

## Marine Robots Track Pollutants

**NSF Award:** [Collaborative Research: RAPID: Autonomous Control and Sensing Algorithms for Surveying the Impacts of Oil Spills on Coastal Environments](#) (Louisiana State University & Agricultural and Mechanical College)

**State:** [Louisiana](#)

**Congressional Districts:** [Louisiana District 06](#)

**Research Areas:** [Engineering](#)

The Deepwater Horizon oil spill has inspired research to improve the tracking of marine robots. Fieldwork off the coast of Louisiana used student developed robotic vehicles to search for oil spill remnants.

Robots can provide important information about the fate and transport of pollutants by surveying affected areas. Their presence limits the need for humans to enter contaminated areas.

This project focused on the collaborative efforts of professors from electrical and computer engineering, mathematics and marine science, who jointly supervised 14 students from different fields. The first nine months of this project focused on developing the fundamental mathematical theory on controller design and performance. The researchers then validated the theory in just 20 days at Grand Isle, La., an area significantly impacted by the oil spill.

This experience provided students with a valuable mixture of theoretical understanding and hands-on experience with marine robots not ordinarily available in the standard applied mathematics or control engineering curriculum.

### Image



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