



Workshop: Modeling water level dynamics in intertidal zones using the Time-integrated Model of Shallow-water Availability (TiMSA)

September 7-8, 2022
09:00 – 13:00 EDT

Online and in-person at the Harte Research Institute

Topics

Module 1 - Overview and applications (Sept. 7)

- ❖ TiMSA history and overview
- ❖ Changes in Water Levels: A Primer
 - Physical constraints
 - Drivers and processes
 - Example methods/models
- ❖ The TiMSA model
 - Data domains
 - Inputs/outputs of TiMSA
- ❖ Inference: output and issues
- ❖ Open discussion: Model limitations
 - Wind-driven systems
 - Larger spatial domains
 - Resolution of space-time
- ❖ Known issues and potential solutions

Module 2 - Applying the model (Sept. 8, optional)

- ❖ Technical details of TiMSA model
- ❖ Hands-on programming
- ❖ Scaling TiMSA

Overview:

TiMSA is a hydrological model that quantifies the spatial and temporal dynamics of shallow-water availability in the intertidal zone. Although originally designed to quantify wading bird foraging habitat availability, TiMSA's concept could be applied for a wide range of conservation, restoration, and management goals in coastal systems. This workshop is designed to understand the model's framework, provide a technical walkthrough, and discuss model limitations and tradeoffs in model-realism and scale.

Instructors:

Leonardo Calle (TiMSA developer)
Antonio Cantu (HRI-TAMUCC)
Dale E. Gawlik (HRI-TAMUCC)

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