

# DEPARTMENT OF EARTH, ENVIRONMENTAL, AND PLANETARY SCIENCES

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**More Information:** <http://eeps.case.edu/>

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The earth, environmental, and planetary sciences encompass the wide range of scientific inquiry into the processes that shape our environment, the Earth as a whole, and other planets. The earth and environmental sciences focus on examining our planet and the linkages between physical, chemical, biological, and geological processes that shape its evolution, its natural resources, the environment, and the climate. The planetary sciences leverage understanding of processes that have shaped the evolution of the Earth to understand other planets in our solar system.

In recent years, significant advances have been made in understanding climate change and the history of the Earth's climate, the impact of climate change on the environment, the nature of processes that shape the Earth's surface and its environment, the interactions between organisms and the environment, the history and operation of the Earth's interior, and the evolution of other planets. Geoscience-based knowledge is fundamental to resource conservation, land use planning, climate change impacts, and other environmental concerns.

Department faculty have active research programs to investigate Earth's changing climate, the interactions between life and the planet, planet formation and evolution, and Earth and environmental history. The department offers degree programs leading to the Bachelor of Arts (BA) and Bachelor of Science (BS) in Geological Sciences, BA in Environmental Geology, BA in Environmental Studies, Master of Science (MS) in Geological Sciences, and Doctor of Philosophy (PhD) in Geological Sciences. The Environmental Studies Program is described elsewhere in this General Bulletin.

## Department Faculty

Steven A. Hauck, II, PhD  
(Washington University in St. Louis)  
*Professor and Chair*  
<https://casfaculty.case.edu/steven-hauck/>  
Geodynamics; planetary science

Tali Babila, PhD  
(Rutgers University)  
*Assistant Professor*  
Paleoceanography; geochemistry

Albert S. Colman, PhD  
(Yale University)  
*Assistant Professor*  
Biogeochemistry; stable isotopes

Ralph P. Harvey, PhD  
(University of Pittsburgh)  
*Professor*  
Planetary materials

Beverly Z. Saylor, PhD  
(Massachusetts Institute of Technology)  
*Professor*  
Sedimentary geology

James A. Van Orman, PhD  
(Massachusetts Institute of Technology)  
*Professor*  
Experimental geochemistry

Peter J. Whiting, PhD  
(University of California, Berkeley)  
*Professor; Associate Dean, College of Arts and Sciences; Director, Environmental Studies*  
Geomorphology; surface water hydrology; environmental geology

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## Adjunct Faculty

Mulugeta Alene Araya, PhD  
(University of Turin/University of Genoa)  
*Adjunct Associate Professor*  
Structural geology

Jeffrey Balcerski, PhD  
(Case Western Reserve University)  
*Adjunct Assistant Professor*

Tyler Doane, PhD  
(Vanderbilt University)  
*Adjunct Assistant Professor*  
Geomorphology

Andrew Dombard, PhD  
(Washington University in St. Louis)  
*Adjunct Associate Professor; University of Illinois-Chicago*  
Planetary geophysics

Mark Green, PhD  
(University of Minnesota)  
*Adjunct Associate Professor*  
Forest hydrology

Joseph Hannibal, PhD  
(Kent State University)  
*Adjunct Associate Professor; Cleveland Museum of Natural History*  
Invertebrate paleontology

Scott Hardy, PhD  
(Ohio State University)  
*Adjunct Associate Professor; Ohio Sea Grant/Ohio State University*

Nathan Jacobson, PhD  
(University of California)  
*Adjunct Associate Professor*

Zhicheng Jing, PhD  
(Yale University)  
*Adjunct Associate Professor*

Elham Mohsenian, PhD  
(University of Leoben)  
*Adjunct Assistant Professor*

Anne Willem Omta, PhD  
(Vrije Universiteit)  
*Adjunct Assistant Professor*

David Saja, PhD  
(University of Pennsylvania)  
*Adjunct Assistant Professor*  
Mineralogy

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## Emeritus

Gerald Matisoff, PhD  
(Johns Hopkins University)  
*Professor Emeritus*  
Sedimentary and environmental geochemistry

Peter McCall, PhD, JD  
(Yale University)  
*Professor Emeritus*  
Benthic ecology, paleoecology

Samuel M. Savin, PhD  
(California Institute of Technology)  
*Jesse Earl Hyde Professor Emeritus of Geological Sciences and Dean Emeritus, College of Arts and Sciences*  
Isotope geochemistry

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## Visiting Faculty

Anne Omta, PhD  
(Vrije Universiteit)  
*Visiting Assistant Professor*  
Ocean biogeochemistry; climate dynamics

## Programs

- Environmental Geology, BA
- Environmental Studies, BA
- Environmental Studies, Minor
- Geological Sciences, BA
- Geological Sciences, BS
- Geological Sciences, Minor
- Geological Sciences, MS
- Geological Sciences, PhD

## Dual Degrees

- Programs Toward Graduate or Professional Degrees