AUBREY LAPLANTE

Flagstaff, AZ 86001 | aal382@nau.edu | 425-246-4223

GEOLOGICAL SCIENTIST

Passionate earth scientist pursuing research in subduction zone science, neotectonics, fault kinematics, and tectonophysics. Primary interests include expanding on current tectonic theories in order to better understand the mechanics of seismic and tsunami hazards. My expertise lies in structural geology, geophysics, and understanding how seismic interplay should influence the way humans live and build within our environment.

EDUCATION

NORTHERN ARIZONA UNIVERSITY, Flagstaff, AZ — Aug 2022-current

Doctor of Philosophy in Earth Sciences and Environmental Sustainability

Cumulative GPA: 4.0

NORTHERN ARIZONA UNIVERSITY, Flagstaff, AZ — Aug 2020-Aug 2022

Master of Science in Geology

Cumulative GPA: 4.0

WESTERN WASHINGTON UNIVERSITY, Bellingham, WA — Jun 2011-Aug 2015

Bachelor of Science in Geology; Physics Minor

Cumulative GPA: 3.61

Major GPA: 3.68

Dean's List — Sep 2013-Jun 2014

PUBLICATIONS/RESEARCH EXPERIENCE

- LaPlante, A., Regalla, C., Sethanant, I., Mahan, S. A., Gray, H. J. (2022). Quantifying modifications in Holocene alluvial fan morphology to determine paleoseismicity of the Panamint Valley transtensional relay (ECSZ). Oral Presentation at 2022 GSA Connects Annual Meeting.
- LaPlante, A., Regalla, C. (2022) Quaternary surficial mapping of central Panamint Valley to evaluate paleoseismic evidence for multi-fault rupture, Eastern California Shear Zone. Poster Presentation at 2022 GSA Connects Annual Meeting.
- LaPlante, A. A. (2022). Evidence for late Holocene multi-fault rupture in the Panamint Valley transtensional relay, eastern California shear zone (Order No. 29322818). [Masters thesis, Northern Arizona University, 148 pp.] Available from ProQuest Dissertations & Theses Global. (2705435966).
- LaPlante, A., Regalla, C., & Sethanant, I. (2022, 09). Evidence for late Holocene multi-fault rupture in the Panamint Valley transtensional relay, Eastern California Shear Zone (ECSZ). Poster Presentation at 2022 SCEC Annual Meeting.

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- Regalla, C., Kirby, E., Mahan, S., McDonald, E., Pangrcic, H., Binkley, A., Schottenfels, E., LaPlante, A., Sethanant, I., & Lynch, E. M. (2022). Late Holocene rupture history of the Ash Hill fault, Eastern California Shear Zone, and the potential for seismogenic strain transfer between nearby faults. *Earth Surface Processes and Landforms*. https://doi.org/10.1002/esp.5432
- LaPlante, A., & Regalla, C. (2021, 08). Tectonogeomorphic evidence for late Holocene complex rupture linking the Panamint Valley and Ash Hill faults, Eastern California Shear Zone. Poster Presentation at 2021 SCEC Annual Meeting.
- Porter, R., Joyal, T., Beers, R., Loverich, J., LaPlante, A., Spruell, J., Youberg, A., Schenk, E., Robichaud, P. R., & Springer, A. E. (2021). Seismic Monitoring of Post-wildfire Debris Flows Following the 2019 Museum Fire, Arizona. *Frontiers in Earth Science*, *9*, [649938]. https://doi.org/10.3389/feart.2021.649938

TECHNICAL SKILLS

Computer & Coding	Matlab, R (tidyverse), GMT, USGS GeMS, Microsoft Office data processing (Word, Excel, PowerPoint), GIS modeling and data processing, Rocscience modeling (Dips, RocTopple, Slide), Agisoft Metashape
Structural Geology	Drone-based structure from motion (SfM), fault mapping, fault/hazard characterization, InSAR analysis, LiDAR analysis
Geomorphology	Topography surveys, Sight Level, GPS, compass readings, aerial imagery analysis
Geophysics	Geophone data recording, P/S wave-picking and analysis, focal diagram analysis
Petrology & Petrography	XRD and SEM rock analysis, trace element analysis
Engineering	Atterberg limits, soft sediment analysis, hard rock analysis (corings, fractures)
Geochronology	Modelling of OSL ages in a steady state tectonic study (Olympic Mtns, WA)

TEACHING EXPERIENCE

Petrology Lab, Northern Arizona University **Jan-Apr 2021**

Graduate Teaching Assistant

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- Conducted a physical rock lab for 25 students assisting in both remote and in-person learning
- Encouraged participation through group exercises and weekly quizzes and activities to track progress
- Explained petrologic processes visually, experimentally, and auditorily in order to cater to different types of learning
- Guided learning by asking questions to guide thought, promoting problem solving and individual thinking

Earth Materials Lab, Northern Arizona University **Aug-Nov 2020**

Graduate Teaching Assistant

- Conducted a mineralogy lab for 18 students, providing both remote and in-person learning options
- Built a silica polymerization lab and reworked previous labs to accommodate online learning options

Visible Geology Module Developer, Northern Arizona University **Apr-Aug 2020**

Graduate Assistant

- Built four Visible Geology modules for use in NAU Intro to Field Methods and Structural Geology courses
- Employed knowledge of interpreting geologic landscapes to teach map patterns associated with dipping beds, faults and folds
- Assisted in co-teaching Intro to Field Methods and Structural Geology labs and implementing Visible Geology in remote learning methods

ACHIEVEMENTS & AWARDS

Geologist in Training	Mar 2016
Graduate Record Examinations	Oct 2015
WWU Summer Commencement Student Speaker	Aug 2015
David A. Rahm Scholarship	Sep 2014-Jun 2015
Presidents List	Mar 2013-Mar 2014
Presidential Scholarship	Sep 2011-Jun 2012
Admission with Distinction	Sep 2011
WWU Foundation Scholarship	Sep 2011-Jun 2012