DEPARTMENT OF MATHEMATICS

FALL 2022
COLLOQUIUM SERIES

WAVE-DRIVEN CHANGES IN BEACH SAND LEVELS
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Understanding and forecasting beach evolution for coastal management purposes is challenging. Relevant processes span individual sand grains and entire littoral cells, and a fleeting wave uprush event interacts with decades of dune development and sea level rise. Physics-based models spanning these scales are highly parameterized for computational feasibility. They are also inaccurate without site-specific calibration. This talk will discuss the development of data-driven models that are useful for predicting beach erosion and recovery, the evolution and impacts of beach nourishment (sand replenishment) projects, and flooding in coastal communities. Lastly, I will present preliminary results that test new satellite remote sensing technologies for their ability to assess storm-driven coastal change across the globe.

THURSDAY, SEPTEMBER 1, 2022 | 4:00 PM
BSS 166

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