

E-201 Ocean Engineering Seminar, Sp 2013

E201 is held every Friday: 2-2:30 Beverages, 2:30-4 Seminar

Aspects of Ocean Waves and Multi-body Systems

By

Professor Katrin Ellermann

Institute of Mechanics

Graz University of Technology, Austria

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3110 Etcheverry Hall, 2:30-4 PM

2-2:30 PM. Beverages & Refreshments

Abstract

Ocean waves acting on a structure pose several problems when one is designing or operating offshore systems. The systematic analysis of the nonlinear dynamics of structures is generally facilitated by additional assumptions, such as waves modeled by periodic functions or linearizations of parts of the equations of motion. On the one hand, these assumptions are necessary in order to handle the computational efforts when analyzing the complex systems. On the other hand, certain effects, which are present in the original, real system, get lost in the modeling process. This talk addresses different approaches for the description of random forces acting on floating structures and for the analysis of the resulting motion.

Speaker's Short Biography

Dr. Katrin Ellermann is a Professor and Head of the Institute for Mechanics at Graz University of Technology, Austria. She received her Doctor of Engineering degree from the University of Hamburg in 2002, and Dr.-Ing. Hab. in 2008 from the same University. Her main areas of interest include non-linear dynamics, multi-body systems, stochastic vibrations and mechatronics. She was the Head of Emmy Noether Group at Hamburg University of Technology from 2005 to 2010, and a Research Fellow at the University of California at Berkeley from 2003 to 2005. She is a member of the German Society of Applied Mathematics and Mechanics.

Hosted by: Prof. A. E. Mansour (alaa@berkeley.edu)