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Sustainability Seminar Series

Sustainability Seminar Series, 2018

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Nov 27th, 4:00 PM - 5:00 PM

## How Do Polar Ice Sheets and Sea Level Behave Under a Changing Climate?

Sandra Passchier

Montclair State University, [passchiers@montclair.edu](mailto:passchiers@montclair.edu)

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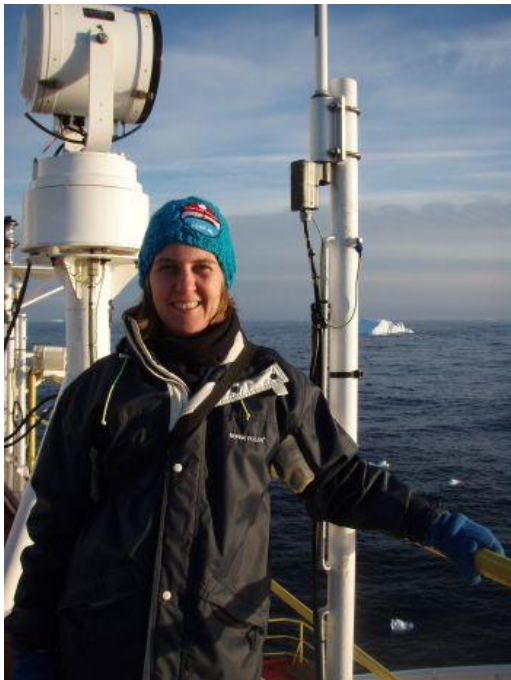
The Doctoral Program in Environmental Management and  
MSU Sustainability Seminar Series Present:

## How do polar ice sheets and sea level behave under a changing climate?

WHEN: November 27, 4:00 pm WHERE: CELS 120 lecture hall

**Dr. Sandra Passchier**

**Earth and Environmental Studies, Montclair State University**



Bio: Dr. Passchier has investigated climate archives in sediments near polar ice sheets since 1992 in collaborative research efforts involving expeditions to the Arctic and the Antarctic, including six international deep-sea drilling campaigns. Her current research involves the use of quantitative sedimentological and geochemical methods on marine sediment core samples to unravel 1) the behavior of polar ice sheets under different climate states, and 2) the response of ice-sheets to abrupt changes in atmospheric and oceanic forcing in the past. The results are used by others to improve modeling efforts of future ice sheet melt and sea level rise. Funded by the National Science Foundation (\$1.4M to Passchier).

**Abstract:** Nearly 3 billion people live within 100 km of the coastline, many in large urban centers. In predictions of sea level rise, the future role of polar ice sheets is one of the most critical uncertainties under the present extreme rise in greenhouse forcing of the climate system. This talk will show how geo-scientists address the Earth system processes involved in melting ice sheets under warmer climates, and introduce the objectives of an upcoming deep-sea drilling expedition to the area with greatest ice loss in West Antarctica.

For more information please contact Dr. Jorge Lorenzo-Trueba at 973-655-5320