

PROPOSED TITLE: Wetlands on the edge: Assessing the impacts of sea-level rise and sea water intrusion on the hydrologic function of Louisiana’s coastal wetlands

CO-ADVISOR AT TULANE UNIVERSITY: [Annalisa Molini, RCSE](#)

PROJECT SUMMARY: The interactions between plants and the water table are a key component of the hydrology of coastal wetlands, and salinity has a major role in regulating these interactions.

As sea level rises, coastal salinization is expected to have substantial impacts on the plant communities of coastal Louisiana, with cascading effects on the hydrologic function, productivity, and overall resilience of these ecosystems.

The main goal of this thesis project is to assess the historical impacts of coastal salinization and submersion on Louisiana's coastal wetlands through a data-driven approach. This will include analyzing and interpreting observations from the [US Geological Service \(USGS\)](#) and [Louisiana's Coastwide Reference Monitoring System](#).

The selected student should be familiar with basic probabilistic and statistical methods, undergraduate-level hydrology, and hydraulics.

Excellent communication, interpersonal and organizational skills, and the ability to use independent judgment are required.

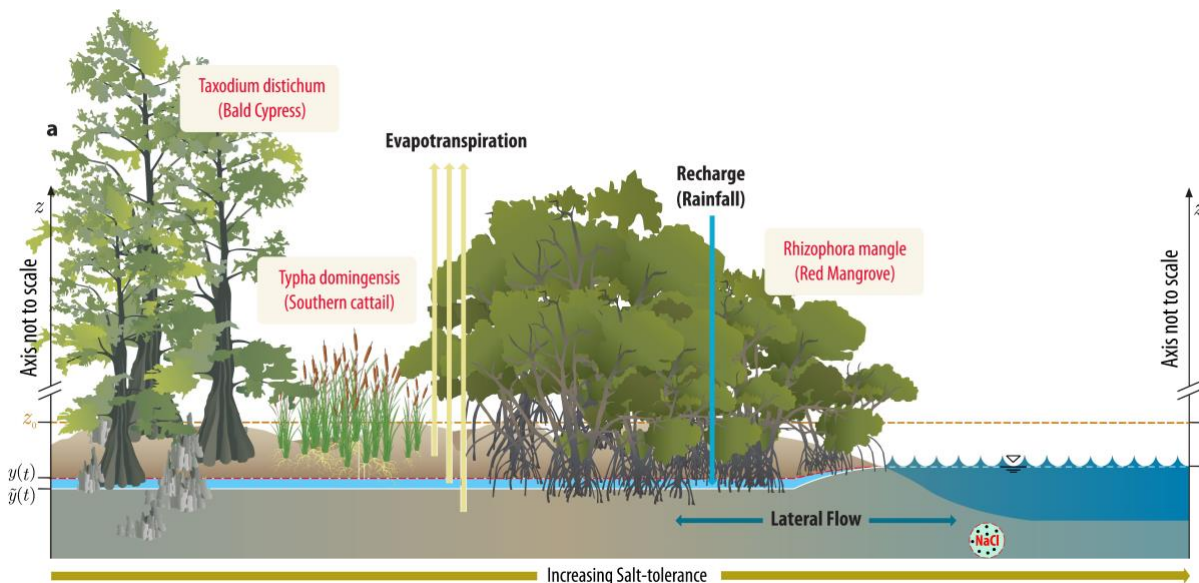


FIGURE 1: Typical plant salt tolerance gradient across a coastal wetland.



SCHOOL OF
SCIENCE AND ENGINEERING

ANNALISA MOLINI
ASSOCIATE PROFESSOR
DEPARTMENT OF RIVER-COASTAL
SCIENCE & ENGINEERING

LINDY BOGGS CENTER
6823 ST. CHARLES AVE
NEW ORLEANS, LA 70118

TEL.: 504-388-0039
EMAIL: AMOLINI@TULANE.EDU