

Disha Chandrakant Okhai (she/her/hers)

dokhai@purdue.edu | <https://dishakokhai.wordpress.com/> | [Google Scholar](#)

RESEARCH INTERESTS: Geochronology; Volcanology; Igneous Petrology

EDUCATION

- Purdue University**, West Lafayette, IN May 2024
Ph.D., Geology Advisor: Michael Eddy
Thesis: Magma, Mass Spectrometry, and Models: Insights into Sub-Volcanic Reservoirs and the Processes that Form Them
Related Coursework: Fracturing of Rocks, Geo/Cosmochemistry, Global Tectonic Systems, Crustal Tectonics, Laboratory Analysis and Instrumentation, Geologic Dating Methods, Cordilleran Tectonics
- Wellesley College**, Wellesley, MA May 2017
B.A., Geosciences with Honors Advisor: David Hawkins
Thesis: [Characterization of the Source Rocks Exposed in the Permian Florida Mountains of Equatorial Pangea.](#)
Related Coursework: Mineralogy/Petrology/Geochemistry, Structural Geology and Tectonics, Hydrogeology, Sedimentology and Stratigraphy, Geomorphology, Volcanoes and Volcanism, Historical Geology
Study Abroad: University of Otago, Dunedin, New Zealand February - July 2016

TEACHING AND MENTORING

Upper Level Core Courses and Electives (Majors only)

- Department of Earth, Atmospheric, and Planetary Sciences**, West Lafayette, IN Spring 2023
Teaching Assistant, EAPS 244: Earth Materials II (Petrology)
- Facilitated student learning through clarifying concepts from lecture during weekly office hours.
- Graded assignments for a class of 14 undergraduate students.
- Designed and implemented one week of course material, including two lectures and a lab, focused on arc volcanoes, their range of eruptive compositions, and their volcanic deposits.
- Department of Earth, Atmospheric, and Planetary Sciences**, West Lafayette, IN February 2023
Guest Lecturer – *Thermal Ionization Mass Spectrometry (TIMS)*, EAPS 591: Laboratory Analysis
- Lectured on the TIMS technique for U-Pb zircon analyses and provided a laboratory tour of the Purdue TIMS facility for 12 graduate and undergraduate students.

Introductory Level Courses (Non-majors)

- Department of Earth, Atmospheric, and Planetary Sciences**, West Lafayette, IN Fall 2021, 2022
Teaching Assistant, EAPS 100: Planet Earth
- Handled student queries and grading for a class of 600 undergraduate students each semester.
- Gave two lectures: “Transform Faults and Hotspots” and “Volcanic Hazards” in Fall 2022.
- Wellesley College Geoscience Department**, Wellesley, MA January 2015 - May 2017
Department Tutor
- Tutored students in introductory Geoscience classes to develop and strengthen conceptual understanding through study strategies, explanations, and reviewing lecture content.

Mentoring

- Future Mentors Program**, John Martinson Honors College, Purdue University, West Lafayette, IN Fall 2023
Graduate Student Mentor
- Designed and implemented an inter-disciplinary project for my mentee, a material science engineer.
- Learned the evidence-based mentorship framework developed by the Center for the Improvement of Mentored Experiences in Research (CIMER) in the associated class, *Research Mentorship Development*.

Graduate-Undergraduate Mentoring Program, West Lafayette, IN Fall 2023-Present
Founder and Mentor
- Established a program to bridge the gap between graduate and undergraduate students in the department.
- Implemented a series of workshops, small group, and one-on-one mentoring to better prepare juniors and seniors for the next step in their career, focused on graduate school and alternate career pathways.

Wellesley Mentorship Affinity Pods (MAP) Program, Wellesley Career Education, Remote Spring 2023
Alumnae Mentor
- Shared experiences and resources at virtual monthly MAP meetings focused on a variety of topics to promote personal and professional wellbeing with other alumnae and current Wellesley students in the group.

EAPS Graduate Student Association, West Lafayette, IN Fall 2021
Incoming Graduate Student Mentor
- Served as a resource for incoming graduate students as they settled into the department and Purdue.

Senior Support Network, Wellesley Career Education, Remote November 2020 - March 2021
Alumnae Mentor
- One of two mentors for a senior in the Geoscience Department at Wellesley College as they navigated senior year and considered future career pathways.

First Year Mentor Program, Wellesley College, Wellesley, MA August - December 2015
First Year Mentor Supervisor
- Mentored a group of 12 incoming first years and helped them settle into Wellesley College.
- Led a group of 17 mentors who were responsible for their own first year groups.

Pforzheimer Learning and Teaching Center, Wellesley College, Wellesley, MA August 2014 – May 2015
Academic Peer Tutor
- Ran workshops and met one-on-one with students in the dorms to develop and strengthen their study skills.

RESEARCH

Purdue University Radiogenic Isotope Geology Lab, West Lafayette, IN August 2020 - Present
Graduate Researcher, PI: Michael Eddy, Senior Research Scientist: Ryan Ickert
- Use U-Pb geochronology to understand the growth and life time of magma chambers underlying volcanoes.
- Conduct high precision zircon U-Pb geochronology on a Thermal Ionization Mass Spectrometer (TIMS).
- Chemically process zircon by dissolving, and isolating U and Pb for measurement in a class 1000 clean lab.
- Train graduate students to process zircon in the clean lab for U-Pb analysis on the TIMS.

Princeton University Geological Sciences, Princeton, NJ June 2017 - November 2018
Research Specialist I, PI: Blair Schoene and Adam Maloof
- Extracted zircon grains from rock through standard crushing, magnetic separation, and density separation.
- Sawed and drilled rock samples for carbon and oxygen isotope measurements on a mass spectrometer.
- Trained new users, ensured smooth day-to-day running of both labs, and worked with MATLAB code.

Wellesley College Science Center Summer Research, Wellesley, MA May - July 2015
Summer Research Assistant, Advisor: Daniel J Brabander
- Conducted method development on and created a standard operating procedure for an elemental analyzer (Carbon, Hydrogen, Nitrogen, and Sulfur), and quantified lead in urban fruit using X-Ray Fluorescence.

ACADEMIC SERVICE

EAPS Graduate Student Association, West Lafayette, IN June 2023 - Present
Graduate-Undergraduate Mentoring Program – Founder and Chair
- Lead a team of 10 graduate students to plan workshops and manage student volunteers for the program.
- Collaborate with other graduate committees and centers on campus to provide professional development opportunities for graduate mentors to obtain mentorship training.

Department of Earth, Atmospheric, and Planetary Sciences, West Lafayette, IN August 2020 - Present
Ombudsperson
- One of two graduate student ombudspeople for the department.
- Serve as a confidential resource for students in the department to address concerns or to re-direct them to the appropriate channels or resources that exist at the department or university level.
- Created material for training ombudspeople as the EAPS Science Leadership Fellow (2022-2023).

Department of Earth, Atmospheric, and Planetary Sciences, West Lafayette, IN August 2022 - Present
Grade Appeals Committee - Graduate Student Representative
- A two year term to serve on the College of Science Grade Appeals committee to evaluate requests for grade appeals at the end of the semester.

EAPS Graduate Student Association, West Lafayette, IN August 2019 - May 2023
Professional Development Chair
- Responsible for organizing professional development events for graduate students, based on their career interests.

EAPS Graduate Student Association, West Lafayette, IN August 2019 - May 2021
Outreach Committee Chair
- Collaborated with two other outreach chairs and the department K-12 outreach coordinator to oversee and participate in outreach events at the departmental and College of Science level.
- Hosted Passport Day 2019, an outreach event planned by the graduate student outreach chairs.
- Designed interactive activity stations and created activity guides with instructions for volunteers.
- Responsible for publicizing the event on Facebook, Instagram, and via QR codes on paper flyers.
- Directed 41 graduate and undergraduate volunteers.
- The event reached 209 members of the greater Lafayette community.

Wellesley College Office of Admissions, Wellesley, MA August 2018 - June 2019
Alumnae Admissions Representative – Africa Region
- Conducted interviews with prospective students in Africa, supported outreach efforts by the Office of Admissions, and co-ran the Wellesley College booth at college fairs.

PUBLICATIONS AND PRESENTATIONS

Conference Talks and Posters

[Evolution of the IXL-Job Canyon Magmatic System in the Stillwater Range, NV](#) Talk at the 2023 Geological Society of America's Annual Meeting in Pittsburgh, PA.

[Exploring Controls on the Volume and Repose Time of Magmatic Increments into Upper-Crustal Silicic Magma Systems and their Eruptive Counterparts](#) Poster at the 2023 Geological Society of America's Annual Meeting in Pittsburgh, PA.

Investigating the link between Construction of the IXL Pluton and Overlying Volcanic Units in the Stillwater Range, NV Poster at the 2023 Geochronology Gordon Research Conference in West Dover, VT.

Insights into the Volume and Repose Time of Magmatic Increments into Upper-Crustal Silicic Magmatic Systems Poster at the 2023 Geochronology Gordon Research Seminar in West Dover, VT.

[Insights into the Size and Frequency of Magmatic Increments Emplaced into Upper-Crustal Silicic Magmatic Systems](#) Poster at the 2022 Geological Society of America's Annual Meeting in Denver, CO.

[Magma Emplacement and Differentiation in the Oligocene IXL Pluton, Nevada](#) Talk at the 2022 Geological Society of America's Annual Meeting in Denver, CO.

[Exploring the Landscape of an Ancient Supercontinent Using Microscopic Grains of "Sand"](#) Interactive teaching presentation, based on undergraduate thesis research, at the 2017 Ruhlman Conference at Wellesley College.

[Assessing Risks and Potential Benefits of Harvesting Urban Fruit](#) Talk (co-presented) at the 2015 Geological Society of America's Annual Meeting in Baltimore, MD.

Panels and Additional Outreach

[Empowering Voices in Science](#) - highlighting fieldwork and research by female scientists in Nevada
Zoom Seminar at City College of New York - Invited Talk (November 2023)

[How Studying Ancient Volcanoes Can Help with Modern Day Hazard Monitoring](#) - Purdue Superheroes of
Science (August 2023)

[Researching the Age of Volcanoes](#) - STEM Career Repository (July 2023)

Purdue EAPS Graduate School Information Night – Graduate Student Panelist (September 2022)

Wellesley McNair Scholars Graduate School Virtual Panel - Panelist (September 2020)

AWARDS AND FELLOWSHIPS

Department nominee for the Purdue Graduate School Excellence in Teaching Award (2024)

Gordon Conference in Geochronology - Student Funding (2023)

Gordon Research Seminar - Student Funding (2023)

Earth Educators' Rendezvous - *Teaching with Geochemical Data* workshop student stipend (2023)

Earth Educators' Rendezvous - *Preparing for an Academic Career* workshop student stipend (2023)

Association for Women Geoscientists Takken Travel Award (2023)

Department of Earth, Atmospheric, and Planetary Sciences – Teaching Assistant Honor Roll (Spring 2023)

Department of Earth, Atmospheric, and Planetary Sciences – Science Leadership Fellow (2022-2023)

Department of Earth, Atmospheric, and Planetary Sciences – Teaching Assistant Honor Roll (Fall 2022)

Department of Earth, Atmospheric, and Planetary Sciences – Travel Grant (2022)

Geological Society of America (GSA) North Central Section Student Travel Grant (2022)

GSA Mineralogy, Geochemistry, Volcanology, and Petrology Division Travel Grant (2022)

Lewis and Clark Field Scholar (2020)

GSA Graduate Student Research Grant (2020)

Frederick N. Andrews Fellowship (2019-2023)

Harold E. Andrews Award in Recognition of Service to the Geosciences Department (2017)

Nomination to Sigma Xi (2017)

Jerome A. Schiff Fellowship (2016)

CERTIFICATIONS

Certificate in Foundations of College Teaching (2022)

Trans Inclusion Training (2022)

Safe Zone Training (2021)

Diversity, Equity, and Inclusion in the Workplace Certificate (2021)

PROFESSIONAL DEVELOPMENT

Member – Earth Educators' Rendezvous 2024 Planning Committee (2023 – present)

Member – Teach the Earth (TTE) committee NAGT (2023 – present)

Mentor – Mentorship 365 (2023 – present)

Earth Educators' Rendezvous – July 2023

Preparing for an Academic Career (3 day workshop)

Teaching with Geochemical Data (2 day workshop)

Defining Learning Goals and Assessing Learning through an Active Learning Lens (afternoon workshop)

Writing Better Multiple Choice Questions (afternoon workshop)

Encouraging Data Literacy: Using Large, Publicly Available Datasets in the Classroom (round table)

Strengthening Graduate-Undergraduate Student Mentorship (round table)