Coastal and Marine Systems Science
2019 Fall Seminar Series

"Deglacial stratigraphy of Beaufort Margin sediments, Arctic Ocean"

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The Arctic Ocean is rapidly changing in response to warming climate. For insight into environmental response to climate change, we typically examine periods of rapid change in the past. However, the Arctic is a hard place to study due to the seasonal sea ice and minimal development along the coast, leading to a lack of data when compared to other ocean basins. We aim to fill in some of these knowledge gaps by examining the Wisconsin deglacial history of the Beaufort Margin in the western Arctic. In 2013, we conducted a cruise on the *USCGC Healy* to collect high-resolution seismic reflection data, multibeam bathymetry data, and sediment cores to examine the deglacial sediment dispersal patterns for the region. The data indicate that the western margin, from Barrow Canyon to the Mackenzie Trough, is characterized by thick Holocene sediments mostly sourced from Barrow Canyon and continental discharge. The eastern Beaufort, from the Mackenzie Trough to the Amundsen Gulf, is dominated by event deposits. These include ice rafting events from the Amundsen Gulf ice stream and glacial lake discharge events that entered the Arctic via the Mackenzie. One of these discharge events coincides with the onset of the Younger Dryas cold period and could be discharge from glacial Lake Agassiz. In this talk, I will elaborate on the significance of this finding and the overall sediment dispersal patterns for the margin.

When: Oct 17, 2019 (Thursday)
3 – 4 p.m.

Where: Science Annex II
Room 204

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