**. Revisiting erosion rate estimates from luminescence profiles in exposed bedrock surfaces using stochastic erosion simulations. *Earth and Planetary Science Letters* 528, 115842.
10.1016/j.epsl.2019.115842

22. **Brown, N. D.**, Rhodes, E. J., **2019**. Dose-rate dependence of natural TL signals from feldspars extracted from bedrock samples. *Radiation Measurements* 128, 106188.
10.1016/j.radmeas.2019.106188

23. Pagonis, V., **Brown, N. D.**, Polymeris, G., Kitis, G., **2019**. A comprehensive study of thermoluminescence signals in MgB_4O_7:Dy,Na. *Journal of Luminescence* 213, 334–342.
10.1016/j.jlumin.2019.05.044

24. Pagonis, V., **Brown, N. D.**, **2019**. On the unchanging shape of thermoluminescence peaks in pre-heated feldspars: implications for temperature sensing and thermochronometry. *Radiation Measurements* 124, 19–28.
10.1016/j.radmeas.2019.01.021

25. Zinke, R., Dolan, J. F., Rhodes, E. J., Van Dissen, R., McGuire, C. P., Hatem, A. E., **Brown, N. D.**, Langridge, R. M. **2019**. Multi-millennial incremental slip rate variability of the Clarence fault at the Tophouse Road site, Marlborough fault system, New Zealand. *Geophysical Research Letters* 46, 717–725.
10.1029/2018GL080688

26. Charreau, J., Saint-Carlier, D., Lavé, J., Dominguez, S., Blard, P.-H., Avouac, J.-P., **Brown, N. D.**, Malatesta, L., Wang, S., Rhodes, E. J., **2018**. Late Pleistocene acceleration of deformation across the northern Tianshan piedmont (China) evidenced from the morpho-tectonic evolution of the Dushanzi anticline. *Tectonophysics* 730, 132–140.
10.1016/j.tecto.2018.02.016

27. Salisbury, J. B., Arrowsmith, R., **Brown, N. D.**, Rockwell, T., Ludwig, L. G., Akçiz, S., **2018**. The age and origin of small offsets at Van Matre Ranch along the San Andreas Fault in the Carrizo Plain, California. *Bulletin of the Seismological Society of America* 108, 639–652.
10.1785/0120170162

28. Malatesta, L. C., Avouac, J. P., **Brown, N. D.**, Breitenbach, S., Pan, J., Chevalier, M.-L., Rhodes, E., Saint-Carlier, D., Zhang, W., Poisson, B., **2018**. Lag and mixing during sediment transfer across the Tian Shan piedmont caused by climate-driven aggradation-incision cycles. *Basin Research* 30, 613–635.
10.1111/bre.12267

29. Charreau, J., Saint-Carlier, D., Dominguez, S., Lavé, J., Blard, P.-H., Avouac, J.-P., Jolivet, M., Yan, C., Wang, S., **Brown, N. D.**, Malatesta, L., Rhodes, E. J., ASTER team, **2017**. Denudation outpaced by crustal thickening in the eastern Tianshan. *Earth and Planetary Science Letters* 479, 179–191.
10.1016/j.epsl.2017.09.025

30. **Brown, N. D.**, Rhodes, E. J., Harrison, T. M., **2017**. Using thermoluminescence signals from feldspars for low-temperature thermochronology. *Quaternary Geochronology* 42, 31–41.
10.1016/j.quageo.2017.07.006

31. Stockmeyer, J. M., Shaw, J., **Brown, N. D.**, Rhodes, E. J., Richardson, P. W., Wang, M., Lavin, L. C., Guan, S., **2017**. Active thrust sheet deformation over multiple rupture cycles: a quantitative basis for relating terrace folds to fault slip rates. *Geological Society of America Bulletin* 129, 1337–1356.
10.1130/B31835.1

32. **Brown, N. D.**, Rhodes, E. J., **2017**. Thermoluminescence measurements of trap depths in alkali feldspars extracted from bedrock samples. *Radiation Measurements* 96, 53–61.
10.1016/j.radmeas.2016.11.011

33. Antinao, J. L., McDonald, E. V., Rhodes, E. J., **Brown, N. D.**, Barrera, W., Gosse, J. C., Zimmerman, S., **2016**. Late Pleistocene-Holocene alluvial stratigraphy of southern Baja California, Mexico. *Quaternary Science Reviews* 146, 161–181.
10.1016/j.quascirev.2016.06.008

34. **Brown, N. D.**, Rhodes, E. J., Antinao, J. L., McDonald, E. V., **2015**. Single-grain post-IR IRSL signals of K-feldspars from alluvial fan deposits in Baja California Sur, Mexico. *Quaternary International* 362, 132–138.
10.1016/j.quaint.2014.10.024

35. **Brown, N. D.**, Forman, S. L., **2012**. Evaluating a SAR TT-OSL protocol for dating fine-grained quartz within Late Pleistocene loess deposits in the Missouri and Mississippi river valleys, United States. *Quaternary Geochronology* 12, 87–97.
10.1016/j.quageo.2012.06.008

Invited Talks

University of Oregon (**2026**), Workshop on Luminescence Thermochronology Kinetics at University of Lausanne (**2025**), New World Luminescence Dating Workshop (NWLDW) (**2025**, *keynote*), International Society for Aeolian Research (ISAR) Virtuaeolian Seminar Series (**2025**), GSA Fall Meeting (**2024**), Physical Research Laboratory, Ahmedabad (**2024**, *keynote*), University of Houston (**2023**), University of Lausanne (**2023**), University of Texas at Dallas (**2022**), Landscapes Live Seminar, EGU (**2022**), Southern Methodist

University (**2022**), Baylor University (**2022**), Midwestern State University (**2022**), University of Texas at Dallas (**2021**), AGU Fall Meeting (**2021**), Stony Brook University (**2021**), University of Nevada, Las Vegas (**2020**), Wadia Institute of Himalayan Geology (**2020**, *keynote*), University of Lausanne (**2020**), EGU General Assembly (**2020**), University of Texas at Arlington (**2020**), California Institute of Technology (**2015**)

Conference Presentations

(* indicates supervised graduate student) (** indicates supervised undergraduate student)

1. *Valenzuela Davila, D., **Brown, N.D.**, **Alvarez, J., Corbett, L., Bierman, P.R., Lifton, N.A., Measuring California ventifact erosion and exposure across different timescales using luminescence and cosmogenic radionuclide rock surface techniques. Oral presentation at the GSA Annual Meeting, October 19 - 23, **2025**.
2. **Brown, N.D.**, Luminescence rock surface dating of cobble, boulder, and outcrop surfaces: Challenges and potential. Oral presentation at the GSA Annual Meeting, October 19 - 23, **2025**.
3. *Skipper, C.L., **Brown, N.D.**, Barth, A.M., Testing three luminescence dating methods on glacial moraines in the Beartooth Mountains, Montana, USA. Oral presentation at the GSA Annual Meeting, October 19 - 23, **2025**.
4. *Joshi, A., **Brown, N.D.**, Moon, S., Argueta, M.O., Investigating landscape response to tectonic reorganisation in the San Gorgonio Pass region using thermoluminescence (TL) thermochronology. Oral presentation at the GSA Annual Meeting, October 19 - 23, **2025**.
5. *Cordero, K., **Brown, N.D.**, Ball, J., Preliminary results on dating maar eruptions in the Clear Lake Volcanic Field using luminescence dating. Poster presentation at the GSA Annual Meeting, October 19 - 23, **2025**.
6. *Joshi, A., **Brown, N.D.**, Moon, S., Argueta, M., Late Quaternary erosion rates in the San Gorgonio Pass: Insights from thermoluminescence thermochronology. Poster presentation at the Statewide California Earthquake Center Annual Meeting, September 7 - 10, **2025**.
7. Akciz, S.O., **Brown, N.D.**, Unraveling the temporal dynamics of channel incision in the Carrizo Plain: Implications for seismic hazard assessment. Poster presentation at the Statewide California Earthquake Center Annual Meeting, September 7 - 10, **2025**.
8. **Brown, N.D.**, Luminescence thermochronology shows a transient landscape response to a changing southern San Andreas fault. Oral presentation at the New World Luminescence Dating Workshop, July 21 - 23, **2025**. (*keynote*)
9. *Cordero, K., **Brown, N.D.**, Harrison, L., Hurwitz, S., Update on dating hydrothermal explosions in the Yellowstone Plateau Volcanic Field with quartz red TL and K-feldspar post-IR IRSL techniques. Oral presentation at the New World Luminescence Dating Workshop, July 21 - 23, **2025**.
10. *Joshi, A., **Brown, N.D.**, Moon, S., Argueta, M., Investigating geologic controls on TL thermochronology-derived erosion rates in the San Gorgonio Pass region. Poster presentation at the New World Luminescence Dating Workshop, July 21 - 23, **2025**.
11. *Skipper, C.L., **Brown, N.D.**, Influence of snow cover on luminescence rock surface exposure dating of glacial moraine boulders. Oral presentation at the New World Luminescence Dating Workshop, July 21 - 23, **2025**.
12. *Valenzuela Davila, D., **Brown, N.D.**, Quantifying multi-scale erosion rates of Californian ventifacts using OSL depth profiles and in situ cosmogenic nuclide analyses. Oral presentation at the New World Luminescence Dating Workshop, July 21 - 23, **2025**.
13. **Brown, N.D.**, Luminescence Sample Simulator (LuSS): A user-friendly tool to model luminescence signals in simple geomorphic scenarios. Poster presentation at the AGU Fall Meeting, December 9 - 13, **2024**.

14. *Valenzuela Davila, D., **Brown, N.D.**, **Alvarez, J., Estimating erosion rates through OSL depth profile analysis of Californian ventifacts. Poster presentation at the AGU Fall Meeting, December 9 - 13, **2024**.

15. **Alvarez, J., **Brown, N.D.**, *Valenzuela Davila, D., Desert ventifacts: Leveraging geochronology and spatial data to understand and educate about wind-sculpted terrain. Poster presentation at the AGU Fall Meeting, December 9 - 13, **2024**.

16. *Skipper, C.L., **Brown, N.D.**, Influence of varying snow cover on apparent luminescence ages of morainal boulders. Poster presentation at the AGU Fall Meeting, December 9 - 13, **2024**.

17. *Cordero, K., **Brown, N.D.**, Harrison, L., Hurwitz, S., Dating hydrothermal explosions in Yellowstone National Park. Poster presentation at the AGU Fall Meeting, December 9 - 13, **2024**.

18. Walcott, C., **Brown, N.D.** Briner, J.P., Balter-Kennedy, A., Schaefer, J., Young, N.E., Anandakrishnan, S., Stevens, N., Kuhl, T., Moravec, E., Did Prudhoe Dome, northwest Greenland disappear during the Holocene? Luminescence dating results from under the Greenland Ice Sheet. Oral presentation at AGU Fall Meeting, December 9 - 13, **2024**.

19. Schaefer, J., Briner, J.P., Balter-Kennedy, A., Young, N.E., Walcott, C., Kuhl, T., Moravec, E., DeConto, R., Anandakrishnan, S., **Brown, N.D.**, Courville, Z., Keisling, B., First data from the transect of pro- and sub-Greenland Ice Sheet bedrock cores from teh GreenDrill project: Potential and limitations of this novel archive of ice-sheet vulnerability and ice-sheet models. Poster presentation at AGU Fall Meeting, December 9 - 13, **2024**.

20. Balter-Kennedy, A., Schaefer, J., Briner, J.P., Young, N.E., Walcott, C., Kuhl, T., Moravec, E., Keisling, B., DeConto, R., Anandakrishnan, S., **Brown, N.D.**, Courville, Z., Update from GreenDrill: Subglacial sediment and bedrock record reduced northern Greeland Ice Sheet extent during the Pleistocene. eLightning presentation at AGU Fall Meeting, December 9 - 13, **2024**.

21. Douglas, M., Li, G.K., West, A.J., Ke, Y., Rowland, J.C., **Brown, N. D.**, Schwenk, J., Kemeny, P.C., Piliouras, A., Fischer, W.W., Lamb, M.P., Permafrost formation and vegetation succession in a meandering river floodplain. Oral presentation at the AGU Fall Meeting, December 9 - 13, **2024**. *(invited)*

22. Nordin, B., Getraer, A., Marshall, J., Peters, N., Schaeffer, A.J., Fosdick, J., **Brown, N.D.**, Kelley, M., Strauss, J., Palucis, M., Post-glacial erosional response of a permafrost landscape across decadal to millennial timescales, Aklavik Range, Arctic Canada. Oral presentation at the AGU Fall Meeting, December 9 - 13, **2024**.

23. Gilchrist, S., Lukens, C.E., **Brown, N.D.**, How boulders and cobbles experience weathering on a hillslope. Poster presentation at the AGU Fall Meeting, December 9 - 13, **2024**.

24. Riedesel, S., **Brown, N.D.**, King, G.E., Jain, M., Kreutzer, S., Emulating exhumation: Exploring the effect of linear cooling on luminescence build-up in feldspars. Poster presentation at the AGU Fall Meeting, December 9 - 13, **2024**.

25. **Brown, N.D.**, *Joshi, A., Argueta, M.O., Moon, S., Rhodes, E.J., Oskin, M.E., Morelan, A.E., Applying luminescence thermochronology to investigate landscape response to Late Pleistocene exhumation near the Mill Creek strand of the San Andreas Fault. Oral presentation at the GSA Annual Meeting, September 22 - 25, **2024**. *(invited)*

26. *Joshi, A., **Brown, N.D.**, Argueta, M.O., Moon, S., Luminescence ages of offset and unfaulted sediments along the Mission Creek strand of the southern San Andreas Fault near the Stone House. Oral presentation at the GSA Annual Meeting, September 22 - 25, **2024**.

27. **Alvarez, J., **Brown, N.D.**, *Valenzuela Davila, D., Integrating geochronology and high-resolution spatial data into ventifact education. Poster presentation at the GSA Annual Meeting, September 22 - 25, **2024**.

28. Nordin, B., Strauss, J., Fosdick, J., Palucis, M., **Brown, N.D.**, Kelley, M., Marshall, J., Schaeffer, A.J., Peters, N., Getraer, A., Post-glacial erosional response of a permafrost landscape across decadal to millennial timescales, Aklavik Range, Arctic Canada. Poster presentation at the GSA Annual Meeting, September 22 - 25, **2024**.

29. McDonald, E., Gosse, J., **Brown, N.D.**, Kirby, E., Age of the penultimate lacustrine highstand in Panamint Valley: A reassessment combining soil stratigraphy and numerical dating. Oral presentation at the GSA Annual Meeting, September 22 - 25, **2024**.

30. *Joshi, A., **Brown, N.D.**, Argueta, M.O., Moon, S., Identifying active uplift across fault strands in the San Gorgonio Pass region: A TL thermochronology based approach. Oral presentation at the New World Luminescence Dating Workshop, June 11 - 14, **2024**.

31. *Cordero, K., **Brown, N.D.**, Harrison, L., Hurwitz, S., Progress in dating hydrothermal explosions in Yellowstone National Park. Oral presentation at the New World Luminescence Dating Workshop, June 11 - 14, **2024**.

32. *Valenzuela Davila, D., **Brown, N.D.**, **Alvarez, J., Erosion rate estimation through OSL depth profile analysis of ventifacts in California. Poster presentation at the New World Luminescence Dating Workshop, June 11 - 14, **2024**.

33. *Skipper, C.L., **Brown, N.D.**, Effects of snow cover on luminescence dating of glacial moraines. Poster presentation at the New World Luminescence Dating Workshop, June 11 - 14, **2024**.

34. **Alvarez, J., **Brown, N.D.**, *Valenzuela Davila, D., Integrating geochronology and high-resolution spatial data into ventifact education. Poster presentation at the New World Luminescence Dating Workshop, June 11 - 14, **2024**.

35. *Warber, J., **Brown, N.D.**, Sickmann, Z., Fingerprinting the origins of sand from Texas river systems using luminescence geochronology. Poster presentation at the New World Luminescence Dating Workshop, June 11 - 14, **2024**.

36. **Brown, N.D.**, Luminescence Sample Simulator (LuSS): Demonstrating a simple app prototype for simulating basic grain or bedrock sample histories. Oral presentation at the New World Luminescence Dating Workshop, June 11 - 14, **2024**.

37. Wenban, W.J., **Brown, N.D.**, Rhodes, E.J., Swift, D.A., Constraining erosion rates and patterns for glaciated basins in the European Alps using thermoluminescence thermochronology. Presentation at the European Geophysical Union General Assembly, April 14-19, **2024**.

38. Walcott, C., Briner, E., Schaefer, J., Young, N.E., Balter-Kennedy, A., **Brown, N.D.**, Ancient landscapes in Inglefield Land, northwest Greenland were preserved during Last Glacial Maximum ice cover. Oral presentation at AGU Fall Meeting, December 11 - 15, **2023**.

39. Balter-Kennedy, A., Schaefer, J., Briner, J.P., Young, N.E., Walcott, C., Kuhl, T., Moravec, E., Keisling, B., Stevens, N., Sridhar Anandakrishnan, **Brown, N.D.**, First results from GreenDrill: Exposure dating in sub-ice material from Prudhoe Dome, northwestern Greenland. Oral presentation at AGU Fall Meeting, December 11 - 15, **2023**.

40. Briner, J.P., Walcott, C., Moravec, E., Balter-Kennedy, A., **Brown, N.D.**, Young, N.E., Kuhl, T., Schaefer, J., Holocene ice-sheet history at the Prudhoe Dome margin, NW Greenland: Samples for exposure dating (CRN and OSL) beneath and beyond the ice margin. Oral presentation at AGU Fall Meeting, December 11 - 15, **2023**.

41. *Joshi, A., **Brown, N.D.**, Moon, S., Argueta, Luminescence ages of offset and unfaulted alluvium along the San Andreas Fault in Southern California. Oral presentation at 17th International Conference on Luminescence and Electron Spin Resonance Dating, Copenhagen, Denmark, June 26-30, **2023**.

42. *Cordero, K., **Brown, N.D.**, Harrison, L., Hurwitz, S., Cooling age estimates for hydrothermal explosions in Yellowstone National Park. Poster presentation at 17th International Conference on Luminescence and Electron Spin Resonance Dating, Copenhagen, Denmark, June 26-30, **2023**.

43. **Brown, N.D.**, Balco, G., Nichols, K., Venturelli, R.A., Adams, J., Braddock, S., Campbell, S., Goehring, B., Johnson, J.S., Rood, D.H., Wilcken K., Hall, B., Woodward, J., Using rock surface luminescence and cosmogenic radionuclide measurements to demonstrate recent ice sheet thinning in the West Antarctic Ice Sheet. Oral presentation at 17th International Conference on Luminescence and Electron Spin Resonance Dating, Copenhagen, Denmark, June 26-30, **2023**.

44. Harrison, L., Hurwitz, S., Licciardi, J., Whitlock, C., **Brown, N.D.,** *Cordero, K., Stelten, M., Hungerford, J., Insights from diverse geochronologic methods applied to hydrothermal explosions in the Yellowstone Plateau Volcanic Field. Oral presentation at the IAVCEI Scientific Assembly, January 30 - February 3, **2023**.

45. Gorin, A.L., **Brown, N. D.**, Shuster, D.L., Balco, G.A., Corbett, L.B., Bierman, P.R., Terrestrial Temperatures Since the LGM in the North Atlantic Based on Cosmogenic Paleothermometry. Poster presentation at AGU Fall Meeting, December 12 - 16, **2022**.

46. †Balco, G., †**Brown, N. D.**, †Nichols, K., †Venturelli, R.A., Adams, J., Braddock, S., Campbell, S., Goehring, B., Johnson, J.S., Rood, D.H., Wilcken, K., Hall, B., Woodward, J., Reversible ice sheet thinning in the Amundsen Sea Embayment during the Late Holocene. Oral presentation at AGU Fall Meeting, December 12 - 16, **2022**.
†Authors contributed equally

47. *Joshi, A., **Brown, N.D.**, Moon, S., Argueta, Preliminary luminescence ages of offset and unfaulted alluvium along the Mission Creek strand. Poster presentation at the New World Luminescence Dating Workshop, October 13 - 15, **2022**.

48. *Cordero, K., **Brown, N.D.**, Harrison, L., Hurwitz, S., Preliminary cooling age estimates for hydrothermal explosions in Yellowstone National Park. Poster presentation at the New World Luminescence Dating Workshop, October 13 - 15, **2022**.

49. **Brown, N.D.**, Balco, G., Nichols, K., Venturelli, R.A., Adams, J., Braddock, S., Campbell, S., Goehring, B., Johnson, J.S., Rood, D.H., Wilcken K., Hall, B., Woodward, J., Using rock surface luminescence and cosmogenic radionuclide measurements to demonstrate recent ice sheet thinning in the West Antarctic Ice Sheet. Oral presentation at the New World Luminescence Dating Workshop, October 13 - 15, **2022**.

50. *Joshi, A., **Brown, N.D.**, Moon, S., Argueta, Preliminary luminescence ages of offset and unfaulted alluvium along the Mission Creek strand. Poster presentation at SCEC Annual Meeting, September 11 - 14, **2022**.

51. Argueta, M.O., Saha, S., Moon, S., **Brown, N.D.**, Rockwell, T., Scharer, K., Morgan, Z., Leidelmeijer, J., Constraining the long-term sedimentation history at ancient Lake Cahuilla, Coachella, CA from Holocene sediment cores. Poster presentation at SCEC Annual Meeting, September 11 - 14, **2022**.

52. **Brown, N.D.**, Argueta, M.O., Moon, S., Rhodes, E.J., Oskin, M.E., Morelan, A.E., Luminescence thermochronology reveals Late Pleistocene exhumation history near the Mill Creek strand of the San Andreas fault. Poster presentation at SCEC Annual Meeting, September 11 - 14, **2022**.

53. Castillo, B., McGill, S., Scharer, K., Yule, D., McPhillips, D., McNeil, J., Saha, S., **Brown, N.D.**, Moon, S., Prehistoric earthquakes on the Banning strand of the San Andreas fault, North Palm Springs, California. Poster presentation at SCEC Annual Meeting, September 11 - 14, **2022**.

54. **Brown, N.D.**, How low can you go? Using luminescence measurements for ultra-low-temperature thermochronology. Oral presentation at AGU Fall Meeting, December 13 - 17, **2021**. *(invited)*

55. **Brown, N.D.**, Argueta, M.O., Moon, S., Rhodes, E.J., Oskin, M.E., Morelan, A.E., Cutting the San Gorgonio Knot: Luminescence thermochronology suggests Quaternary uplift across Mill Creek fault in Southern California. Poster presentation at AGU Fall Meeting, December 13 - 17, **2021**.

56. Argueta, M.O., Saha, S., Moon, S., **Brown, N.D.**, Rockwell, T.K., Scharer, K.M., Leidelmeijer, J., Morgan, Z., Constraining long-term sediment depositional history at ancient Lake Cahuilla, Coachella, California. Poster presentation at AGU Fall Meeting, December 13 - 17, **2021**.

57. **Brown, N.D.**, Rhodes, E.J., Developing an internally consistent methodology for K-feldspar MAAD TL thermochronology. Oral presentation at the 16th International Luminescence and Electron Spin Resonance Dating (LED) Conference Online, September 13 - 17, **2021**.

58. Saha, S., Moon, S., **Brown, N.D.**, Rhodes, E.J., Sediment transport and depositional history from nested alluvial fans to flood plains using single-grain luminescence. Oral presentation at AGU Fall Meeting, December 13 - 17, **2021**.

59. Plante, Z., Moon, S., Fosdick, J.C., **Brown, N.D.**, Hilley, G.E., Could atmospheric dust deposition be an important contributor to Earth's riverine silicate weathering flux? Poster presentation at AGU Fall Meeting, December 13 - 17, **2021**.

60. **Brown, N.D.**, Understanding geomorphic processes with luminescence signals. Oral presentation at Wadia Institute of Himalayan Geology Luminescence Workshop Online, November 25-27, **2020**. *keynote*

61. Higa, J., **Brown, N.D.**, Moon, S., Stock, J.M., Sabbeth, L., Bennett, S.E.K., Martin, A., Argueta, M.O., Microcontinent evolution of Isla Angel de la Guarda, Gulf of California, Mexico, from neotectonic mapping, luminescence dating, and topographic analysis. Oral presentation at AGU Fall Meeting Online, December 1 - 17, **2020**.

62. Saha, S., Moon, S., **Brown, N.D.**, Rhodes, E.J., Examining single-grain luminescence dating uncertainties between upstream fans and downstream sediment deposits in seismically active Southern California. Poster presentation at AGU Fall Meeting Online, December 1 - 17, **2020**.

63. **Brown, N.D.**, Reading Quaternary landscapes with luminescence signals from detrital clasts and sand grains. Poster presentation at AGU Fall Meeting Online, December 1 - 17, **2020**.

64. Argueta, M.O., Moon, S., Blisniuk, K., Corbett, L.B., Bierman, P.R., **Brown, N.D.**, Zimmerman, S.R.H., The influence of topographic disequilibrium on erosion rates from the San Bernardino Mountains, California. Poster presentation at AGU Fall Meeting Online, December 1 - 17, **2020**.

65. **Brown, N.D.**, Argueta, M.O., Moon, S., Rhodes, E.J., Oskin, M.E., Resolving a transient erosional response to tectonic uplift in the San Bernardino Mountains, California, by combining luminescence thermochronology and cosmogenic radionuclides. Oral presentation at GSA Annual Meeting Online, October 26 - 30, **2020**.

66. **Brown, N.D.**, Moon, S., Interpreting erosion frequency and magnitude from luminescence profiles in boulders. Oral presentation at EGU General Assembly Online, May 4 - 8, **2020**. *(invited)*

67. **Brown, N.D.**, How to interrogate stones, and other lessons from luminescence. Poster presentation at AGU Annual Meeting, San Francisco, CA, USA, December 9 - 13, **2019**.

68. Plante, Z., **Brown, N.D.**, Fosdick, J., Hilley, G., Moon, S., Can atmospheric dust deposition account for Earth's riverine Si discharge? Oral presentation at AGU Annual Meeting, San Francisco, CA, USA, December 9 - 13, **2019**.

69. Sabbeth, L., Stock, J.M., Bennett, S.E.K., Barajas, A.M., Moon, S., Higa, J.T., **Brown, N.D.**, Intrarift deformation and transition to marine conditions on southeastern Isla Angel de la Guarda, Gulf of California, Mexico. Poster presentation at AGU Annual Meeting, San Francisco, CA, USA, December 9 - 13, **2019**.

70. Higa, J.T., Moon, S., **Brown, N.D.**, Argueta, M.O., Saha, S., Sabbeth, L., Bennett, S.E.K., Barajas, A.M., Combining luminescence dating and high-resolution imaging to analyze an evolving microcontinent, Isla Angel de la Guarda, Gulf of California, Mexico. Poster presentation at AGU Annual Meeting, San Francisco, CA, USA, December 9 - 13, **2019**.

71. Argueta, M., Moon, S., Blisniuk, K., Corbett, L., Bierman, P., **Brown, N.D.**, Zimmerman, S., New erosion rate measurements from the San Bernardino Mountains, California: insights into tectonic and topographic evolution. Poster presentation at AGU Annual Meeting, San Francisco, CA, USA, December 9 - 13, **2019**.

72. Saha, S., Moon, S., **Brown, N.D.**, Rhodes, E.J., Influence of sediment dynamics and alluvial fan formation on paleoseismic studies in southern California, North America. Oral presentation at AGU Annual Meeting, San Francisco, CA, USA, December 9 - 13, **2019**.

73. Hatem, A.E., Dolan, J.F., Zinke, R.W., Van Dissen, R.J., McGuire, C., Rhodes, E.J., **Brown, N.D.**, High-resolution Holocene to late Pleistocene records of paleoseismology and incremental slip rates along Conway segment of Hope fault, South Island, New Zealand: Towards a dated path of earthquake slip through time. Poster presentation at AGU Annual Meeting, San Francisco, CA, USA, December 9 - 13, **2019**.

74. **Brown, N.D.**, Moon, S., Interpreting erosion frequency and magnitude from luminescence profiles in boulders. Oral presentation at GSA Annual Meeting, Phoenix, AZ, USA, September 22 - 25, **2019**.

75. Pena, K., McGill, S.F., Rhodes, E.J., Dolan, J.F., **Brown, N.D.**, Hatem, A.E., Saha, S., Zinke, R., Paleoseismic results from the Christmas Canyon West Site, Central Garlock Fault, Searles Valley, California. Poster presentation at Southern California Earthquake Center Annual Meeting, Palm Springs, CA, USA, September 7-11, **2019**.

76. Burns, J.E., McGill, S.F., Rhodes, E.J., Dolan, J.F., **Brown, N.D.**, Dating of offset geomorphic features along the Garlock Fault, Mojave Desert, California: Testing a proposed earthquake supercycle model. Poster presentation at Southern California Earthquake Center Annual Meeting, Palm Springs, CA, USA, September 7-11, **2019**.

77. Saha, S., Moon, S., **Brown, N.D.**, Rhodes, E.J., McGill, S, Castillo, B., Scharer, K., McPhillips, D., Yule, J.D., Influence of sediment dynamics and alluvial fan formation on paleoseismic studies in southern California, North America. Poster presentation at Southern California Earthquake Center Annual Meeting, Palm Springs, CA, USA, September 7-11, **2019**.

78. **Brown, N.D.**, Rhodes, E.J., Leaky buckets and adjustable spigots: Why differences in natural dose rates (sometimes) matter in feldspar TL thermometry. Oral presentation at the 13th New World Luminescence Dating Workshop, Urbana-Champaign, IL, USA, August 5 - 7, **2019**.

79. Saha, S., Moon, S., **Brown, N.D.**, Rhodes, E.J., Influence of sediment dynamics and alluvial fan formation on paleoseismic studies in southern California, North America. Poster presentation at the 13th New World Luminescence Dating Workshop, Urbana-Champaign, IL, USA, August 5 - 7, **2019**.

80. Blisniuk, K., Sharp, W.D., **Brown, N.D.**, Moon, S., Determining the origins and ages of paleolandscapes in the Anza Borrego Desert. Oral presentation at the New Discoveries in the American Paleolithic Conference, Borrego Springs, CA, USA, January 10 - 12 **2019**.

81. **Brown, N.D.**, Moon, S., Sabbeth, L., Stock, J., Martin-Barajas, A., Piña-Páez, A, Higa, J, Integrating high-resolution topography, geochronology, and elemental analyses to constrain the active break-up of a microcontinent. Poster presentation at AGU Annual Meeting, Washington, DC, USA, December 10 - 14, **2018**.

82. Peltzer, G., van der Woerd, J., Meriaux, A.-S., **Brown, N.D.**, Rhodes, E.J., Ryerson, F.J., Hollingsworth, J., Stable rate of slip along the Karakax Valley Fault from observation of inter-glacial and post-glacial offset morphology and surface dating. Poster presentation at AGU Annual Meeting, Washington, DC, USA, December 10 - 14, **2018**.

83. Sabbeth, L., Stock, J., **Brown, N.D.**, Moon, S., Martin-Barajas, A., Piña-Páez, A, Isolation and break up of a microcontinent in the Gulf of California: Fault structure and volcanic geochemistry. Oral presentation at GSA Annual Meeting, Indianapolis, IN, USA, November 4 - 7, **2018**.

84. **Brown, N.D.**, Moon, S., Stock, J.M., Sabbeth, L., Dating offset alluvial terraces to understand the ongoing break-up of a microcontinent. Oral presentation at the 12th New World Luminescence Dating Workshop, East Carolina University, Greenville, NC, USA, June 27 - 30, **2018**.

85. **Brown, N.D.**, Moon, S., Increasing topographic relief revealed by luminescence thermochronology: A case study from the San Bernardino Mountains. Poster presentation at the First Annual Southern California Geomorphology Symposium, May 5, **2018**.

86. **Brown, N.D.**, Moon, S., Rhodes, E.J., Using luminescence signals from bedrock feldspars to quantify rapid cooling in the San Bernardino Mountains, Southern California. Oral presentation (T193-10) at GSA Annual Meeting, Seattle, WA, USA, October 22-25, **2017**.

87. **Brown, N.**, Moon, S., Rhodes, E.J., Harrison, T.M., Using feldspar TL for low-temperature thermochronology. Oral presentation at 15th International Conference on Luminescence and Electron Spin Resonance Dating, Cape Town, South Africa, September 11-15, **2017**.

88. Guralnik, B., Jain, M., **Brown, N.**, King, G.E., Lambert, R., Chen, R., S.W.S. McKeever, Towards a physical kinetic model for feldspar OSL-thermochronometry. Presentation at Goldschmidt, Paris, France, 13-18 August, **2017**.

89. Malatesta, L.C., Avouac, J.-P., **Brown, N.**, Breitenbach, S., Chevalier, M.-L., Pan, J., Rhodes, E.J., Saint-Carlier, D., Zhang, W., Incision in alluvial piedmonts indirectly records climate forcing after modulation by glaciation in the E. Tian Shan high range. Presentation at EGU General Assembly, Vienna, Austria, 23-28 April, **2017**.

90. **Brown, N.**, Rhodes, E.J., Harrison, T.M., Thermoluminescence signals from bedrock K-feldspars: Minimum cooling ages from a glacial valley. Oral presentation at 11th New World Luminescence Dating Workshop, University of Nebraska, Lincoln, NE, USA, May 19-21, **2016**.

91. Emmons, B., Moon, S., **Brown, N.**, Blisniuk, K., Rhodes, E., Applying newly developed luminescence dating techniques to alluvial fans in the Anza Borrego Desert, southern California. Poster presentation at Southern California Earthquake Center Annual Meeting, Palm Springs, CA, USA, September 11-14, **2016**.

92. Salisbury, J.B., Arrowsmith, R., Rockwell, T., Akciz, S., **Brown, N.**, Ludwig, L.G., Investigating the age and origin of small beheaded channels along the San Andreas Fault in the Carrizo Plain, California. Poster presentation at Southern California Earthquake Center Annual Meeting, Palm Springs, CA, USA, September 11-14, **2016**.

93. Malatesta, L.C., Avouac, J.-P., **Brown, N.**, Rhodes, E.J., Prancevic, J.P., Pan, J., Chevalier, M.-L., Saint-Carlier, D., Zhang, W., Berger, Q., Recycling of sediments from the last 300 kyr in the modern sediment flux during transfer across the north Tien Shan alluvial piedmont. Presentation at EGU General Assembly, Vienna, Austria, 12-17 April, **2016**.

94. McDonald, E., Antinao, J.L., Rhodes, E.J., **Brown, N.**, Gosse, J., The role of tropical cyclones on landscape dynamics in southern Baja California, Mexico base on Late Pleistocene-Holocene alluvial stratigraphy. Presentation at EGU General Assembly, Vienna, Austria, 12-17 April, **2016**.

95. **Brown, N.D.**, Rhodes, E.J., Harrison, T.M., Thermally-controlled luminescence signals from bedrock K-feldspars. Poster presentation at AGU Fall Meeting, San Francisco, CA, USA, December 14-18, **2015**.

96. **Brown, N.D.**, Rhodes, E.J., Harrison, T.M., Unravelling the luminescence kinetics of K-feldspar during geologic cooling. Oral presentation at 10th New World Luminescence Dating Workshop, Manhattan, KS, USA, June 18-20, **2015**.

97. **Brown, N.D.**, Rhodes, E.J., Harrison, T.M., Using luminescence signals from bedrock feldspars for low temperature thermochronology. Poster presentation at Southern California Earthquake Center Annual Meeting, Palm Springs, CA, USA, September 12-16, **2015**.

98. Malatesta, L.C., Avouac, J.-P., **Brown, N.**, Rhodes, E.J., Prancevic, J.P., Pan, J., Chevalier, M.-L., Saint-Carlier, D., Zhang, W., Sediment from the last two glacial periods amalgamated and re-entrained in the alluvial piedmont of the north Tien Shan. Poster presentation at AGU Fall Meeting, San Francisco, CA, USA, December 14-18, **2015**.

99. Stockmeyer, J.M., Shaw, J.H., **Brown, N.**, Rhodes, E.J., Lavin, L.C., Wang, M., Guan, S., Coseismic faulting and folding in an active thrust sheet over multiple rupture cycles resolved by integrating surface and subsurface records of earthquake deformation. Poster presentation at AGU Fall Meeting, San Francisco, CA, USA, December 14-18, **2015**.

100. **Brown, N.D.**, Rhodes, E.J., Harrison, T.M., Low-temperature thermochronology using luminescence from K-feldspar: A case study along the San Andreas Fault, CA. Oral presentation (EP23G-08) at AGU Fall Meeting, San Francisco, CA, USA, December 15-19, **2014**.

101. Stockmeyer, J.M., Shaw, J.H., **Brown, N.D.**, Rhodes, E.J., Wang, M., Richardson, P., Perron, T., Guan, S., Quaternary fault activity in the southern Junggar Basin, northwest China revealed from fluvial terraces. Poster presentation (323-11) at GSA Annual Meeting, Vancouver, British Columbia, Canada, October 19-22, **2014**.

102. Antinao, J.L., McDonald, E., Rhodes, E.J., Barrera, W., **Brown, N.D.**, Gosse, J.C., Zimmerman, S.H., Late Pleistocene-Holocene alluvial stratigraphy of southern Baja peninsula. Oral presentation (87-11) at GSA Annual Meeting, Vancouver, British Columbia, Canada, October 19-22, **2014**.

103. **Brown, N.D.**, Rhodes, E.J., Capaldi, T.N., Low-temperature thermochronology: assessing ITL, IRSL, and OSL signals within K-feldspar. Oral presentation at 14th International Conference on Luminescence and Electron Spin Resonance Dating, Montréal, Québec, Canada, July 7-11, **2014**.

104. **Brown, N.D.**, Rhodes, E.J., Antinao, J.L., McDonald, E., Barrera, W.A., Sedimentary record of a Holocene hydroclimatic shift in Baja California Sur, Mexico. Oral presentation (EP52-A) at AGU Fall Meeting, San Francisco, CA, USA, December 9-13, **2013**.

105. **Brown, N.D.**, Rhodes, E.J., Antinao, J.L., McDonald, E., Barrera, W.A., Sedimentological and geochronological evidence for large-magnitude paleofloods in the desert region of Baja California Sur, Mexico. Oral presentation (T230-9) at GSA Annual Meeting, Denver, CO, USA, October 27-30, **2013**.

106. **Brown, N.D.**, Rhodes, E.J., Antinao, J.L., McDonald, E., Barrera, W.A., Using single grain K-feldspar post-IR_{50} $IRSL_{225}$ to constrain depositional dynamics of alluvial fan terraces in southern Baja California Sur, Mexico. Oral presentation at 9th New World Luminescence Dating Workshop, University of Utah, Logan, UT, USA, August 16-18, **2013**.

107. Rhodes, E.J., **Brown, N.D.**, Antinao, J.L., Huenupi, E.C., Baker, S.E., McDonald, E., Developing a luminescence chronology for fan-terrace sediments, Los Cabos, Baja California, Mexico. Poster presentation (GC33D-1052) at AGU Fall Meeting, San Francisco, CA, USA, December 3-7, **2012**.

108. **Brown, N.D.**, Evaluating a SAR TT-OSL protocol for dating fine-grained quartz within Late Pleistocene loess deposits in the Missouri and Mississippi river valleys, United States. Oral presentation at 8th New World Luminescence Dating Workshop, University of California, Los Angeles, CA, USA, September 6-9, **2012**.

Teaching

GEOL 4421/5421: Geochronology (UTA) **2022 -**

GEOL 3388: Field Geology (UTA) **2022 -**

GEOL 2445: Mineralogy (UTA) **2021 -**

UNIV 1131: Student Success (UTA) **2022 - 2023**

GEOL 4199/5199, ENVR 4199, EVSE 5199: Technical Sessions (UTA) **2021 - 2022**

EPSS 1: Introduction to Earth Science (UCLA; Instructor of Record) **2016 - 2018**

EPSS 61: Geologic Maps (UCLA; Teaching Assistant) **2014 - 2016**

EPSS 1: Introduction to Earth Science (UCLA; Teaching Assistant) **2013 - 2014**

EAES 475: Hydrology (UIC; Teaching Assistant) **2011**

EAES 102: Exploring the Earth's Interior (UIC; Teaching Assistant) **2009 - 2010**

GEOL 437: Hydrogeology (Wheaton College; Grader) **2009**

GEOL 371: Geographical Information Systems (Wheaton College; Grader) **2008**

Advising

Undergraduate Students

Jessica Martin (**2021 - 2023**)

Karissa Cordero (**2021 - 2022**)

Cindy Lou Skipper (**2022**)

Diana Valenzuela Davilla (**2022**)

Taylor Bailey (**2022**)

Jeffrey Warber (**2023**)

Julia Alvarez (**2023 - 2024**)

Mariam Zenhom (**2025**)

Maddox Flores (**2025**)

Dylan Wilson (**2025**)

Graduate Students

Ph.D. Students

Ayush Joshi (**2021 - **)

Karissa Cordero (**2022 - **)

Cindy Lou Skipper (**2024 - **)

Diana Valenzuela Davila (**2024 - **)

Ogochukwu Azike (**Graduated 2024**); co-supervised with Professor Emeritus Qinhong 'Max' Hu

M.S. Students

Jeffrey Warber (**Graduated 2025**)

Cindy Lou Skipper (**2023**; transitioned to Ph.D. Spring 2024)

Diana Valenzuela Davila (**2023**; transitioned to Ph.D. Spring 2024)

Advisee Honors and Awards

Diana Valenzuela Davila, awardee of Spindletop Graduate Scholarship (**2023**), EDGE Program Scholarship (**2023**), UTA College of Science DISCOVER Research Symposium Finalist (**2023**), Best Student Poster Award at the New World Luminescence Dating Workshop (**2024**)

Cindy Lou Skipper, awardee of Fort Worth Wildcatters Endowed Scholarship (**2022**), Patricia and Charles Jenkins Endowed Scholarship (**2022**), and UTA College of Science DISCOVER Research Symposium Finalist (**2023**)

Karissa Cordero, UTA College of Science DISCOVER Research Symposium Finalist (**2024**)

Ayush Joshi, awardee of UTA Maverick Merit Fellowship (**2021**)

Jessica Martin, awardee of UTA Undergraduate Research Opportunity Program (**2021**)

Grants Awarded

"Measuring differential uplift rates across multiple fault strands in the San Gorgonio Pass region using thermoluminescence thermochronology"

Award 25225, Statewide California Earthquake Center (**PI: N. Brown**)
Funded for $30,341 (**2025 - 2026**)

"Technician Support: The University of Texas at Arlington Luminescence Laboratory"
Award 2350175, National Science Foundation - Earth Sciences Instrumentation and Facilities (EAR/IF) (**PI: N. Brown**)
Funded for $812,839 (**2024 - 2029**)

"Quantifying long-term aeolian abrasion rates on hard rock surfaces"
Award 2314628, National Science Foundation - Geomorphology and Land-use Dynamics (GLD) (**PI: N. Brown**)
Funded for $261,593 (**2024 - 2026**)

"Using luminescence dating to constrain the most recent slip along the Mission Creek strand of the San Andreas fault near Mission Creek"
Award 22097, Southern California Earthquake Center (**PI: N. Brown**)
Funded for $35,000 (**2022 - 2023**)

"Measuring aeolian abrasion on millennial timescales"
Research Enhancement Program at UTA (**PI: N. Brown**)
Funded for $9,985 (**2021 - 2022**)

"EAR-PF: Using noble gas techniques to benchmark feldspar TL thermochronology"
Award 1806629, National Science Foundation - Earth Sciences Postdoctoral Fellowship (EAR-PF) (**PI: N. Brown**)
Funded for $174,000 (**2019 - 2021**)

"Luminescence dating on a timescale of days"
Proposal 66081-EV-II to the US Army Research Office (PI: Edward Rhodes)
Funded for $48,578 in direct costs (**2015**)
N. Brown wrote the proposal, planned and executed much of the research, and led the reporting of results.

External Service

External Ph.D. Committee Member

Fernanda Rodrigues. University of São Paulo. (**Graduated 2022**)

Marina Argueta. University of California, Los Angeles. (**Graduated 2024**)

Caleb Walcott. University of Buffalo. (**Graduated 2025**)

Seth Gilchrist. University of California, Merced. (**2023 - **)

Salome Oehler. University of Lausanne. (**2023 - **)

Reviewer for *Science*, *Scientific Reports*, *Science Advances*, *Geology*, *Earth and Planetary Science Letters*, *Geophysical Research Letters*, *Journal of the Geological Society*, *Geomorphology*, *Earth Surface Dynamics*, *Journal of Geophysical Research: Earth Surface*, *Quaternary Geochronology*, *Quaternary International*, *Geochronology*, *Review of Geophysics*, *Tectonics*, *Tectonophysics*, *Journal of Quaternary Science*, *Climate of the Past*, *Physical Geography*, *Earth, Planets and Space*, *Icarus*, *Radiation Measurements*, *Radiation Physics and Chemistry*, *Journal of Luminescence*, *Physica B*, *Ancient TL*.

Steering committee member for AGeS-cubed initiative (**2023 - 2025**)

Editorial board member for *Ancient TL* (**2024 - **)

Ad hoc reviewer for NSF Geomorphology and Land-use Dynamics Program and NSF Major Research Instrumentation

Ad hoc reviewer for UK Research and Innovation

Panelist for multiple NSF programs

Technical session chair at AGU Annual Meeting (**2020, 2021, 2024**) and GSA Annual Meeting (**2024**)

Field trip leader at GSA Annual Meeting (**2024**)

Scientific committee member for International Luminescence and Electron Spin Resonance Dating Conference (**2026**) and International Thermochronology Conference (**2021**)

Volunteer judge for AGU Outstanding Student Presenter Award

Departmental and University Service

University Service: Co-Chair of Academic Standards and Policy Working Group (**2025**–), Undergraduate Assembly Member (**2021**–**2025**), Radiation Safety Committee (**2022**–)

Departmental Service: Chair of Graduate Studies Committee (**2023**–), Faculty Search Committee Chair (**2023**), Faculty Search Committee (**2020**,**2022**,**2024**), Geology Curriculum Committee (**2021**), Faculty Advisor for Geological Society (**2021**–), Faculty Organizer for Departmental Seminar (**2021**–**2022**), Faculty Advisor for Student Success course (**2022, 2023**)

EES M.S. Thesis Committee: James Breen, Prince Oware

EES Ph.D. Thesis Committee: Rijumon Nandy, Christopher McCauley, Khawaja Iltaf, Xiangwei Guo, Xiaoqing Yuan, Jiayi Wang, Farnood Sobhbidari, Mitali Gautam, Diana Hansen, Brenda Costello, Alexandra May

Media Coverage

"Scientists just got some ancient clues about future sea-level rise – and it's bad news." *The Washington Post*, **1/5/26**.

"UTA research team helps Texas cities, others understand natural disasters, climate issues." *Fort Worth Report*, **11/24/25**.

"Far from West Coast, UTA team tracks California quakes." *UTA News Release*, **9/9/25**.

"SCENE: Dark Lab." *UTA Magazine*, **Winter 2023**.

"Earth Day 2022: Rocks and Minerals." *DFW Airport YouTube Channel*, **2022**.

Community Outreach

Volunteer at Explore Your Universe community outreach event (**2014**)

Presentations to third- (**2013**) and fifth-grade (**2014, 2016**) students of Equitas Academy Charter School, Los Angeles

Presentation at *Popping the Science Bubble* community outreach program, Berkeley (**2019**)

Volunteer at *Skype a Scientist* (**2021**–)

Last updated: January 23, 2026