

THE SCOTT INSTITUTE FOR ENERGY INNOVATION,
THE STEINBRENNER INSTITUTE FOR ENVIRONMENTAL
EDUCATION AND RESEARCH, ALONG WITH
THE CENTER FOR CLIMATE AND ENERGY DECISION MAKING



1 APR. 2016
RICHARD ALLEY

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Slip Slidin' Away: Ice Sheets and Sea-Level Rise

Warming melts ice, and melting of ice that is not floating contributes to sea level rise. Sea level now is rising because glaciers in the mountains are melting, the ocean is expanding as it warms, and the ice sheets of Greenland and Antarctica are shrinking a little. The ongoing rate of sea-level rise is only about a foot per century (3.3 mm/yr), but is already contributing to coastal problems in some areas. With continuing warming, the rise is expected to accelerate somewhat. But, the chance exists of a great acceleration if instabilities are triggered in the ice sheets. Attention is especially focused on Thwaites Glacier in West Antarctica, where collapse may have been triggered already or else be very close, with the potential of raising sea level 10 feet (3.3 m) in a human lifetime. Large uncertainties motivate vigorous research.

Bio

Dr. Richard Alley has ranged from Antarctica to Greenland to help learn the history of Earth's climate, and whether the great ice sheets will fall in the ocean and flood our coasts. With over 250 scientific publications, he has been asked to provide advice to the highest levels of government, and been recognized with numerous awards including election to the US National Academy of Sciences and the Royal Society. He hosted the recent PBS miniseries *Earth: The Operators' Manual*, and has been compared to a cross between Woody Allen and Carl Sagan for his enthusiastic efforts to communicate the excitement and importance of the science to everyone.

Carnegie Mellon University



1 April 2016
12:00pm EDT

Tepper 340
Carnegie Mellon University

Lunch will be served at 11:45am.
Seminar is presented under the
auspices of CEDM and the department
of Engineering and Public Policy.

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