UNIVERSITY OF CENTRAL FLORIDA

MECHANICAL AND AEROSPACE ENGINEERING

Announcing MAE Spring 2013 Seminar Series

Friday, March 1, 2013, 2:00pm-3:00pm, CL 1, Room 320

This event is hosted by the College of Engineering and Computer Science and the Mechanical and Aerospace Engineering Department at the University of Central Florida

"Predictive Rate Coefficient Calculations For Combustion Modeling"

Date:
Friday, 03/01/2013

Time:
2:00pm—3:00pm

Location:
CL 1, Room 320

For more information please contact:

Dr. Tina Tian at Tian.Tian@ucf.edu

www.mae.ucf.edu

Judit Zádor, Ph.D.

Combustion Research Facility
Sandia National Laboratories
Livermore, CA

Abstract - From a chemist's perspective, combustion is a complicated network of chemical reactions, and undoubtedly, the chemical transformation of matter and the corresponding heat release are at the core of every combustion process. The level of details, however, at which the chemistry has to be understood to predict the behavior of a combustion system depends on the circumstances, and eventually on the application in mind. In this talk I am going to illustrate the need for detailed understanding of chemistry in low-temperature autoignition systems, and describe the toolset that theoretical chemical kinetics can provide to obtain accurate predictions for rate coefficients.

Bio - Judit Zádor received her PhD in 2006 from the Eötvös University in Budapest, Hungary, in Physical Chemistry working on modeling and uncertainty analysis of combustion and atmospheric systems. After a year of experimental kinetic work at the Chemical Research Center of the Hungarian Academy of Sciences, she joined the Combustion Research Facility of Sandia National Laboratories in 2007 as a postdoctoral researcher. Since 2010 she is staff researcher in the same institution. Her research interest is theoretical chemical kinetics and uncertainty analysis.