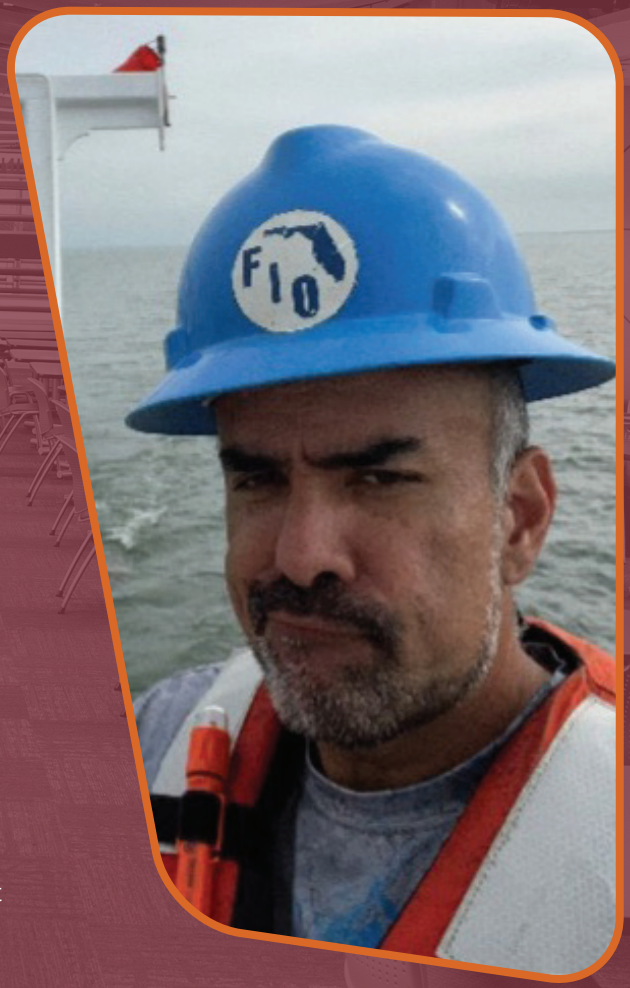
CIVIL & ENVIRONMENTAL ENGINEERING GRAD STUDENT SEMINAR

Deepwater Benthic Foraminifera Along the West Florida Shelf Escarpment

Friday, November 6
12:30 PM
COE A322



Michael Martinez-Colon, Ph.D.

ASSOCIATE PROFESSOR
Geological Oceanography and Marine Pollution
School of the Environment, Florida A&M University

ABSTRACT: It is well known that sediment texture (i.e., mud) and composition (i.e., organic matter- TOM) play an integral role on spatial-temporal meiofaunal populations. The distribution and dominance of disturbance-tolerant taxa will be indicative of deep-water physical disturbances (e.g., current speed) impacting their ecological structure. Eleven short sediment cores (8 – 10 cm) were collected at depths between 1,000 – 3,000 m from the West Florida Shelf Escarpment (Gulf of America) in relation to deep-water coral habitats. A total of 8,400 benthic foraminiferal (BF) specimens were picked between all the sediment samples. Changes in sedimentation, due to ocean current intensity, is the main factor associated with changes in the fate and transport of TOM and mud. On the one hand, up-core trends in TOM noticeably changed (two-fold increase) at 4 – 0 cm across the stations and is the driver of BF assemblage as it mirrored the drastic decrease in species richness and diversity. On the other hand, mud had a constant up-core decreasing trend but was the main control between 10 – 4 cm. Results demonstrate an increase in erosion since high energy deep ocean currents are inversely proportional to mud sedimentation (up-core decreasing trend). Potential changes in upwelling (cold-rich nutrient water) could explain the TOM trends, with a "prolonged" event occurring between 4 – 0 cm triggering an increase in marine snow.

This event is sponsored by FAMU-FSU College of Engineering and Department of Civil & Environmental Engineering

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