



Stanford



Joshua Crozier

Postdoctoral Scholar, Geophysics

 Curriculum Vitae available Online

 Resume available Online

Bio

BIO

My research focuses on understanding the processes controlling volcanoes, earthquakes, and glaciers. I combine a variety of types of geophysical and geologic data with methods from fields such as seismology, geodesy, and numerical modeling to understand these systems and the hazards they pose.

PROFESSIONAL EDUCATION

- PhD, University of Oregon , Geophysics (2021)
- BS, Rice University , Geophysics (2016)

STANFORD ADVISORS

- Paul Segall, Postdoctoral Faculty Sponsor

LINKS

- personal website: <https://crozierjosh.weebly.com/>
- google scholar: https://scholar.google.com/citations?user=qu_c5IYAAAAJ&hl=en
- orcid: <https://orcid.org/0000-0001-8996-3441>
- linkedin: <https://www.linkedin.com/in/josh-crozier-a21a3571/>

Research & Scholarship

LAB AFFILIATIONS

- Paul Segall, Crustal Deformation and Fault Mechanics (4/1/2024)

Publications

PUBLICATIONS

- **Explosive 2018 eruptions at Kilauea driven by a collapse-induced stomp-rocket mechanism** *NATURE GEOSCIENCE*
Crozier, J., Dufek, J., Karlstrom, L., Anderson, K. R., Cahalan, R., Thelen, W., Benage, M., Liang, C.
2024
- **Earthquake Cycle Mechanics During Caldera Collapse: Simulating the 2018 Kilauea Eruption** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
Crozier, J., Anderson, K. R.
2024; 129 (5)
- **Understanding the drivers of volcano deformation through geodetic model verification and validation** *BULLETIN OF VOLCANOLOGY*
Crozier, J., Karlstrom, L., Montgomery-Brown, E., Angarita, M., Cayol, V., Bato, M., Wang, T. A., Grapenthin, R., Shreve, T., Anderson, K., Astort, A., Bodart, O., Cannavo, et al

2023; 85 (12)

- **Outgassing through magmatic fractures enables effusive eruption of silicic magma** *JOURNAL OF VOLCANOLOGY AND GEOTHERMAL RESEARCH*
Crozier, J., Tramontano, S., Forte, P., Oliva, S. C., Gonnermann, H. M., Lev, E., Manga, M., Myers, M., Rader, E., Ruprecht, P., Tuffen, H., Paisley, R., Houghton, et al
2022; 430
- **Evolving magma temperature and volatile contents over the 2008-2018 summit eruption of Kilauea Volcano** *SCIENCE ADVANCES*
Crozier, J., Karlstrom, L.
2022; 8 (22): eabm4310
- **Wavelet-Based Characterization of Very-Long-Period Seismicity Reveals Temporal Evolution of Shallow Magma System Over the 2008-2018 Eruption of Kilauea Volcano** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
Crozier, J., Karlstrom, L.
2021; 126 (6)
- **Magma Oscillations in a Conduit-Reservoir System, Application to Very Long Period (VLP) Seismicity at Basaltic Volcanoes: 2. Data Inversion and Interpretation at Kilauea Volcano** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
Liang, C., Crozier, J., Karlstrom, L., Dunham, E. M.
2020; 125 (1)
- **Basal control of supraglacial meltwater catchments on the Greenland Ice Sheet** *CRYOSPHERE*
Crozier, J., Karlstrom, L., Yang, K.
2018; 12 (10): 3383-3407
- **Permeability During Magma Expansion and Compaction** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
Gonnermann, H. M., Giachetti, T., Fliedner, C., Nguyen, C. T., Houghton, B. F., Crozier, J. A., Carey, R. J.
2017; 122 (12): 9825-9848