

# Pumps & Pipes 5: *New Horizons*



**Monday, December 5, 2011**

The Methodist Hospital Research Institute | Main Auditorium

*Fostering and building unique research opportunities between energy and medicine —  
Houston's largest industries — to enhance and develop resources and technologies.*

#### PROGRAM DIRECTORS

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UNIVERSITY of  
**HOUSTON**

**ExxonMobil**



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**DECEMBER 5, 2011** | The Methodist Hospital Research Institute, Main Auditorium

7:00 - 8:00 Registration and Breakfast

## Promising as the Morning Horizon

- 8:00 - 8:15 **Welcome to Pumps & Pipes 5**  
Alan B. Lumsden, M.D.  
Methodist DeBakey Heart & Vascular Center
- 8:15 - 8:30 **Strategic Serendipity: Around the World & Back Again**  
William Kline, Ph.D.  
ExxonMobil
- 8:30 - 8:50 **Collaboration & Open Innovation in Government**  
Jeffrey Davis, M.D.  
NASA, Johnson Space Center

## Touching the Horizon ■ Is There a Doctor in the House?

- 8:50 - 9:15 **What if...Connecting the Dots**  
David Horsup, Ph.D.  
Nalco Company
- 9:15 - 9:25 **Microbial Induced Corrosion: A Big O&G Problem**  
William Kline, Ph.D.
- 9:25 - 9:45 **Imaging Bacteria During Biofilm Formation**  
Jacinta Conrad, Ph.D.  
University of Houston
- 9:45 - 10:00 BREAK
- 10:00 - 10:30 **Video at 10:00: Gravel Pack Imaging II**  
Pietro Valsecchi, Ph.D., ExxonMobil  
Christof Karmonik, Ph.D., Methodist DeBakey Heart & Vascular Center
- 10:30 - 11:00 **I'll Take Your Help in a Heartbeat!  
The HeartBeat Simulator**  
Stephen Little, M.D.  
Methodist DeBakey Heart & Vascular Center
- 11:00 - 12:00 **Tours, Demonstrations & Networking**  
Methodist Institute for Technology, Innovation & Education (MITIE<sup>SM</sup>), NanoLabs
- 12:00 - 12:15 BREAK—Pickup Lunch
- 12:15 - 1:00 **LUNCH KEYNOTE PRESENTATION  
Pumps & Pipes: In the Beginning**  
Denton A. Cooley, M.D.  
Texas Heart Institute

## Exploring the Horizon

- 1:00 - 1:20 **Blood vs. Oil**  
Ron Webb  
Cameron
- 1:20 - 1:50 **Alternative Energy Systems & Atomic Hearts**  
Vic Poirier, M.B.A.  
Thermo CardioSystems (Retired)
- 1:50 - 2:10 **Wellbore Tractors: Little Engines That Can**  
Jeff Whittaker  
Welltec
- 2:10 - 2:30 **15-Year Quest: Shape Memory Polymers for Treating Stroke**  
Duncan Maitland, Ph.D.  
Texas A&M University
- 2:30 - 2:45 BREAK

## The Horizon is Here!

- 2:45 - 3:30 **Live Cardiac Surgery Case: Hybrid Suite**  
Mahesh Ramchandani, M.D.  
Methodist DeBakey Heart & Vascular Center
- Pumps & Pipes Future Directions**  
Matthias Loebe, M.D.  
Methodist DeBakey Heart & Vascular Center
- 3:30 - 3:50 **NanoTech in Oil & Gas**  
Rustom Mody  
Baker Hughes
- 3:50 - 4:10 **Next Generation Nanoparticle Contrast Agents**  
Ananth Annapragada, Ph.D.  
The University of Texas Health Science Center
- 4:10 - 4:30 **Partly Cloudy with a Chance of Discovery:  
Cloud Computing for Pumps & Pipes**  
Larry Shi, Ph.D.  
University of Houston
- 4:30 - 4:50 **Fetal Intervention: When the Womb Becomes the Operating Room**  
Sina Haeri, M.D.  
Texas Children's Hospital
- 4:50 - 5:15 **Wrap-Up: The Way Forward**  
Alan B. Lumsden, M.D.  
William Kline, Ph.D.  
Ioannis Kakadiaris, Ph.D.

## The Evening Horizon

- 5:15 - 7:00 **Social Hour and Reception**  
Trevisio's Restaurant