



**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 54th Hydro-Seminar is

**Prof. Fu Shixiao**

Prof of Ocean Engineering  
School of Naval Architecture, Ocean and Civil Engineering,  
Shanghai Jiao Tong University,  
Visiting Professor at Osaka University



**Date:** Thursday, 10 Oct, 2019

**Time:** 10:30 – 12:00

**Venue:** S1-312 (Lecture room, 3F of S1 building)  
Suita Campus, Osaka University

## Hydro-elasticity of Very Large Floating Structures under Inhomogeneous waves

### Abstract

Very large floating structures (VLFS) have received enormous attention in past decades, such as the floating airports in Japan, mobiles offshore bases in China, and floating bridges and submerged floating tunnels in Norway. With large size but relatively small flexural rigidity of VLFS, hydro-elasticity responses in waves are of the most concern. Hydro-elasticity theories in frequency-domain have been widely investigated by use of both the modal superposition approach and the direct method. However, in most of the studies, the wave field near VLFS is considered to be homogeneous. In fact, the environment at one end of the VLFS may be different from that at the other end several kilometers away, which is called as inhomogeneous wave field. The lecture will give a brief description of a time-domain method for hydro-elasticity response analysis of VLFS in inhomogeneous waves.

### The Speaker: Prof. Fu Shixiao

Prof. Fu Shixiao received his Bachelor and Master degrees in Naval Architecture from Dalian University of Science and Technology, China, in 1999 and 2002, respectively. He got his PhD degree in Ocean Engineering from Shanghai Jiao Tong University, China, in 2005. From 2005, he started working for CESOS, NTNU, Norway. Since 2007, he joined Shanghai Jiao Tong University as a staff where he promoted to full professor in 2009 and to distinguished professor in 2019, respectively. He is also an adjunct professor at NTNU since 2018. In Oct, 2019, he became a visiting professor, Department of Naval Architecture & Ocean Engineering, Osaka University, Japan. His research interests are VIV of risers, floating bridges, fish farming structures, etc. He is a member of ISSC Committee, and Associate Editor of “Marine Structures” and “Journal of Offshore Mechanics and Arctic Engineering”.



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