

2023 Geodynamics Seminar

Characterizing environmental gradients in reef ecosystems: physical processes driving high-frequency and fine-scale spatial variability



Dr. Kristen Davis

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Thursday, May 11, 2023

1:30 – 2:30 P.M.

Clark 507, Quissett Campus

In coral ecosystems, variation in environmental conditions supports a mosaic of coral communities in which spatial insurance effects could enhance community stability. One of the major challenges to understanding community structure on reefs and the resilience of coral communities to climate change is in quantifying physical and biological patterns at appropriate spatiotemporal scales. Here we examine physical processes shaping environmental gradients on Dongsha Atoll, a coral reef and Taiwanese National Park in the South China Sea during an observational campaign in summer 2019. Physical processes considered include atmosphere-ocean heat exchange, surface and internal waves, tides, and wind.