



Osaka University

Graduate School of Engineering
Department of Naval Architecture & Ocean Engineering

Hydro-Seminar

by Lab. of Floating-Body Dynamics in Waves

The speaker in the 20th Hydro-Seminar is

Professor Bin Teng

State Key Laboratory of Coastal and Offshore Engineering
Dalian University of Technology, China

Date: Tuesday, 06 December, 2011

Time: 10:00 – 11:00

Venue: Seminar Room 312, S-1 building
Suita Campus, Osaka University

Time-domain Coupling Analysis of Deep Water Structures

Abstract

Offshore engineering has gone into a water depth of thousand meters. For deep water offshore structures, the weight of mooring line system is very heavy, and response of upper structures is greatly influenced by the dynamic motion of the mooring system. Thus, the dynamic coupling analysis must be carried for deep water moored platforms. A fully time domain coupling analysis method for deep water platform with mooring lines is introduced. The wave interaction on offshore structures is computed by a time-domain nonlinear model based on perturbation expansion, and mooring lines is simulated by a dynamic model of nonlinear finite element method. Motion of upper structures and mooring is simulated with consideration coupling effect between waves, upper structures and mooring line system. Numerical examination is carried out for some deep water platform.

The Speaker: Professor Bin Teng



Prof. Bin Teng works on hydrodynamics, including the computation of wave loads on structures, simulation of ship berthing in harbor, hydro-elastic analysis of very large structures, analysis of wave interaction with multiple bodies, and coupling analysis of deep water platforms with risers and mooring lines

He received his Ph.D from Dalian University of Technology, China in 1989, and was a post-doctoral research assistant in University of Oxford, United Kingdom from 1990-1992, a Japan Science and Technology Agency Fellow in Ship Research Institute, Japan from 1995 to 1996. In 1996 he was promoted as a professor by Dalian University of Technology, China, and in 2001 was appointed as a specially appointed professor in “Cheung Kong Scholars Program” by Education Ministry of China.

Now he is Deputy-Director of Research Center for Deep Water Engineering of Dalian University of Technology, and Vice-Director of State Key Laboratory of Coastal and Offshore Engineering, Dalian University of Technology.



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