

**The Center for BioEnergy Sustainability (CBES)
At Oak Ridge National Laboratory (ORNL)**

**is pleased to announce that we are holding our next Forum on March 15th, 2012 in
the Ocoee Room (Room 189) in Building 1505 at 3:30.**

*Our special guest Host for this month's forum will be Tim Theiss
After forum reception will be held at Robert Kennedy's home
(Map with directions will be available at forum)*

This month's forum topic is:

**“ Impacts of Emerging Engine and Fuel Technologies on
the Efficiency of Future Engines”**

The automotive industry currently faces the challenge of meeting aggressive increases in fuel economy regulations. At the same time, the diversity of fuels is increasing because of aggressive alternative fuel mandates and emission regulations are becoming more stringent. As a response to these changes in the industry, new technologies are rapidly being developed and deployed. This presentation will first give an overview of the energy consumption in the U.S. transportation sector, then illustrate some specific challenges the automotive industry is facing. Finally, the audience will be introduced to several specific technologies that are being pursued at ORNL to improve efficiency within the Fuels, Engines, and Emissions Research Center (FEERC), including optimizing engines for high ethanol-content fuels and advanced combustion strategies.

Guest Speaker:

James Szybist

National Transportation Research Center (NTRC)



Jim Szybist has been an ORNL staff member working in the Fuels, Engine, and Emissions Research Center for the past 5 years. During this time, he has worked on a variety of research projects with the goal of achieving higher efficiency in automotive engines, and the direct displacement of petroleum through the use of alternative fuels. Specific research topics include fuel effects on advanced combustion, waste heat recovery, alternative engine cycles, and engine optimization for high ethanol-content fuels. Jim received his Ph.D. in Fuel Science from Penn State in 2005.

**Please mark your calendar for every third Thursday for 2012 so that you can join in the
collaboration and camaraderie that is being built by your participation in the CBES forums.**