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Ship Hydromechanics

Employment

Ship Hydromechanics

Delft University of Technology

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Research outputs

An open-source reproducible chess robot for human-robot interaction research

Zhang, R., de Winter, J. C. F., Dodou, D., Seyffert, H. C. & Eisma, Y. B., 2025, In: *Frontiers In Robotics and AI*. 12, 17 p., 1436674.

Application of the harmonic balance method for ship-cargo interaction with intermittent contact nonlinearities

Speksnijder, A. D., Karacadagli, U., Seyffert, H. C. & Grammatikopoulos, A., 2025, In: *Journal of Sound and Vibration*. 601, 19 p., 118925.

Designing for dangerous waves – a new ‘Adaptive Screening’ method to predict extreme values of non-linear marine and coastal structure responses to waves

van Essen, S. M. & Seyffert, H. C., 2025, In: *Reliability Engineering and System Safety*. 264, 20 p., 111404.

Unidirectional and multi-directional wave estimation from ship motions using an Adaptive Kalman Filter with the inclusion of varying forward speed

Bourkaib, R., Kok, M. & Seyffert, H. C., 2025, In: *Probabilistic Engineering Mechanics*. 80, 11 p., 103773.

Walk Along: An Experiment on Controlling the Mobile Robot ‘Spot’ with Voice and Gestures

Zhang, R., Linden, J. V. D., Dodou, D., Cenzer, H. S., Eisma, Y. B. & Winter, J. D., 2025, In: *ACM Transactions on Human-Robot Interaction*. 14, 4, 43 p., 64.

Finding Dangerous Waves-Review of Methods to Obtain Wave Impact Design Loads for Marine Structures

van Essen, S. & Seyffert, H., 2023, In: *Journal of Offshore Mechanics and Arctic Engineering*. 145, 6, 14 p., 060801.

Prediction of short-term non-linear response using screening combined with multi-fidelity Gaussian Process Regression

van Essen, S. M., Scholcz, T. P. & Seyffert, H. C., 2023, *Proceedings of the ASME 2023 42nd International Conference on Ocean, Offshore and Arctic Engineering (OMAE 2023)*. ASME, 14 p. OMAE2023-10095

Required test durations for converged short-term wave and impact extreme value statistics — Part 1: Ferry dataset

van Essen, S. M., Scharnke, J. & Seyffert, H. C., 2023, In: *Marine Structures*. 90, 25 p., 103410.

Required test durations for converged short-term wave and impact extreme value statistics–Part 2: Deck box dataset

Scharnke, J., van Essen, S. M. & Seyffert, H. C., 2023, In: *Marine Structures*. 90, 25 p., 103411.

The Design, Production, Verification, and Calibration of an Elastic Model of a Catamaran for Hydroelastic Experiments

Keser, A., Verdult, M., Seyffert, H. & Grammatikopoulos, A., 2023, *HSMV 2023 - Proceedings of the 13th Symposium on High Speed Marine Vehicles*. Begovic, E. (ed.). IOS Press, p. 139-148 10 p. (Progress in Marine Science and Technology; vol. 7).

Finding Dangerous Waves – Towards an Efficient Method to Obtain Wave Impact Design Loads for Marine Structures

Van Essen, S. & Seyffert, H., 2022, *Proceedings of the ASME 2022 41th International Conference on Ocean, Offshore and Arctic Engineering (OMAE 2022): Offshore Technology*. ASME, Vol. 1. 18 p. OMAE2022-79479

Generating an ensemble of mutually exclusive and exhaustive waves targeted for extreme responses

Seyffert, H. C., 2022, In: Ocean Engineering. 243, 16 p., 110172.

Long-term rogue wave occurrence probability from historical wave data on a spatial scale relevant for spar-type floating wind turbines

Nederkoorn, T. P. & Seyffert, H. C., 2022, In: Ocean Engineering. 251, 14 p., 110955.

Design Contours for Complex Marine Systems

Seyffert, H. C., Kana, A. A. & Troesch, A. W., 2021, *Practical Design of Ships and Other Floating Structures : Proceedings of the 14th International Symposium, PRADS 2019*. Okada, T., Kawamura, Y. & Suzuki, K. (eds.). Springer, Vol. 2. p. 168-183 (Lecture Notes in Civil Engineering; vol. 64 LNCE).

Numerical investigation of response-conditioning wave techniques for short-term rare combined loading scenarios

Seyffert, H. C., Kana, A. A. & Troesch, A. W., 2020, In: Ocean Engineering. 213, 17 p., 107719.

Response-based reliability contours for complex marine systems considering short and long-term variability

Seyffert, H. C. & Kana, A. A., 2020, In: Applied Ocean Research. 103, 11 p., 102332.

Combined stochastic lateral and in-plane loading of a stiffened ship panel leading to collapse

Seyffert, H. C., Troesch, A. W. & Colette, M. D., 2019, In: Marine Structures. 67, 22 p., 102620.

Evaluation of an equivalent design wave method to define lifetime combined loading scenarios for trimarans

Seyffert, H. C. & Kana, A. A., 2019, *Proceedings of the ASME 2019 38th International Conference on Ocean, Offshore and Arctic Engineering: Volume 3: Structures, Safety, and Reliability*. New York, NY, USA: ASME, 10 p. OMAE 2019-95497

Probabilistic Assessment of Combined Loading on Trimarans

Seyffert, H. C., 2018, *13th International Marine Design Conference (IMDC)*.

Data Mining Pt. Reyes Buoy for Rare Wave Groups

Seyffert, H. C. & Troesch, A. W., 2016, In: Journal of Offshore Mechanics and Arctic Engineering. 138, 1, 011101.

Large Wave Groups- Their Probability, Profiles, and Mean Offsets

Seyffert, H. C., 2016, *International Workshop on Water Waves and Floating Bodies*.

Rare wave groups

Seyffert, H. C., Kim, D. H. & Troesch, A. W., 2016, In: Ocean Engineering. 122, p. 241-252

Spar Platform Response due to Rare Wave Groups

Seyffert, H. C., 2016, *Practical Design of Ships and Other Floating Structures (PRADS)*.