



Parallels between pumping blood, oil focus of conference

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ExxonMobil, Methodist DeBakey Heart Center, UH team up to explore shared technologies

HOUSTON, Nov. 12, 2007 – Much like moving oil through a pipeline, the heart must pump blood through the body. In a collaborative effort between Houston's largest industries, an event bringing together petroleum, medical and imaging experts will explore potential crossover ideas and extract shared technologies useful to each industry.

Sponsored by ExxonMobil, the Methodist DeBakey Heart Center of The Methodist Hospital and the University of Houston, the "Pumps & Pipes I" conference will be held at UH's Texas Learning and Computation Center from 8 a.m. to 5 p.m., Monday, Nov. 12 in 232 Philip G. Hoffman Hall.

The presentations and discussions will explore issues common to the medical and oil and gas industries, discussing cross-over ideas and shared technologies. The goal of the conference is to stimulate dialogue among relevant, actively-engaged participants in the medical and oil fields. This will no doubt lead to the formulation of new ideas and the sharing of new technologies between these industries that face similar challenges, even if on different scales.

This by-invitation-only event will provide common language and terminology to all parties, as well as provide a platform to discuss the hurdles facing each discipline. Talks will focus on anatomy, pathophysiology, how the petroleum industry maintains flow in the pipeline infrastructure, and other topics with potential crossover. The intended audience includes researchers from medical device manufacturers, computer scientists, imaging specialists, physicists and engineers from academia; geologists, physicists and researchers from the oil and gas industry; and vascular biologists, researchers and clinicians interested in cardiovascular disease.

"This meeting is not limited to the hydraulics of the heart and of oil pumps and pipes," said Dr. Alan B. Lumsden, Professor of Surgery at the Methodist DeBakey Heart Center, who conceived the idea for the conference. "It has a broader perspective such as imaging of pumps and pipes of all sorts, as well as understanding the mechanics involved in their evolution and gradual degradation. We hope to stimulate new avenues for research and collaboration with this gathering."

Program directors from the co-hosting organizations are Ioannis Kakadiaris, Eckhard Pfeiffer Professor of Computer Science at UH, and Bill E. Kline, Manager of the Wells and Materials Division at ExxonMobil Upstream Research Company. All three – Lumsden, Kakadiaris and Kline – will be among more than 20 presenters with topics that include the areas of hydraulics, conduits and pumps, accessing targets, and imaging and monitoring.

In addition to presenting his own research in medical image computing during one of the afternoon sessions, Kakadiaris will give an overview of the competencies of the UH Biomedical Cluster. Lumsden and Kline will kick off the event with a discussion titled "Docs and Rocks," with Lumsden addressing the anatomy and physiology of the cardiovascular system followed by Kline talking about the geology and physics of hydrocarbon production.

For more information, contact Susan McRee at 713-441-3018 or smcree@tmhs.org.