

civil & environmental engineering department presents

# Kirlin Distinguished Seminar Series

## Overview of Fukushima Daiichi Events – Technology, Chronology, Damage, Current Conditions, and Lessons Learned



**Douglas M. Chapin,**  
PhD, NAE,  
Fellow, American Nuclear Society  
Principal of MPR Associates, Inc.

Douglas M. Chapin, Ph.D., NAE, Fellow, American Nuclear Society is a Principal of MPR Associates, Inc. He holds a B.S. in Electrical Engineering from Duke University, a certificate from the Bettis Reactor Engineering School, an M.S. in Applied Science from George Washington University and a Ph.D. in Nuclear Studies in Chemical Engineering and Nuclear Engineering from Princeton University. Dr. Chapin has worked in the nuclear industry since 1962, beginning with four years in the Naval Reactors design group for nuclear ships. With MPR since 1968, Dr. Chapin has been involved with commercial nuclear power plants worldwide, including more than thirty years experience in working with the Japanese.

Abstract: : On March 11, 2011 one of the largest earthquakes in recorded history occurred off the northeast coast of Japan. The earthquake severely jolted Japan including the six nuclear power plants at the TEPCO Fukushima Daiichi power station. The earthquake also created a tsunami; the effective water rise was about five stories when it arrived at Fukushima Daiichi; the tsunami was apparently the root cause of most of the subsequent events. Using pictures and drawings, this lecture will: fill in some of the details, e.g., plant location and configuration, the reactors on the site, a high level chronology of events, the source and extent of damage; make a brief comparison to TMI-2 and Chernobyl; describe the current conditions on the site; and provide examples of lessons learned.

2011



**WEDNESDAY, NOVEMBER 16, 2011**  
12:00 PM - 1:00 PM  
CEE Conference Room  
(1179 Glenn L. Martin Hall)