



Lars Bergdahl

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Lars Bergdahl is Full Professor at the Department of Mechanics and Maritime Sciences, and Professor Emeritus at the Department of Architecture and Civil Engineering, the Division of Water Environment Technology at Chalmers.

Lars Bergdahl's research on water surface gravity waves is devoted to wave energy studies, to wave forces on and wave-induced motions of fixed and floating structures, and to the dynamics and fatigue of mooring cables.

Lars Bergdahl's research within computational fluid dynamics (CFD) has focused on its application to engineering hydraulics and environmental problems e.g. mixing in ponds and reservoirs, flow over weirs and in rivers.

Lars Bergdahl's thesis treated thermally induced, non-linear, viscoelastic expansion of ice sheets in water reservoirs and the rheological behaviour of ice.

Publications

Latest publications

2018

Experimental and numerical investigation of a taut-moored wave energy converter—a validation of simulated buoy motions

Author: Shun-Han Yang; Jonas Ringsberg; Erland Johnson; ZhiQiang Hu; Lars Bergdahl; Fei Duan

Published: 2018

Published in: Proceedings of the Institution of Mechanical Engineers Part M: Journal of Engineering for the Maritime Environment

Publication type: Journal article

2017

An hp-adaptive discontinuous Galerkin method for modelling snap loads in mooring cables

Author: Johannes Palm; Claes Eskilsson; Lars Bergdahl

Published: 2017

Published in: Ocean Engineering

Publication type: Journal article

On numerical uncertainty of VOF-RANS simulations of wave energy converters through V&V technique

Author: Claes Eskilsson; Johannes Palm; Lars Bergdahl

Published: 2017

Published in:

Publication type: Paper in proceedings

On Mooring Solutions for Large Wave Energy Converters

Author: Jonas Bjerg Thomsen; Jens Peter Kofoed; Francesco Ferri; Claes Eskilsson; Lars Bergdahl; Martin Delaney; Sarah Thomas; Kim Nielsen; Kurt Due Rasmussen; Erik Friis-Madsen

Published: 2017

Published in:

Publication type: Paper in proceedings

2016

Dynamically Scaled Model Experiment of a Mooring Cable

Author: Lars Bergdahl; Claes Eskilsson; Johannes Palm; Jan Lindahl

Published: 2016

Published in:

Publication type: Journal article

Mooring cable simulations with snap load capturing for wave energy applications

Author: Johannes Palm; Claes Eskilsson; Lars Bergdahl

Published: 2016

Published in:

Publication type: Paper in proceedings

Coupled mooring analysis for floating wave energy converters using CFD: Formulation and validation

Author: Johannes Palm; Claes Eskilsson; Guilherme Moura Paredes; Lars Bergdahl

Published: 2016

Published in: International Journal of Marine Energy

Publication type: Journal article

Experimental investigation of mooring configurations for wave energy converters

Author: Guilherme Moura Paredes; Johannes Palm; Claes Eskilsson; Lars Bergdahl; F. Taveira-Pinto

Published: 2016

Published in: International Journal of Marine Energy

Publication type: Journal article

Mooring Design for WECs

Author: Lars Bergdahl

Published: 2016

Published in:

Publication type: Book chapter

2015

Experimental investigation of mooring configurations for wave energy converters

Author: Guilherme Moura Paredes; Johannes Palm; Claes Eskilsson; Lars Bergdahl; Francisco Tavierapinto

Published: 2015

Published in:

Publication type: Paper in proceedings

CFD study of a moored floating cylinder: Comparison with experimental data

Author: Johannes Palm; Claes Eskilsson; Lars Bergdahl; Guilherme Moura Paredes

Published: 2015

Published in:

Publication type: Paper in proceedings

2014

Hydrological Feasibility of Flood Barriers to Protect the Gothenburg (Sweden) during the 21st Century - An Initial Assessment

Author: Masoud Iranzhad; Ulf Moback; Lars Bergdahl; Björn Klöve

Published: 2014

Published in:

Publication type: Conference contribution

2013

Modelling of formation and flow of aggregates in Dissolved Air Flotation: Comparison between 2D and 3D

Author: Mia Bondelind; Henrik Ström; Srdjan Sasic; Lars Bergdahl

Published: 2013

Published in:

Publication type: Paper in proceedings

Research on mooring systems for wave energy devices

Author: Guilherme Moura Paredes; Johannes Palm; Claes Eskilsson; Francisco Taveira-Pinto; Lars Bergdahl

Published: 2013

Published in:

Publication type: Conference contribution

Station keeping design for floating wave energy devices compared to floating offshore oil and gas platforms

Author: Guilherme Moura Paredes; Lars Bergdahl; Johannes Palm; Claes Eskilsson; Fransisco Taveira Pinto

Published: 2013

Published in:

Publication type: Paper in proceedings

A model to estimate the size of aggregates formed in a Dissolved Air Flotation unit

Author: Mia Bondelind; Srdjan Sasic; Lars Bergdahl

Published: 2013

Published in: Applied Mathematical Modelling

Publication type: Journal article

Simulation of Mooring Cable Dynamics Using a Discontinuous Galerkin Method

Author: Johannes Palm; Guilherme Moura Paredes; Claes Eskilsson; Francisco Taveira Pinto; Lars Bergdahl

Published: 2013

Published in:

Publication type: Paper in proceedings

CFD Simulation of a Moored Floating Wave Energy Converter

Author: Johannes Palm; Claes Eskilsson; Guilherme Moura Paredes; Lars Bergdahl

Published: 2013

Published in:

Publication type: Paper in proceedings

Experimental and Numerical Modelling of a Moored, Generic Floating Wave Energy Converter

Author: Guilherme Moura Paredes; Claes Eskilsson; Johannes Palm; Lars Bergdahl; Luis M. Leite; Francisco Taveira-Pinto

Published: 2013

Published in:

Publication type: Paper in proceedings

2012

Eulerian modelling of the formation and flow of aggregates in dissolved air flotation

Author: Mia Bondelind; Henrik Ström; Srdjan Sasic; Lars Bergdahl

Published: 2012

Published in:

Publication type: Paper in proceedings

2010

Setting Up a Numerical Model of a DAF Tank: Turbulence, Geometry, and Bubble Size

Author: Mia Bondelind; Srdjan Sasic; Thomas Pettersson; Thodoris Karapantsios; Margaritis Kostoglou; Lars Bergdahl

Published: 2010

Published in: Journal of Environmental Engineering, ASCE

Publication type: Journal article

Single- and two-phase numerical models of Dissolved Air Flotation: Comparison of 2D and 3D simulations

Author: Mia Bondelind; Srdjan Sasic; Margaritis Kostoglou; Lars Bergdahl; Thomas Pettersson

Published: 2010

Published in: Colloids and Surfaces A: Physicochemical and Engineering Aspects

Publication type: Journal article

2009

Wave-Induced Loads and Ship Motions

Author: Lars Bergdahl

Published: 2009

Published in:

Publication type: Report

Ice Loads for Wind-Power Foundations in the Gulf of Bothnia

Author: Lennart Fransson; Lars Bergdahl

Published: 2009

Published in: Proceedings of the International Conference on Port and Ocean Engineering under Arctic Conditions, POAC

Publication type: Paper in proceedings

Rigid moorings in shallow water: A wave power application. Part I: Experimental verification of methods

Author: John Fitzgerald; Lars Bergdahl

Published: 2009

Published in: Marine Structures

Publication type: Journal article

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