



## Hugh Daigle

Professor of Chemical Engineering  
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**Hugh Daigle** is an Assistant Professor in the Hildebrand Department of Petroleum and Geosystems Engineering at the University of Texas at Austin and holds the Anadarko Petroleum Corp. Centennial Fellowship #2 in Petroleum Engineering. He is the author of over 100 peer-reviewed publications and conference papers. Dr. Daigle received an A.B. in Earth and Planetary Sciences magna cum laude from Harvard University in 2004 and a Ph.D. in Earth Sciences from Rice University in 2011, and has five years' industry experience as a wireline logging engineer and petrophysicist with Schlumberger and Chevron. His research interests include pore structure and transport properties of rocks, applications of nanotechnology in the upstream petroleum industry, and natural gas hydrates as an energy resource.

### *“Nuclear magnetic resonance as a probe of pore structure and fluid content”*

#### Abstract

Nuclear magnetic resonance (NMR) measurements are a popular method of characterizing various properties of porous media. These non-destructive measurements can yield information on porosity, distribution of pore sizes, transport properties including permeability and diffusion coefficient, and fluid distribution and type. I will present applications of NMR in natural porous media, including a focus on determining the pore structure and fluid distribution in organic shales. We have developed several new techniques for such analysis, including novel two-dimensional measurements and machine learning methods for interpreting the results.

**Tuesday, February 19<sup>th</sup>**

**1:00 – 1:50PM**

**Spahr Auditorium**