Feb 11th, 4:00 PM - 5:00 PM

Reconstructing last interglacial sea level to understand how ice sheets behave in a warmer world

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MONTCLAIR STATE UNIVERSITY

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

Reconstructing last interglacial sea level to understand how ice sheets behave in a warmer world

WHEN: February 11th, 4:00 pm WHERE: CELS 120 lecture hall

Jacky Austermann

Columbia University, Lamont

Jacky Austermann grew up in Germany and earned a B.Sc. in Physics and a M.Sc. in Geophysics before moving to the U.S. for her Ph.D., which she obtained from Harvard University in 2016 in Earth and Planetary Sciences. She moved on to a postdoctoral position at the University of Cambridge and has started as an Assistant Professor in the Department of Earth and Environmental Sciences at Columbia University in 2018. Jacky is interested in connecting the solid Earth and the dynamics of it's interior to the paleoclimate record.

The last interglacial (125 ka) marks a time during which global mean temperatures were 1-2º warmer than pre-industrial values. This time period has therefore been used as a natural laboratory for studying ice sheet stability and sea level rise in a warmer world. Local sea level during the last interglacial can be reconstructed using sea level indicators such as fossil corals. In order to infer global mean sea level, or equivalent ice volume, one needs to correct local sea level estimates for post-depositional deformation. In this presentation I will explain what solid Earth deformation needs to be accounted for in these reconstructions and how we can model these processes. I will further show newly obtained last interglacial sea level data from the Bahamas, use them to infer last interglacial global mean sea level and provide an outlook of how these findings can affect predictions of future sea level change.

For more information contact Dr. Passchier at passchiers@mail.montclair.edu