

CV - Trygve Kristiansen. October 2015.

Born 02.12.1975

Positions

06.2015 – present	Professor	Dept. of Marine Technology, NTNU, Main field: Marine Hydrodynamics
03.2015 – 06.2015	Research Manager	New Ocean Industries, Aquaculture structures, MARINTEK
03.2013 – 03.2015	Senior research scientist	Dept. of Offshore Hydrodynamics, MARINTEK
04.2002 – 02.2013	Research scientist	Dept. of Offshore Hydrodynamics, MARINTEK
02.2010 – 11.2012	PostDoc	With Prof. Odd M. Faltinsen, CeSOS, NTNU
08.2005 – 10.2008	PhD	CeSOS, NTNU

Education

08.2005 – 10.2008	PhD, NTNU	Centre for Ships and Offshore Structures (CeSOS), NTNU. Marine hydrodynamics, moonpool resonance. Supervisor: Prof. Odd M. Faltinsen
08.1996 – 03.2002	Msc, NTNU	Dept. of Mathematics and Physics, Numerical mathematics (Thesis from University of Minnesota)

Selected topics/projects

- Moonpool and ship side-by-side resonance (2005-present);
- Offshore wind-mills – ringing on monopiles (2013-2015);
- Modelling of fish farms (2011-2014);
- Ship roll (2013-2014);
- Fairing instability (2009);
- Shallow water wave modelling (2008);
- High-mode VIV analysis (2004);
- Wave run-up (2002-2004);

Publications

1. Baarholm, R., T. Kristiansen, and H. Lie, *INTERACTION AND CLASHING BETWEEN BARE OR STRAKED RISERS, ANALYSES OF EXPERIMENTAL DATA*, in *Proc. 26th Int. Conf. on Offshore Mech. and Arctic Eng.* 2007.
2. Baarholm, R., et al., *Experimental Investigation of Dual Riser Interaction*, in *24th Int. Conf. on Offshore Mech. and Arctic Eng.* 2005.
3. Fredriksen, A., T. Kristiansen, and O.M. Faltinsen, *Investigation of gap resonance in moonpools at low forward speed using a nonlinear hybrid method coupling potential and viscous flow*. *Appl. Ocean Res.*, 2013. **47**.
4. Fredriksen, A., T. Kristiansen, and O.M. Faltinsen, *Wave-induced response of a floating 2D body with moonpool*. *Proceedings of Royal Society A*, In review 2014. **Special issue**.
5. Fredriksen, A.G., T. Kristiansen, and O.M. Faltinsen, *Investigation of gap resonance in moonpools at forward speed using a non-linear domain-decomposition method*, in *27th Int. Workshop on Water Waves and Floating Bodies*. 2012.
6. Kristiansen, T., *Two-dimensional numerical and experimental studies of piston-mode resonance*. 2009, Norwegian University of Science and Technology.
7. Kristiansen, T., et al., *Kinematics in a Diffracted Wave Field: Particle Image Velocimetry (PIV) and Numerical Models*, in *24th Int. Conf. on Offshore Mech. and Arctic Eng.* 2005.
8. Kristiansen, T., R. Baarholm, and C.T. Stansberg, *Validation of Second-order Analysis in Predicting Diffracted Wave Elevation Around a Vertical Circular Cylinder.*, in *Proc. 14th Int. Offshore and Polar Eng. Conf.* 2004.

9. Kristiansen, T., E. Bachynski, and R. Firoozkoohi, *Experimental and numerical investigation of shallow water wave loads on a monopile*. Appl. Ocean Res., (To be submitted 2014).
10. Kristiansen, T., et al., *An investigation of fairing instability by experiments and flutter analysis*. J. Fluids Struct., (To be submitted 2014).
11. Kristiansen, T., et al., *VALIDATION OF SECOND-ORDER FREE SURFACE ELEVATION PREDICTION AROUND A CYLINDER ARRAY*, in *Int. Conf. on Comp. Meth. in Marine Eng.* 2005.
12. Kristiansen, T. and O.M. Faltinsen, *Application of a vortex tracking method to the piston-like behaviour in a semi-entrained vertical gap*. Appl. Ocean Res., 2008. **30**: p. 1-16.
13. Kristiansen, T. and O.M. Faltinsen, *Studies on Resonant Water Motion Between a Ship and a Fixed Terminal in Shallow Water*. J. Offshore Mech. and Arctic Eng., 2009. **131**: p. 11 pages.
14. Kristiansen, T. and O.M. Faltinsen, *A two-dimensional numerical and experimental study of resonant coupled ship and piston-mode motion*. Appl. Ocean Res., 2009. **32**: p. 158-176.
15. Kristiansen, T. and O.M. Faltinsen, *Gap resonance analyzed by a domain decomposition method*, in *26th Int. Workshop on Water Waves and Floating Bodies*. 2011.
16. Kristiansen, T. and O.M. Faltinsen, *Mooring loads of a circular net cage with an elastic floater in waves and current*, in *6th Int. Conf. on Hydroelasticity in Marine Technology*. 2012.
17. Kristiansen, T. and O.M. Faltinsen, *Modelling of current loads on aquaculture net cages*. J. Fluids and Structures, 2012. **34**: p. 218-235.
18. Kristiansen, T. and O.M. Faltinsen, *Gap resonance analyzed by a new domain-decomposition method combining potential and viscous flow*. Appl. Ocean Res., 2012. **34**: p. 198 - 208.
19. Kristiansen, T. and O.M. Faltinsen, *A parameter study on current forces on circular aquaculture net cages*, in *OMAE-2013, Nantes*. 2013.
20. Kristiansen, T. and O.M. Faltinsen, *Experimental and numerical investigation of a circular net cage with elastic floater in waves and current*. J. Fluids and Structures, Accepted Sept 2014.
21. Kristiansen, T., et al., *Experimental and Numerical Investigation of Ship Roll Damping with and without Bilge Keels*, in *Proc. 33rd Int. Conf. on Offshore Mech. and Arctic Eng.* 2014.
22. Kristiansen, T., T. Sauder, and R. Firoozkoohi, *Validation of a hybrid code combining potential and viscous flow with application to 3D moonpool*, in *OMAE-2013, Nantes*. 2013.
23. Kristiansen, T. and C.T. Stansberg, *STEEP WAVE KINEMATICS AND INTERACTION WITH A VERTICAL COLUMN*, in *Fifth Int. Symp. WAVES*. 2005.
24. Kristiansen, T. and C.T. Stansberg, *Empirical prediction of nonlinear wave diffraction and run-up on vertical columns*, in *ITTC Workshop on VIV and Run-up, Nantes*. 2013.
25. Kristiansen, T. and C.T. Stansberg, *Experimental and numerical study on parasitic shallow water waves in a model test basin*. Appl. Ocean Res., (To be submitted 2014).
26. Lie, H., et al., *Free-Span VIV Testing Of Full-Scale Umbilical*, in *Proc. 17th Int. Offshore and Polar Eng. Conf.* 2007.
27. Sauder, T., T. Kristiansen, and A. Østman, *Validation of a numerical method for the study of piston-like oscillations between a ship and a terminal*, in *Proc. 20th Int. Offshore and Polar Eng. Conf.* 2010.
28. Stansberg, C.T., et al., *Extreme Wave Amplification and Impact Loads on Offshore Structures*, in *Offshore Technology Conference*. 2005.
29. Stansberg, C.T., et al., *Prediction of Green Sea Loads on FPSO in Random Seas*, in *Proc. 14th Int. Offshore and Polar Eng. Conf.* 2004.
30. Stansberg, C.T. and T. Kristiansen, *Linear and Nonlinear Wave Amplification Effects Observed at FPSO Bow*, in *10th Int. Symp. on Practical Design of Ships and Other Floating Struct.* 2004.
31. Stansberg, C.T. and T. Kristiansen, *Non-linear scattering of steep surface waves around vertical columns*. Appl. Ocean Res., 2006. **27**: p. 65-80.
32. Stansberg, C.T. and T. Kristiansen, *Experimental study of slow-drift ship motions in shallow water random waves*, in *Proc. 30th Int. Conf. on Offshore Mech. and Arctic Eng.* 2011: Rotterdam, Netherlands.
33. Wang, J., et al., *An Experimental and Computational Development of a Benchmark Solution for the Validation of Numerical Wave Tanks*, in *Proc. 33rd Int. Conf. on Offshore Mech. and Arctic Eng.* 2014.