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LSU Researchers Score Grant to Develop Offshore Oil Spill Risk Scenarios

A team of LSU researchers, lead by Mayank Tyagi, assistant professor of the LSU Department of Petroleum Engineering and the Center for Computation & Technology, has been awarded a grant from Shell for their three year project titled "Offshore Oil Spill Scenarios Development."

The Deepwater Horizon disaster made it incumbent on the offshore oil and gas community to evaluate the risks in all phases of offshore development and prepare reliable, fast response mechanisms to minimize the environmental, economic, and human health damage caused by such spill events.

This project will present an analysis of probable as well as potential events that could lead to accidental release of hydrocarbons into the deepwater environments. A set of community actions will also be developed that leverage and incorporate the principles of business preparedness, mitigation, and continuity to decrease the economic impact of a spill event.

"Our goal is to approximately quantify the risks and probabilities associated with a variety of potential leak source scenarios using the available data, identify areas where additional data are needed, and combine with a critical flow path analysis to determine different criteria for evaluating priority orders for intervention techniques," said Tyagi.

Other team members are Richard Hughes, John Smith, Steve Sears, and Darryl Bourgoyne from the LSU Department of Petroleum Engineering, and a complementary team led by Joseph Booth from LSU's Stephenson Disaster Management Institute (SDMI).

SDMI will assist with both the social sciences (community impact) as well as the business perspective (economic impact of both the disaster response and recovery aspects) of disasters and prepare a study of the impact of each of the proposed scenarios. The report will examine possible timelines, tools, and resources that can be deployed to more effectively manage the situation and minimize the health, economic, and social consequences of the various scenarios.

For more information on this or other research being done at the LSU Center for Computation & Technology, visit: http://www.cct.lsu.edu/home.

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