



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 47th Hydro-Seminar is

Dr. Volker Bertram

**DNV GL (Det Norske Veritas, Germanischer Lloyd)
Senior Project Manager in the Training Department**

Date: Monday, November 12, 2018

Time: 16:00 – 17:00

**Venue: S1-412 (Lecture room, 4F of S1 building)
Suita Campus, Osaka University**



Autonomous Ship Technology – Science and Fiction

Abstract

This presentation surveys concepts of unmanned and autonomous ships. By looking at adjacent marine robotics fields and the historical development of visions on unmanned shipping, we define the current state of the art. A survey of key tasks to be automated or referred to remote control, we see that research focusses on nautical tasks, which are largely solved, while (engine) maintenance would be the key hurdle to address. Legal, political, financial and other non-technical barriers are briefly discussed. Autonomous cargo ships in international trade are expected to come later than widely assumed, but autonomous technology supporting ship operation is already in place and progressing in adoption and scope.

The Speaker: Dr. Volker Bertram

Volker Bertram is senior project manager at DNV GL, in the training department. His responsibilities include project management for the development of class-room and e-learning courses. He is a naval architect & marine engineer by training, has worked half his professional life in academia and half in industry, working on ship design, hydrodynamics, environmental aspects and Artificial Intelligence in the maritime industries. He has (co)authored more than 300 publications, including two books (“Practical Ship Hydrodynamics” and “Ship Design for Efficiency and Economy”). Ever since he spent his sabbatical in Urakami Lab of Mitsubishi in Nagasaki, he has a special relation to Japan.



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