

Zongheng Li

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EDUCATION

Arizona State University, USA

01/2023 - 06/2025

BS in Geological Sciences, GPA 4.0/4.0

Core Courses: Mineralogy, Structural Geology, Geophysics, Petrology, Sedimentology, Field Geology

Honors: Dean's List (Spring 2023 & Fall 2023 & Spring 2024 & Fall 2024)

Chengdu University of Technology, China

09/2020 - 12/2022

Major: Civil Engineering

Core Courses: Engineering Geology, General Geology, Civil Engineering Materials, Mechanics of Materials, Theoretical Mechanicals, Structural Mechanics, Engineering Geotechnical Science.

PUBLICATION

Zongheng Li. *Optimization Analysis on Seismic Mitigation of Building Foundation in Coastal Area.* Journal of Physics: Conference Series, volume 2386, 20 August 2022. DOI: 10.1088/1742-6596/2386/1/012055

RESEARCH

Simulation of Sub-Plinian Eruption of La Fossa Cone in Italy

06/2024 - 07/2024

Research Assistant

- Conducted a field trip to La Fossa Cone on Vulcano Island, Italy, including collecting samples of tephra and analyzing the geology settings of La Fossa cone;
- Combined Python, Tephra2 and HYSPLIT to simulate the dispersal of tephra before and after 4 hours;
- Performed economic and safety evaluations of residential areas on Vulcano Island susceptible to the dispersal of tephra;
- Completed a research presentation.

Research on Big Data Processing in Geology

03/2024 - 05/2024

Independent Project

- Combined the basic methods of Python and geological analysis to determine the correlation between earthquakes on Earth's surface and their topography;
- Classified the Earthquake dataset and Topography dataset;
- Made a plot illustrating the correlation between the number of earthquakes on Earth's surface and the elevation.

Optimization Analysis on Seismic Mitigation of Building Foundation in Coastal Area

02/2022 - 07/2022

Research Assistant

- Compiled and analyzed the basis for siting and seismic design of foundations for large-scale engineering projects in China's coastal areas over the past 25 years;
- Analyzed the drawbacks of seismic structure of building foundations in littoral regions in terms of civil engineering and structural geology, and conducted the seismic design optimization;
- Adopted appropriate dampers to dissipate the seismic waves to reduce the shear force between foundation layers;
- Carried out the drainage consolidation on the coastal soft soil layer to reduce its water content and porosity ratio;
- Grouted and reinforced the rock mass in the weathered zone to reduce the void volume ratio contained in the fractured zone, to avoid uneven settlement and deformation of the foundation;
- Completed the thesis and successfully published it in the Journal of Physics.

INTERNSHIP

Sichuan Hechuan Engineering Consultancy Co., Ltd

07/2022 - 08/2022

Intern

- Participated in the reconstruction project of a dyke along a river as a trainee surveyor;
- Learned to use laser levels, laser theodolite, and total stations;
- Completed the determination of soil particle size composition, soil moisture content experiments, and in situ direct shear experiments of rock and soil mass.

EXTRACURRICULAR ACTIVITIES

The GeoClub of Arizona State University

03/2023 - Present

Member

Administrative Office, Chengdu University of Technology

09/2020 - 06/2022

Student Assistant

- Assisted in arranging academic conferences and thesis defenses; collated and filed college academic journals.

SKILLS

Skills: Python/Adobe Illustrator/AutoCAD/ArcGIS/StraboSpot

Languages: IELTS 7.5 (Listening 8; Reading 7.5; Writing 6.5; Speaking 7), Chinese (Native)

Hobbies: Biking (mountain biking)