

2010 Fellow American Geophysical Union



Peter Clark

Professor, Geology and Geophysics

Peter Clark, a professor of geosciences in the College of Earth, Ocean, and Atmospheric Sciences, has been elected as Fellow of the American Geophysical Union. This recognition by the AGU is a special tribute for those who have made exceptional scientific contributions.

Clark is a paleoclimatologist who studies glaciers and ice sheets to learn about past climate changes, their causes and effects, and better understand the mechanisms that could affect current and future climate – including the potential for very rapid climate changes and rising sea levels.

“Glaciers can tell us a lot about climate change, because they respond to changes in both temperature and precipitation,” noted Clark. “They are like a checking account where you make both deposits and withdrawals, and can see the long-term effects of climate change, through the year-to-year variation in the balance

between the two. At the same time, the large ice sheets can influence global climate as well as cause large and sometimes rapid changes in sea level. Understanding past changes in glaciers and ice sheets can inform us about how these systems may change in the future.”

Recent research includes describing the underlying mechanisms that have caused periodic ice ages on Earth for the past 2.5 million years; studying evidence of the history of ancient glaciers at Mauna Kea on the island of Hawaii; monitoring the decline of Oregon’s largest glacier, Collier Glacier; projecting sea level rise from a collapse of the West Antarctic Ice Sheet; and findings about past changes in global ocean circulation.

In 2010, Clark was also named a lead author for the much anticipated Intergovernmental Panel on Climate Change Fifth Assessment Report, “Climate Change 2013: The Physical Science Basis,” which will be released in 2013. Clark is a coordinating lead author for the chapter on sea level change.

A tidewater glacier losing mass by so-called calving. This process represents a means by which glaciers and ice sheets can lose mass quickly, causing rapid changes in sea level as well as potentially in climate.



“Being recognized by the AGU as a Fellow is truly a great honor. I am unbelievably fortunate to have such a job that has led to this recognition, where Oregon State University provides an intellectually stimulating environment with amazing colleagues and students to work with, and where great ideas are fostered.” — Peter Clark