Yiming Zhang

Curriculum Vitae

Department of Earth and Planetary Science
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EDUCATION

Ph.D. Candidate., Earth and Planetary Science
University of California, Berkeley — Expected May 2024

B.A, cum laude., Geology, Occidental College — 2019

PUBLICATIONS

Slotznick, S.P., Swanson-Hysell, N.L., **Zhang, Y.**, Clayton, K.E., Wellman, C.H., Tosca, N.J., and Strother, P.K. (in revision) Reconstructing the paleoenvironment of an oxygenated Mesoproterozoic shoreline and its record of life, GSA Bulletin.

Pierce, J., **Zhang, Y.**, Hodgin, E.B., and Swanson-Hysell, N.L., Quantifying inclination shallowing and representing flattening uncertainty in sedimentary paleomagnetic poles, submitted to Geochemistry, Geophysics, Geosystems. doi: `https://doi.org/10.1029/2022GC010682`

Rose, I., **Zhang, Y.**, and Swanson-Hysell, N.L. Bayesian paleomagnetic Euler pole inversion for paleogeographic reconstruction and analysis, JGR: Solid Earth. doi: `https://doi.org/10.1029/2021jb023890`

Zhang, Y., Swanson-Hysell, N.L., Avery, M.S., Fu, R.R., (2022), High geomagnetic field intensity recorded by anorthosite xenoliths requires a strongly powered late Mesoproterozoic geodynamo. PNAS. doi: `https://doi.org/10.1073/pnas.2202875119`

Hodgin, E.B., Swanson-Hysell, N.L., DeGraff, J.M., Kylander-Clark, A.R.C., Schmitz, M.D., Turner, A.C., **Zhang, Y.**, Stolper, D.A., (2022), Final inversion of the Midcontinent Rift during the Rigolet Phase of the Grenvillian Orogeny. Geology. doi: `https://doi.org/10.1130/G49439.1`

Cromwell, G., **Zhang, Y.**, (2021), New paleointensity data from Aniakchak volcano, Alaska, USA. Geochemistry, Geophysics, Geosystems. doi: `https://doi.org/10.1029/2021GC0100321`

Zhang, Y., Swanson-Hysell, N.L., Schmitz, M.D., Miller Jr., J.D., and Avery, M.S., (2021), Synchronous emplacement of the anorthosite xenolith-bearing Beaver River diabase and one of the largest lava flows on Earth. Geochemistry, Geophysics, Geosystems. doi: `https://doi.org/10.1029/2021GC009909`

Swanson-Hysell, N.L., Avery, M.S., **Zhang, Y.**, Hodgin, E.B., Sherwood, R.J., Apen, F.E., et al., (2021). The paleogeography of Laurentia in its early years: new constraints from the Paleoproterozoic East Central Minnesota batholith. Tectonics. doi: `https://doi.org/10.1029/2021TC0067511`

Swanson-Hysell, N.L., Hoaglund, S.A., Crowley, J.L., Schmitz, M.D., **Zhang, Y.**, and Miller Jr., J.D.,

(2020), Rapid emplacement of massive Duluth Complex intrusions within the Midcontinent Rift. Geology. doi: https://doi.org/10.1130/G47873.1

Zhang, Y., Pairing paleointensity results with coercivity spectra: providing support for selection criteria. *IRM Quarterly. Volume 30. Number 1.*

TALKS

2023 MagIC workshop (*invited)* Feb 2023
New perspectives on Laurentia's Grenville Loop: tracking Rodinia across the Mesoproterozoic to Neoproterozoic boundary

2022 AGU Fall Meeting Dec 12-16 2022
Reconstructing the position of the supercontinent Rodinia in the early Neoproterozoic: new constraints from Laurentia's interior and the Grenville margin

Beijing Paleomagnetism and Geochronology Laboratory (*invited, online)* Sep 28 2022
High geomagnetic field intensity recorded by anorthosite xenoliths requires a strongly powered late Mesoproterozoic geodynamo

Young CEED 21 Frontiers in quantitative paleogeography (*invited, online)* Nov 14-20 2021
Bayesian_PEP_inversion: a Bayesian framework for integrating paleomagnetic and geochronologic data into apparent polar wander inversion

Grand Canyon Supergroup Field Forum (*invited)* April 9-19 2021
The rich paleomagnetic record of the Mesoproterozoic Midcontinent Rift and the Southwestern Laurentia LIP

Cloud Meeting on Paleomagnetism (*invited, online)* 1/29/2021
Intense magmatic activity and a strong geomagnetic field -a study on the anorthosite xenoliths hosted in the Mesoproterozoic Midcontinent Rift diabase

2020 AGU Fall Meeting (*online)* 12/15/2020
Recovering Mesoproterozoic geomagnetic field intensity using anorthosite xenoliths hosted in Midcontinent Rift diabase

North Central GSA Conference, Duluth, MN (*online)* 05/18/2019
The rich paleomagnetic records of Proterozoic Midcontinent Rift intrusives: an updated synthesis with a new pole from the Beaver River diabase

Institute for Rock Magnetism, University of Minnesota, Minneapolis, MN (*invited)* 01/09/2019
Paleomagnetism and rock magnetism on the Beaver River diabase and anorthosite xenoliths therein

TEACHING

Reader for EPS 88 PyEarth: A Python Introduction to Earth Science Spring 2023
Advisor: Nicholas Swanson-Hysell

GSI for EPS 101 Field Geology and Digital Mapping Fall 2022
Advisor: Nicholas Swanson-Hysell

Reader for EPS 115 Stratigraphy and Earth History Spring 2022

Advisor: Eben Blake Hodgin

GSI for EPS 101 Field Geology and Digital Mapping — Fall 2021
Advisor: Nicholas Swanson-Hysell

GSI for EPS 50 The Planet Earth — Spring 2021
Advisor: Daniel Stolper

Participant in the Graduate Remote Instruction Innovation Fellows Program — Winter 2020

GSI for EPS 101 Field Geology and Digital Mapping — Fall 2020
Advisor: Nicholas Swanson-Hysell

Completion of UC Berkeley GSI Conference training — Jan 2020

Completion of required Online Course: Professional Standards and Ethics for GSIs — Fall 2019

Completion of required Pedagogy Course EPS 375 — Fall 2019

ORIGINAL GEOLOGICAL FIELD WORK

Adirondack Mountains, New York [1 week] — 2022
Pairing paleomagnetic data and thermochronology records to reevaluate the exhumation history of rocks of the Grenvillian Orogeny in Adirondack Highlands and recalibrate the Grenville Loop.

Death Valley, California; Grand Canyon, Arizona [4 weeks] — 2021
Using paleomagnetism and geochronology to study the temporal and magnatic relationship between the ca. 1.1 Ga Southwestern Laurentia Large Igneous Province and the Midcontinent Rift.

Pikes Peak, Colorado [2 weeks] — 2020
Using paleomagnetism and geochronology to study the emplacement history of Pikes Peak batholith and its temporal and magmatic associations with the Midcontinent Rift 1.1 billion years ago.

Midcontinent Rift, Lake Superior Region [11 weeks] — 2019, 2020, 2021
Reconstructing the behavior of the Mesoproterozoic geomagnetic field, continental motion during supercontinent assembly and the nature of ancient environments through paleomagnetic studies of the intrusive rocks and sediments of the 1.1 billion-year-old Midcontinent Rift.

Central Highland, Iceland [3 weeks] — 2019
Qualitatively and quantitatively measure the erosion rate of rofabards soil erosion in Central highlands, Iceland

RESEARCH AND FUNDING

2022 GSA Graduate Student Research Grant ($1749) — 2022
Paleomagnetism and thermochronology of the Adirondack Mountains, Grenville Province

UC Berkeley graduate student conference travel grant ($900) — 2022
2022 AGU Fall Meeting oral presentation

Hearts to Humanity Eternal (H2H8) Programs — 2022
H2H8 Association Graduate Research Grant to Advance Humanity through Science ($10,000)

U.S. Visiting Student Fellowships, Institute for Rock Magnetism 2019
Paleomagnetism and rock magnetism study on Mesoproterozoic Beaver Bay Complex and anorthosite xenoliths therein ($500)

ILSG Student Research Fund, Institute on Lake Superior Geology 2019
To study the emplacement history of the Beaver River diabase and the anorthosite xenoliths therein using paleomagnetism ($500)

Chevron-Xenel Gateway Fellowship, Berkeley International House ($5,000) 2019

John Parke Young Student Grant , Occidental College 2019
Multi-temporal UAV Data for Monitoring Modern Rofabard Soil Erosion in Central Highlands, Iceland ($3,500)

Student assistant, Scripps Institute of Oceanography 2019
Pleistocene Paleointensity Record of Aleutian Island Volcanics, NSF award 1520788

Independent research, Occidental College 2018
Pseudo-Thellier Paleointensity Measurement on R-N Geomagnetic Polarity Reversal Recorded by Mafic Lava Flows, Anahola, Kauai ($4,000)

Independent research, Henry Luce Foundation, Nanjing Univeristy 2017
Mapping of Ambient Ozone Pollution in China and the Assessment of Its Health Impact on Socio-Economy ($2,250)

MEMBERSHIPS

American Geophysical Union (AGU)
Geological Society of America (GSA)