



**Department of Engineering
Seminar Program
Wednesday, October 8, 2014
Shanahan Teaching and Learning Center
Lecture Hall 1430, 4:10pm**

“Hydraulic Fracturing: Using Membrane Technology to Recycle Water”

**Jamie Hestekin
Department of Chemical Engineering, University of Arkansas**

Summary:

Hydraulic fracturing is a technology that has allowed for a tremendous economic boom in the last 10 years. However, this boom has led to an increase in demands on water resources as well as other environmental concerns. The Hestekin group, along with their corporate partners, is working on new membrane treatment technologies to recycle water used in hydraulic fracturing back into hydraulic fracturing processes so that the water resource demands are drastically reduced. This talk will show how this is economically possible as well as the technological demands that still remain in the application of these recycling technologies.

Bio:

Dr. Jamie Hestekin received his bachelor's degree in chemical engineering in 1995 from the University of Minnesota, Duluth and his PhD in chemical engineering in 2000 from the University of Kentucky under the advisement of Dr. D. Bhattacharyya. He spent three years at Argonne National Laboratory where he worked on a research project that won a prestigious R&D 100 Award in 2006. He spent 3 years at Kraft Foods while co-inventing the milk component of Tassimo Hot Beverage System. He is currently an associate professor at the University of Arkansas, is the holder of the Jim L. Turpin Professorship in Chemical and Biochemical Separations, is the secretary of the North American Membrane Society, and serves on the editorial board of *Environmental Progress and Sustainable Energy*. Awards while at Arkansas include a 2009 Faculty Gold Medal (5-7 given out annually University wide), a 2012 Honors College Outstanding Faculty Member (one of 10 inaugural members University wide), and a 2011 Associate Student Government Teacher of the Year (one of 3 given out annually University wide). He holds 13 US patents as well as over 30 peer reviewed journal publications and book chapters.

After the seminar there will be an informal dinner and conversation with the speaker in the Mitchell Room at Hoch-Shanahan Dining Hall. If you are not on the meal plan, we will have a signup sheet. If you are interested in attending, please RSVP with Sydney Torrey at storrey@hmc.edu.