

EDUCATION

California Institute of Technology, Pasadena, California, USA.

PhD. In Geology (2021 to present)

Qualifying exam: approved on September 14th, 2022

Expected dissertation: Spring 2026

University of Sonora, Hermosillo, Sonora, Mexico.

Bachelor of Science in Geology (2020)

Thesis: New petrotectonic evidence into Sierra Los Algodones, San Carlos, Sonora, Mexico: Emphasis in the volcanic vestiges of Miocene related to Protogulf of California.

Advisors: Dr. Jesus Roberto Vidal Solano (University of Sonora) and Dr. Joann M. Stock (Caltech)

CURRENT RESEARCH PROJECTS

Caltech (June 2021 to present)

Project: Mass deposit related to transform fault in the Guaymas basin, Gulf of California: basin structure and sediment volume from seismic reflection data

Advisor: Joann Stock

Collaborators: Daniel Lizarralde (WHOI), Antonio Gonzalez (CICESE), Arturo Martin (CICESE), Kathleen Marsaglia (CSUN)

Activities: Interpretation of seismic reflection data

Caltech (February 2022 to present)

Project: Geochemistry and geochronology of the Soda minette sill: Implications for the volcanism during the Sonoma Orogeny

Advisor: Brian Wernicke

Activities: Petrographic analysis, electron probe microanalysis of individual mineral phases, whole-rock chemistry via XRF, and laser-ablation U-Pb geochronology of zircon grains (Arizona Laserchron).

Caltech (June 2023 to present)

Project: Correlation of ash beds in the Quaternary marine sedimentary well data acquired during IODP Expedition 385 in Guaymas Basin, Gulf of California

Advisor: Joann Stock

Collaborators: Kathleen Marsaglia (CSUN) Priscilla Martinez (UofA), Arturo Martin-Barajas (CICESE)

Activities: Petrographic analysis, electron probe analysis, and well correlation.

Caltech (June 2023 to present)

Project: Geochemical and geochronological analysis of the Isla Tortuga volcano: implications for quaternary volcanism in the Gulf of California

Advisor: Joann Stock

Collaborators: Brian Hausback (CSUS), Arturo Martin-Barajas (CICESE)

Activities: Field work, petrographic analysis, whole-rock chemistry via XRF, and glass geochronology.

Caltech (June 2023 to present)

Project: Mass wasting deposit(s) along the Macquarie Ridge, the Australia-Pacific plate boundary: implications for regional tectonics and potential tsunami risk

Advisor: Joann Stock

Collaborators: Mike Coffin (Utas)

Activities: Multibeam and echosounder data analysis.

PUBLICATIONS

Piña, Adriana, Stock, Joann M.; Lizarralde, Daniel; González-Fernández, Antonio; Martin, Arturo; Marsaglia, Kathleen; Gallegos-Castillo, Christian. (2022) "Mass deposit related to transform fault in the Guaymas basin, Gulf of California: basin structure and sediment volume from seismic reflection data". *In progress*

Piña, Adriana; Vidal-Solano, Jesús Roberto; Stock, Joann M. (2022) "New insights into the North of Baja California Microplate reconstruction at ca. 12 Ma: Petrography, geochemistry, and paleomagnetism of the Ignimbrite of Hermosillo – Tuff of San Felipe in San Carlos, Sonora, Mexico". *In progress*

SCHOLARSHIPS AND AWARDS RECEIVED

- **2023**—GSA Graduate Student Research Grant
- **2022**— Scholarship from Lamont Earth Observatory for the Geoscience Data Resources workshop.
- **2021**— Scholarship from Caltech Graduate Studies for the first academic year.
- **2020**— Award "Francisco Medina Martinez" of the Mexican Geophysical Union for the best bachelor's thesis. Guadalajara, Jalisco, Mexico.
- **2020**— Thesis dissertation of bachelor's degree. **Honorable Mention.**
- **2019**— Contest of Earth Science knowledge in the Annual Meeting of Mexican Geophysical Union. Puerto Vallarta, Jalisco, Mexico. **2nd place award.**
- **2019**— Bachelor's degree oral presentations at the annual meeting of National Institute Geochemistry. Ensenada, Baja California, Mexico. **1st place award.**
- **2018**— Sumer Undergraduate Research Fellowship of Caltech.
- **2017**— Bachelor's degree oral presentations at the annual seminar of the Cultural Week of Geology of University of Sonora. Hermosillo, Sonora, Mexico. **1st place award.**
- **2017**— Fellowship for undergraduate students of Association of Miners, Metallurgists, and Geologists Engineers of Mexico (AIMMGM).
- **2017**— Contest of short stories "Let the ink runs" of the Institute of Sonoran Youth. Title: Vikingo (**Winning short story**).

PRESENTATIONS AT MEETINGS

Piña, A., Stock, J. M., Gonzalez-Fernandez, A., Martin, A., Marsaglia, K. M., & Gallegos-Castillo, C. (2022, December). Mass-transport deposit related to transform fault in the Guaymas basin, Gulf of California: basin structure and sediment volume from seismic reflection data. In *AGU Fall Meeting Abstracts* (Vol. 2022, pp. T45D-0153).

Piña, Adriana; Vidal-Solano, Jesús Roberto; Stock, Joann M. (**2022**) "New insights into the North of Baja California Microplate reconstruction at ca. 12 Ma: Petrography, geochemistry, and paleomagnetism of the Ignimbrite of Hermosillo – Tuff of San Felipe in San Carlos, Sonora, Mexico" Joint 118th Annual Cordilleran/72nd Annual Rocky Mountain Section Meeting – 2022, Geological Society of America, 2022. Las Vegas, Nevada, USA. Abstract in: <https://gsa.confex.com/gsa/2022CD/webprogram/Paper373818.htm>

Piña-Páez, Adriana; Vidal-Solano, Jesús Roberto; Stock, Joann M (2019) “Paleomagnetic study of IGH-TSF unit in San Carlos, Coast of Sonora: A new correlation with Baja California” Annual meeting of Mexican Geophysical Union, 2019. Puerto Vallarta, Jalisco, Mexico. Abstracts Book: <https://www.raugm.org.mx/2019/docs/geos/geos39-2.pdf>. p. 159

Piña-Páez, Adriana; Vidal-Solano, Jesús Roberto; Meza-Figueroa, Diana (2019) “Petrographic and Geochemistry study of IGH-TSF unit in San Carlos, Sonora, Mexico: A new correlation with Baja California for Proto-Gulf” At the annual meeting of National Institute of Geochemistry, 2019. Ensenada, Baja California, Mexico. Abstract in: <https://inageq2019.cicese.mx/docs/resumenes/S03/PE08.pdf>

Sabbeth, Leah; Stock, Joann; Brown, Nathan D; Moon, Seulgi; Martín-Barajas, Arturo; and **Piña- Páez, Adriana (2018)**. “Isolation and break up of a microcontinent in the gulf of California: fault structure and volcanic geochemistry” GSA Annual Meeting 2018, Indianapolis, Indiana, USA; Abstract in: <https://gsa.confex.com/gsa/2018AM/webprogram/Paper323305.html>

Piña-Páez, Adriana; Sabbeth, Leah; Stock, Joann M (2018): “Geology of Southern Isla Ángel de la Guarda, Gulf of California: Petrotectonics conditions for the formation of microcontinents” At annual meeting of the National Institute of Geochemistry, 2018. Zacatecas, Zacatecas, Mexico. Abstract in Memorias INAGEQ 2018, p. 167

Piña-Páez, Adriana, Sabbeth, Leah, Stock, Joann M, (2018): “Geology of Southern of Ángel de la Guarda Island, California Gulf: Petro-Tectonics Constrictions for the formation of microcontinents” Surf Caltech 2018, Pasadena, California, USA: Abstracts Book p. 66

EXTRACURRICULAR AND OTHERS

- **2023**— Scientific party of the Blake Plateau MCS cruise aboard the R/V Marcus G. Langseth
- **2023 Winter term**— Caltech Graduate teaching assistant of the course Ge106 Introduction to Structural Geology
- **2022 September to present**— Mentor at the Caltech GPS buddy program.
- **2019 January-May**— Teaching assistant of the Structural Geology class at the University of Sonora. Instructor: Dr. Jesus Roberto Vidal-Solano.
- **2019 January-May**— Course of English reading comprehension. Department of foreign languages of the University of Sonora.
- **2018 January-May**— Course or Arabic language II. Department of foreign languages of University of Sonora.
- **2018 August to December**— Teaching assistant in the Igneous Petrology class at the University of Sonora. Instructor: Dr. Jesus Roberto Vidal-Solano.
- **2018-2019**— Volunteer student at *La Rocateca: un medio de diffusion para las rocas del estado de Sonora, Mexico*.
- **2017 September-November**— Course of basic writing of academic texts. Department of Letters and Linguistics of University of Sonora.
- **2017 September-December**— Course of Arabic language I. Department of foreign languages of University of Sonora.
- **Other interests**— Cooking, swimming, writing, reading, Hispano-American literature, classic, flamenco and trove music.