

Hydro-Seminar

by Lab. of Floating-Body Dynamics in Waves

The speaker in the 51st Hydro-Seminar is

Professor Yonghwan Kim

Department of Naval Architecture & Ocean Engineering
Seoul National University, Seoul, Korea
Specially Appointed Professor of Osaka University

Date: Thursday, 31 January, 2019
Time: 14:00 – 15:00
Venue: S1-412 (Lecture room, 4F of S1 building)
Suita Campus, Osaka University



Prediction of Sloshing Severity in Ship Cargo

Abstract

Sloshing is one of critical problems in the design of LNG carrier or LNG-related offshore platforms. There have been numerous researches and publications to solve the sloshing flows, but the practical analysis methods are still limited in practical application for ship design. Mode-scale experiment is known as the most reliable for practical engineering purpose, but it is costly and time consuming. In this seminar, the practical problems related to sloshing experiment and prediction of sloshing loads are described. Particularly, a new method to predict the severity of sloshing-induced impact loads is explained. The prediction results are introduced for different ship tanks. The applicability of the developed method is dependent on the degree of prediction accuracy, therefore the degree of accuracy is observed based on the comparison with experimental data. Through this research, a significant reduction of cost and time for model-scale experiment can be expected.

The Speaker: Professor Yonghwan Kim

Professor Kim graduated Seoul National University for his bachelor and master degrees, and got a PhD degree at MIT. From 2004, he has been working at the Department of Naval Architecture and Ocean Engineering at Seoul National University. Currently he is the director general of Future Ocean Cluster (FOC), director of Research Institute of Marine System Engineering, Advanced Marine Engineering Center and the Lloyd's Register Foundation Center at Seoul National University. Also he is a specially-appointed professor of Osaka University.

His primary research areas are marine hydrodynamics, including motion responses of ships and offshore structures, sloshing, ship hydroelasticity, green-ship technology, and naval hydrodynamics. He is the author of more than 350 technical papers, and he is serving for several international journals as editor-in-chief, associate editor, and editorial board member.

He is a member of Korean Academy of Engineering and Fellow of RINA. Also he was chosen as the Distinguished Visiting Fellow of Royal Academy of Engineering, UK, in 2015~2016.



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