

JUSTIN T. HIGA

EDUCATION

Jun 2023	University of California, Los Angeles , Los Angeles, California Ph.D., Geology <i>Dissertation: Multi-scale investigations on the impacts of geologic fractures</i>
Dec 2020	University of California, Los Angeles , Los Angeles, California M.S., Geology
May 2018	University of Hawai‘i at Mānoa , Honolulu, Hawai‘i B.S., Geology & Geophysics

PROFESSIONAL EXPERIENCE

Jan 2024 – Dec 2025	NSF Earth Sciences Postdoctoral Fellow University of Hawai‘i at Mānoa Scientific mentor: Dr. Scott Rowland
Sep 2022 – Jun 2023	Virtual Student Federal Service intern Pacific Islands Water Science Center
Apr 2021 – Apr 2022	Cohort member American Geophysical Union Voices for Science
Sep 2018 – Jun 2023	Graduate researcher UCLA Geomorphology Lab Advisor: Dr. Seulgi Moon

PEER-REVIEWED PUBLICATIONS

1. Moon, S., Formetta, G., **Higa, J.T.**, Bellugi, D.G., Busti, R., Dietrich, W.E., Milledge, D.G., Ebel, B.A., (*in review*). Deep critical zone controls on shallow landslides: insights from numerical simulations in a steep, forested landscape.
2. **Higa, J.T.***, Brown, N.D.*, Moon, S., Stock, J.M., Sabbeth, L., Bennett, S.E.K., Barajas, A.M., Argueta, M.O. (2022). Microcontinent Breakup and Links to Possible Plate Boundary Reorganization in the Northern Gulf of California, México. *Tectonics*, 41, e2021TC006933. <https://doi.org/10.1029/2021TC006933>
3. Li, G., Moon, S., **Higa, J.T.** (2022). Residence Time of Over-Steepened Rock Masses in an Active Mountain Range. *Geophysical Research Letters*, 49, e2021GL097319. <https://doi.org/10.1029/2021GL097319>

* Co-first author

TECHNICAL REPORTS

1. Ito, G., **Higa, J.T.**, Whitter, R., Grobbe, N., Lautze, N., Thomas, D. (2019). Constraints on Subsurface Density from Gravity Surveying in and Around the Salt Lake Tuff Ring Complex, South-Central Oahu. *Unpublished technical report*, SOEST Contribution # 10644.

INVITED TALKS

1. University of Southern California Lithospheric Dynamics seminar. How a microcontinent breaks up: combining field geology, remote sensing, and geochronology to study young continental rifting. (2024)
2. University of Hawai‘i at Mānoa Earth Sciences Seminar. Is the “critical zone” critical? How weathered bedrock geometry impacts soil landslides. (2023)

SELECTED CONFERENCE PROCEEDINGS

1. **Higa, J.T.**, Formetta, G., Bellugi, D.G., Dietrich, W.E., Ebel, B.A., Busti, R., Moon, S. Critical Zone Controls on Shallow Landslides: Insights from Numerical Simulations in a Steep, Forested Landscape. *2022 American Geophysical Union Fall Meeting*, Chicago. (Poster)
2. **Higa, J.T.**, Bellugi, D.G., Moon, S., Formetta, G., Dietrich, W.E. Critical Zone Controls on Shallow Landslides Near Coos Bay, Oregon. *2021 American Geophysical Union Fall Meeting*, New Orleans. (Poster)
3. **Higa, J.T.**, Brown, N.D., Moon, S., Stock, J.M., Sabbeth, L., Bennett, S.E.K., Barajas, A.M., Argueta, M.O. Microcontinent Evolution of Isla Angel de la Guarda, Gulf of California, Mexico, from Neotectonic Mapping, Luminescence Dating, and Topographic Analysis. *2020 American Geophysical Union Fall Meeting*, Virtual. (Talk)
4. **Higa, J.T.**, Moon, S., Argueta, M.O., Brown, N.D., Saha, S., Stock, J.M., 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. *2019 American Geophysical Union Fall Meeting*, San Francisco, California. (Poster)
5. **Higa, J.T.**, Cai, S., Tauxe, L., Hendrickson, M. First archaeointensity results from the historical period of Cambodia, Southeast Asia. *2017 American Geophysical Union Fall Meeting*, New Orleans, Louisiana. (Poster)
6. Smith-Konter, B., Ward, L., **Higa, J.T.**, Xu, X., Tong X., Sandwell, D.T. New constraints on slip rates and locking depths of the San Andreas Fault System from Sentinel-1A InSAR and GAGE GPS observations. *2017 American Geophysical Union Fall Meeting*, New Orleans, Louisiana. (Poster)

TEACHING EXPERIENCE

Fall 2022	EPS SCI 8 Earthquakes, Teaching Associate (UCLA)
Fall 2021	EPS SCI 3 Astrobiology, Teaching Associate (UCLA)
Winter 2021	EPS SCI 165 Tectonic Geomorphology, Teaching Assistant (UCLA)
Fall 2019	EPS SCI 1 Introduction to Earth Science, Teaching Assistant (UCLA)
Winter 2019	EPS SCI 112 Structural Geology, Teaching Assistant (UCLA)

FUNDING & AWARDS

2023	NSF Earth Sciences Postdoctoral Fellowship , National Science Foundation: “Does topographic stress connect subsurface to surface through influencing bedrock strength, clast size, and landslides?” (\$180,000)
2021	Excellence in Teaching Award , Department of Earth, Planetary, and Space Sciences, UCLA
2021	Parke D. Snavely, Jr. Cascadia Research Award , Geological Society of America: “Improving landslide models with three-dimensional topographic stress-induced bedrock weathering” (\$2,500)
2019	Graduate Research Fellowship Program Honorable Mention , National Science Foundation: “3-D stability analysis of giant Hawaiian landslides”
2018	Graduate Dean’s Scholar Award , UCLA
2018	Agatin Abbott Memorial Award , Department of Geology & Geophysics, University of Hawai‘i
2016 & 2017	School of Ocean and Earth Science and Technology Achievement Scholarship Asia Pacific Focus , University of Hawai‘i

SERVICE

2024 –	Managing Editor , Geomorphica – Diamond Open Access Journal
2024 –	Educational collaborator , Neighborhood geology: a place-based field experience for 5 th graders in Hawaii, Salt Lake Elementary School, Honolulu, HI
2023	Volunteer , Charles R. Drew University Saturday Science Academy, What is the Critical Zone?, UCLA, Los Angeles, CA
2022	Speaker , 3 rd – 4 th grade Skype a Scientist, Westbrook School, Edmonton, AB
2021	Speaker , 5 th grade Skype a Scientist, Charles Armstrong School, Belmont, CA
2020 – 2021	Booth leader , Trashcano: Volcanic Eruption in a Bin, Exploring Your Universe, (https://youtu.be/sWplRfQI_yY), UCLA, Los Angeles, CA
2018	Volunteer , An Eye in the Sky on Earthquakes, Exploring Your Universe, UCLA, Los Angeles, CA

MEDIA

2022	Bedrock Talks , What is computer modeling?
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PROFESSIONAL AFFILIATIONS

American Geophysical Union
Geological Society of America