

## **Earth Intern Program for Columbia and Barnard Students**

*Sponsored by the Earth Institute, Lamont-Doherty Earth Observatory, Barnard College and the Department of Earth and Environmental Sciences at Columbia University.*

**Program Dates: June 1st-August 3rd, 2022**

The Earth Intern Program offers the chance to experience scientific research as an undergraduate.

**The program is open to all Columbia College, Columbia Engineering, Columbia General Studies, and Barnard students** who have completed their junior or sophomore year in college with majors (or anticipated majors) in earth science, environmental science, sustainable development, chemistry, biology, physics, mathematics, engineering or political science.

**Graduating seniors are not eligible.** Minorities and women are encouraged to apply.

Applicants should have an interest in conducting research in the Earth, atmospheric, or ocean sciences. Completion of at least two courses in Earth, atmospheric or ocean sciences is desirable.

All students are preferred to have at least one year of calculus (high school or college) and/or good grades in college level mathematics. Students undertaking research in geochemistry and chemical oceanography are required to have at least two semesters of college-level chemistry. Students undertaking research in marine biology are required to have at least two semesters of college-level biology. Students undertaking research in geophysics should have at least three semesters of college-level physics.

**STIPEND:** Students will receive a stipend of \$6000 for this 10-week program.

**HOUSING and TRAVEL BENEFITS:** The student will receive free housing in a single room. Students will also receive free bus transportation between housing at Dominican College and Lamont. Students who are traveling to New York for this internship from more than 200 miles away will be reimbursed for a round-trip supersaver fare\*.

The following members of the Earth Institute and the LDEO staff will act as research mentors:

**Roisin Commane, Martin Stute, Andy Juhl.** Expertise: **Methane Emissions, Atmospheric Composition, Water Quality.** Research Project: How Does the Potent Greenhouse Gas Methane Produced in Landfills Reach the Atmosphere?

**Stephen Cox, Pete Reiners.** Expertise: **Noble Gas Geochemistry and Geochronology.** Research Project: What Is the Timing of Mineralizing Fluid Flow in the Paradox Basin?

**Arnold Gordon.** Expertise: **Physical Oceanography, Oceanographic Field Programs.** Research Project: Are the Anomalous Behaviors During 2015-2017 of the Tropical Indonesian Throughflow and of the Southern Ocean Weddell Sea Bottom Water Characteristics Related?

**Daniel Green, Kevin Uno.** Expertise: **Paleontology, Evolution, Earth Sciences, Ecology.** Research Project: How Did the Afro-Eurasian Faunal Exchange Reshape Ecological Niche Partitioning in Mammals?

**Mike Kaplan, Sidney Hemming, Victoria Peck.** Expertise: **Glacial Geology, Geochemistry, Isotope Geology, Marine Geology, Paleoclimate.** Research Project: What Do Marine Records Tell Us About Former Ice Sheets in Patagonia and Ice Age Climates in the Southern Hemisphere?

**Einat Lev.** Expertise: **Volcanology.** Research Project: Boom! Splash! What Can We Learn About Geysers (And Volcanoes) From Building a Big One in the Lab?

**Maria Tzortziou, Joaquim Goes, and Helga Gomes.** Expertise: **Biological Oceanography, Aquatic Biogeochemistry, Climate Change, Remote Sensing, Ecosystem-Human Interactions.** Research Project: What Are the Impacts of Extreme Episodic Events on the Health and Ecology of the Long Island Sound Ecosystem and How Do These Influence Vulnerable Coastal Communities?

**Beizhan Yan, Wei Min.** Expertise: **Environmental Geochemistry, Pollutant Identification.** Research Project: What Are the Major Sources of Nanoplastics in New York City Waterways?

**Beizhan Yan, Wei Min.** Expertise: **Air Pollution, Exposure Science, Chemical Imaging.** Research Project: What Are the Major Pathways by Which Humans Are Exposed to Nanoplastics?

**Xiaojun Yuan.** Expertise: **Polar Climate Studies, Atmosphere-Ocean-Sea Ice Interaction, Tropical- Polar Climate Connections.** Research Project: How Much Does Upper Ocean Heat Content Contribute to Seasonal Sea Ice Predictability in the Antarctic?

APPLICATION DEADLINE: Application form must be submitted by **February 23rd, 2022.**

**There is an online application form. It is posted at:** <http://webapp.ldeo.columbia.edu/interns>  
**The online application form asks for the following files:**

-Resume with description of computer skills.

-A statement of interest. This statement can include a description of a particular research project that the student wishes to undertake or it can be a more general statement of the three research projects that interest the student most. We recognize that students with no prior research experience may have difficulty formulating a research project and we will not penalize students who do not submit a detailed project description. The goal of our program is to teach students about the research process and we encourage students with no prior research experience to apply. The student should also include a statement of the characteristics of a good scientist and the availability of undergraduate research opportunities at their home institution.

-Two letters of recommendation from your professors. Additional letters are not required or desired.

-Scanned transcript(s). Transcripts need not be official but must be legible and in English. If you have more than one undergraduate transcript, combine them into a single document for upload.

**If transcripts are not available in time to append to the online application form, send scanned transcript(s) by email to:**

**Dr. Dallas Abbott  
Summer Internship Program  
Lamont-Doherty Earth Observatory  
Palisades, New York 10964  
Email: [dallashabbott@gmail.com](mailto:dallashabbott@gmail.com)**

Columbia and Barnard students who also want their application considered for the research projects in the Lamont Summer intern program sponsored by NSF and IODP-USSP should select 3 research projects each for both programs on the online application form. It is **not** necessary to send separate applications and transcripts to both programs.

For more information about the program, look at this link:

<http://www.ldeo.columbia.edu/education/programs/summer-internship/intern-program-faqs>

Decisions for all but the waiting list will be made on or before April 1st, 2022. Every year the research projects and advisors change. Please look for the yearly posting of new projects in mid-January. \* \$700 cap on travel reimbursement.