



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 57th Hydro-Seminar is

Professor Pierre Ferrant

Laboratoire de Recherche en Hydrodynamique, Energetique
et Environnement Atmospherique (LHEEA Lab.),
Ecole Centrale de Nantes, Nantes, France



Date: Friday, 13 December, 2019

Time: 15:30 – 16:30

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

A review of recent research activities in LHEEA Res. Dept., Ecole Centrale de Nantes

Abstract

The LHEEA Res. Dept. of Ecole Centrale de Nantes has long history of research in marine hydrodynamics, with applications to naval and ocean engineering, as well as marine renewable energy. This research is based on the combined use of theoretical and numerical developments, model scale experiments, and full scale testing at sea.

This presentation will give a focus on the most recent research activities in marine hydrodynamics in LHEEA Res. Dept., including:

Numerical developments:

- Research on deterministic wave prediction
- Generation of regular and irregular waves in CFD solvers via domain decomposition and relaxation zones
- Two-way coupling of potential flow and Navier Stokes solvers combining the Swense approach and Poincaré formulation

Experiments:

- Floatgen floating wind turbine : one year of electricity production, with connection to the grid
- Recent model scale experiments in Centrale Nantes

The Speaker: Professor Pierre Ferrant

Prof. Pierre Ferrant graduated in 1981 from Ecole Centrale de Nantes, with a specialization in mechanical engineering and shipbuilding. He obtained a Master degree (DEA) in 1982 and defended his doctoral thesis in 1988 on the numerical simulation of nonlinear wave-body interactions.

After several positions of research assistant in Ecole Centrale de Nantes, P. Ferrant joined SIREHNA, a start-up from Ecole Centrale de Nantes, in which he was responsible for the development of nonlinear simulation methods for ocean waves and wave-structure interactions. He joined Ecole Centrale de Nantes as an assistant professor in 1998, and he was promoted to full professor in 2008. Since 1998, he has held different positions in ECN: Scientific responsibility for the development of experimental activities in hydrodynamics since 1998, deputy head of the research team 'Hydrodynamics and Ocean Engineering of the Fluid Mechanics Lab of Ecole Centrale de Nantes (LMF – UMR6598) (2004-2012). In the period 2010-2012, he managed the restructuration of the LMF, with the creation of the new research department, LHEEA, standing for 'Laboratoire de recherche en Hydrodynamique, Energétique et Environnement Atmosphérique'. P. Ferrant is director of the LHEEA Res. Dept. since 2012. Prof. Pierre Ferrant has supervised 30 PhD theses and has published more than 200 papers in international journals, book chapters, or refereed conference proceedings.



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