

## Wave breaking and setup over fringing reefs

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**3:00-3:30 pm Coffee Hour**  
**3:30-4:30 pm Seminar**

### Abstract

Wave breaking over coral reefs can induce wave setup and near-shore currents, which have significant impacts on near-shore circulations and the transport of organisms, nutrients, and sediments. Wave breaking and setup over coral reefs are controlled by the morphology of reef profiles and the characteristics of incident waves. This talk will focus on wave dynamics over an idealized fringing reef, which has a reef flat and a fore-reef slope. Experimental results will be presented to discuss effects of the reef-flat submergence and the fore-reef slope on characteristics of wave breaking over fringing reefs. Very often a ridge structure can be found at the edge of a reef flat. Both experimental and numerical results will also be presented to show that the presence of a ridge structure can significantly increase the wave setup on the reef flat.

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Please join us for the coffee hour at the seminar venue a half hour before the seminar, 3:00 – 3:30 pm