

Publications for Björn Windén

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CFD analysis

- Windén, B., Huang, Z. and Kawamura, T. (2015), Comparative self propulsion simulations of the JBC bulk carrier, JASNAOE Spring meeting 2015, Kobe, Japan
- Windén, B., Turnock, S. and Hudson, D.. (2015a), 'CFD Modelling of a Self Propelled Ship Using Body Force Propeller Models: A Framework for Creating Coupled Solvers', Journal of Marine Science and Technology (Pending submission).
- Windén, B., Turnock, S. and Hudson, D. (2015b), Influence of waves on the computation of viscous flow around a ship, Computers & Fluids (Pending review).
- Windén, B., Turnock, S. and Hudson, D. (2014a), A RANS modelling approach for predicting powering performance of ships in waves, International Journal of Naval Architecture & Ocean Engineering **6**(2)
- Windén, B., Turnock, S. and Hudson, D. (2014b), Self propulsion modelling of the KCS container ship using an open source framework, in 'Proceedings of the 17th Numerical Towing Tank Symposium, Marstrand, Sweden.
- Windén, B. (2014), Visualisation of the flow and force distribution around a self propelled container ship in head waves, Technical report. Dataset and report, University of Southampton. URL: <http://eprints.soton.ac.uk/id/eprint/365546>
- Badoe, C., Windén, B., Lidtke, A.K., Phillips, A.B., Hudson, D.A. and Turnock, S.R. (2014), Comparison of various approaches to numerical simulation of ship resistance and propulsion. Proceedings of, SIMMAN 2014, Lyngby, Denmark
- Windén, B., Turnock, S. and Hudson, D. (2013a), A RANS modelling approach for predicting powering performance of ships in waves, in '12th International Symposium on Practical Design of Ships and Other Floating Structures (PRADS13), Changwon City, Korea'.
- Windén, B., Badoe, C., Turnock, S., Phillips, A. and Hudson, D. (2013b), Self propulsion in waves using a coupled RANS-BEMt model and active RPM control, in 'Proceedings of the 16th Numerical Towing Tank Symposium, Duisburg Germany'.
- Windén, B., Turnock, S. and Hudson, D. (2013c), Predicting powering performance changes for ships in offshore conditions from small design modifications, in 'Proceedings of the 23rd International Offshore and Polar Engineering Conference (ISOPE13), Anchorage, Alaska'.
- Windén, B., Turnock, S. and Hudson, D. (2013d), A CFD approach to estimating the performance of ships in waves, in 'UK Marine Technology Postgraduate Conference, London'.
- Windén, B., Turnock, S. and Hudson, D. (2012a), Validating Force Calculations using OpenFOAM® on a Fixed Wigley Hull in Waves, in 'Proceedings of the 15th Numerical Towing Tank Symposium, Cortona, Italy'.
- Windén, B., Turnock, S. and Hudson, D. (2012b), Viscous Effects on Added Resistance in Waves, in '3rd UK Marine Technology Postgraduate Conference, Glasgow'.
- Turnock, S., Lewis, S., Philips, A., Banks, J., Windén, B., Hudson, D. and Molland, A. (2010), Evaluating the self-propulsion of a container ship in a seastate using computational fluid dynamics, in 'William Froude Conference: Advances in Theoretical and Applied Hydrodynamics - Past and Future'.

Wireless sensors

- Bennett, S., Brooks, C. J., Windén, B., Taunton, D. J., Turnock, S. R., Hudson, D. A. and Forrester, A. I. J. (2014), 'Measurement of ship hydroelastic response using multiple wireless sensor nodes', Ocean Engineering **79**.
- Bennett, S., Windén, B., Brooks, C., Turnock, S. and Hudson, D. (2012a), High speed video analysis of freak wave-ship model encounters, in 'Proceedings of International Conference on Violent Flows, Nantes, France'.

Bennett, S., Windén, B., Brooks, C., Turnock, S., Hudson, D., Forrester, A. and Taunton, D. (2012b), A Wireless sensor network for measuring ship responses in abnormal waves, in 'Proceedings of 29th Symposium on Naval Hydrodynamics, Gothenburg, Sweden'.

Denchfield, S., Windén, B., Brooks, C., Turnock, S., Hudson, D., Forrester, A. and Taunton, D. (2011), Wireless sensor network for determining boat motions and hydroelastic responses, in 'The Second International Conference on Advanced Model Measurement Technology for EU Maritime Industry'.

CO₂ emissions reduction

Windén, B., Chen, M., Okamoto, N., Kim, D. and McCaig, E. (2011), Offshore Thermal Power with CCS: An Alternative to CO₂ Transportation, ISBN 978-0-854-32928-1.

Windén, B., Chen, M., Okamoto, N., Kim, D., McCaig, E., Sheno, R. and Wilson, P. A. (2013e), Logistical and Economical Benefits of using Offshore Thermal Power in a Future CCS Scheme', *Energy Procedia* **37**.

Windén, B., Chen, M., Okamoto, N., Kim, D., McCaig, E., Sheno, R. and Wilson, P. A. (2014c), Investigation of an offshore thermal powerplant with carbon capture as an alternative to CO₂ transportation, *Ocean Engineering* **76**.

Theses

Windén, B., (2014), Powering Performance of a Self Propelled Ship in Waves, Ph.D. Thesis, University of Southampton, Southampton, UK.

Windén, B., (2009), Anti Roll Tanks in Pure Car and. Truck Carriers, M.Sc Thesis, Royal Institute of Technology, Stockholm, Sweden.