

The Coastal Waters Consortium Presents:

Scientist Spotlight



Ali Reza Payendeh

What is your educational background?

I got my undergraduate degree in civil engineering and went on to receive a Master's degree in Coastal Engineering from University of Tehran. Now I am working on a doctoral degree in Oceanography at Louisiana State University.

What inspired you to become a scientist?

As a child, I was always fascinated by sea travel and stories of the Persian Gulf. An interest that developed to inspire my education as a Ph.D. student in Oceanography. I study transport processes affecting oil slick movement in my doctoral research because I want to provide insights on how oil spills would impact large body of waters.

Can you describe what you enjoy the most about conducting scientific research?

My favorite part of scientific research is testing theories, to find an answer and advance knowledge. Doing research to explain why something is happening in the ocean and using numerical models combined with observational data to simulate the exact nature of a physical process is always amazing for me.



What is your role as a scientist for CWC?

As a Ph.D. student, I work with Dr. Dubravko Justic. We are studying the influence of key environmental factors affecting the transport and fate of oil slicks in Barataria Bay and adjacent northcentral Gulf of Mexico.

Can you summarize your oil spill research and describe any surprising findings you have come across?

Currently I am working on a comprehensive modeling study focused on cold fronts, tropical storms and river diversions as important environmental factors affecting the transport and fate of oil spills. The models I use are FVCOM and MIKE 3. I mainly use numerical models in my research, but I also collect a range of data such as wave height, surface elevation, and sediment concentration.

The Coastal Waters Consortium's mission is to assess the chemical evolution, biological degradation, and environmental stresses of petroleum and dispersant within Gulf of Mexico coastal and shelf ecosystems.