

Søren Ehlers

List of Publications by Year in descending order

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127
papers

1,667
citations

331670

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361022

35
g-index

128
all docs

128
docs citations

128
times ranked

1023
citing authors

#	ARTICLE	IF	CITATIONS
1	A procedure for numerically model surface of the corroded specimen. Ships and Offshore Structures, 2023, 18, 469-484.	1.9	0
2	Influence of corrosion pit geometry on stress distribution within a single artificial pit. Ship Technology Research, 2023, 70, 73-89.	2.5	0
3	A simulation approach for local ice loads on ship structures in level ice. Marine Structures, 2022, 81, 103117.	3.8	5
4	Numerical analysis of the correlation between the pitting severity and surface roughness of corroded specimens. Ships and Offshore Structures, 2022, 17, 2699-2714.	1.9	2
5	Comparison of local fatigue assessment methods for high-quality butt-welded joints made of high-strength steel. Forces in Mechanics, 2022, 6, 100056.	2.8	15
6	Review of methods for the high-cycle fatigue strength assessment of steel structures subjected to sub-zero temperature. Marine Structures, 2022, 82, 103153.	3.8	10
7	Development of Combined Load Spectra for Offshore Structures Subjected to Wind, Wave, and Ice Loading. Energies, 2022, 15, 559.	3.1	1
8	Relation between the Fatigue and Fracture Ductile-Brittle Transition in S500 Welded Steel Joints. Metals, 2022, 12, 385.	2.3	7
9	A comprehensive approach to scenario-based risk management for Arctic waters. Ship Technology Research, 2022, 69, 129-157.	2.5	8
10	Combining H-Adaptivity with the Element Splitting Method for Crack Simulation in Large Structures. Materials, 2022, 15, 240.	2.9	2
11	Safety Considerations of Hydrogen Application in Shipping in Comparison to LNG. Energies, 2022, 15, 3250.	3.1	9
12	Predicting compressive strength and behavior of ice and analyzing feature importance with explainable machine learning models. Ocean Engineering, 2022, 255, 111396.	4.3	7
13	Statistical Characterization of Stress Concentrations along Butt Joint Weld Seams Using Deep Neural Networks. Applied Sciences (Switzerland), 2022, 12, 6089.	2.5	9
14	Hydroelastic potential flow solver suited for nonlinear wave dynamics in ice-covered waters. Ocean Engineering, 2022, 259, 111756.	4.3	2
15	Influence of pitting corrosion on the fatigue strength of offshore steel structures based on 3D surface scans. International Journal of Fatigue, 2022, 164, 107128.	5.7	19
16	The measurement accuracy of instrumented ship structures under local ice loads using strain gauges. Marine Structures, 2021, 76, 102919.	3.8	3
17	Fatigue assessment of welded joints at sub-zero temperatures by means of stress averaging approach. Ships and Offshore Structures, 2021, 16, 216-224.	1.9	5
18	Probability analysis of PIT distribution on corroded ballast tank. Ocean Engineering, 2021, 228, 108958.	4.3	11

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19	Study on the cohesive edge crack in a square plate with the cohesive element method. International Journal of Fracture, 2021, 231, 21.	2.2	1
20	Fatigue strength of PBFâ€B/M and wrought 316L stainless steel: effect of postâ€treatment and cyclic mean stress. Fatigue and Fracture of Engineering Materials and Structures, 2021, 44, 3077-3093.	3.4	18
21	An algorithm for statistical evaluation of weld toe geometries using laser triangulation. International Journal of Fatigue, 2021, 149, 106293.	5.7	19
22	Fatigue strength of normal and high strength steel joints improved by weld profiling. Engineering Structures, 2021, 246, 113030.	5.3	4
23	Guidance for Material Selection Based on Static and Dynamic Mechanical Properties at Sub-Zero Temperatures. Journal of Offshore Mechanics and Arctic Engineering, 2021, 143, .	1.2	14
24	Model scale investigation of aspects influencing the ice resistance of ships sailing ahead in level ice. Ship Technology Research, 2020, 67, 26-36.	2.5	4
25	Equivalent ice thickness in ship ice transit simulations: overview of existing definitions and proposition of an improved one. Ship Technology Research, 2020, 67, 84-100.	2.5	5
26	Fatigue strength of filletâ€welded joints at subzero temperatures. Fatigue and Fracture of Engineering Materials and Structures, 2020, 43, 403-416.	3.4	29
27	Influence of the optical measurement technique and evaluation approach on the determination of local weld geometry parameters for different weld types. Welding in the World, Le Soudage Dans Le Monde, 2020, 64, 301-316.	2.5	30
28	A machine learning-based method for simulation of ship speed profile in a complex ice field. Ships and Offshore Structures, 2020, 15, 974-980.	1.9	15
29	Oil spill damage: a collision scenario and financial liability estimations for the Northern Sea Route area. Ship Technology Research, 2020, 67, 148-164.	2.5	10
30	Extension of the strain energy density method for fatigue assessment of welded joints to subâ€zero temperatures. Fatigue and Fracture of Engineering Materials and Structures, 2020, 43, 2867-2882.	3.4	14
31	Development of environmental contours for first-year ice ridge statistics. Structural Safety, 2020, 87, 101996.	5.3	5
32	Requirements for stress gradientâ€based fatigue assessment of notched structures according to theory of critical distance. Fatigue and Fracture of Engineering Materials and Structures, 2020, 43, 1541-1554.	3.4	25
33	Development of a design load patch for the consideration of ice loads. Ships and Offshore Structures, 2020, 15, S20-S28.	1.9	2
34	On the Deterministic Prediction of Water Waves. Fluids, 2020, 5, 9.	1.7	32
35	Application of local approaches to the assessment of fatigue test results obtained for welded joints at sub-zero temperatures. International Journal of Fatigue, 2020, 138, 105672.	5.7	21
36	The ice extrusion test: a novel test setup for the investigation of ice-structure interaction â€ results and validation. Ships and Offshore Structures, 2020, 15, S1-S9.	1.9	10

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37	Sub-Zero Temperature Fatigue Strength of Butt-Welded Normal and High-Strength Steel Joints for Ships and Offshore Structures in Arctic Regions. , 2020, , .		9
38	Investigation of Nonlinear Wave-Ice Interaction Using Parameter Study and Numerical Simulation. Journal of Offshore Mechanics and Arctic Engineering, 2020, 142, .	1.2	3
39	Inverse modeling approach for transformation of propeller shaft angular deformation and velocity to propeller torque load. Marine Structures, 2019, 67, 102614.	3.8	9
40	Crack Monitoring in Resonance Fatigue Testing of Welded Specimens Using Digital Image Correlation. Journal of Visualized Experiments, 2019, , .	0.3	0
41	Investigation on semi-empirical coefficients and exponents of a resistance prediction method for ships sailing ahead in level ice. Ships and Offshore Structures, 2019, 14, 161-170.	1.9	7
42	Establishing a common database of ice experiments and using machine learning to understand and predict ice behavior. Cold Regions Science and Technology, 2019, 162, 56-73.	3.5	20
43	A simplified welding simulation approach used to design a fatigue test specimen containing residual stresses. Ship Technology Research, 2019, 66, 22-37.	2.5	3
44	A Fleet Efficiency Factor for fleet size and mix problems using particle swarm optimisation. Ship Technology Research, 2019, 66, 106-116.	2.5	2
45	Ice Pressure Prediction Based on the Probabilistic Method for Ice-Going Vessels in Inland Waterways. Journal of Offshore Mechanics and Arctic Engineering, 2019, 141, .	1.2	4
46	MARSTRUCT benchmark study on nonlinear FE simulation of an experiment of an indenter impact with a ship side-shell structure. Marine Structures, 2018, 59, 142-157.	3.8	44
47	Comparison of fatigue strength of post-weld improved high strength steel joints and notched base material specimens. Ships and Offshore Structures, 2018, 13, 47-55.	1.9	6
48	A Rubber Bag for Liquid Cargo to Improve Ship Collision Resistance. Journal of Offshore Mechanics and Arctic Engineering, 2018, 140, .	1.2	1
49	Virtual prototyping for maritime crane design and operations. Journal of Marine Science and Technology, 2018, 23, 754-766.	2.9	15
50	An Object-Oriented Modeling Approach to Virtual Prototyping of Marine Operation Systems Based on Functional Mock-Up Interface Co-Simulation. Journal of Offshore Mechanics and Arctic Engineering, 2018, 140, .	1.2	11
51	Updatable Spatio-Temporal Probabilistic Corrosion Modeling for Offshore Structures. , 2018, , .		0
52	Fatigue strength of high-strength steel after shipyard production process of plasma cutting, grinding, and sandblasting. Welding in the World, Le Soudage Dans Le Monde, 2018, 62, 1273-1284.	2.5	14
53	A method for estimation of equivalent-volume ice thickness based on WMO egg code in absence of ridging parameters. Cold Regions Science and Technology, 2018, 155, 381-395.	3.5	6
54	The influence of the bow design on structural response due to ice loading. Ships and Offshore Structures, 2018, 13, 302-311.	1.9	4

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55	Current status and future operational models for transit shipping along the Northern Sea Route. Marine Policy, 2018, 94, 53-60.	3.2	52
56	Bonded window panes in strength analysis of ship structures. Ship Technology Research, 2018, 65, 102-121.	2.5	6
57	Bowtie Analysis without Expert Acquisition for Safety Effect Assessments of Cooperative Intelligent Transport Systems. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering, 2018, 4, 04018036.	1.7	1
58	Ice Pressure Prediction Based on the Probabilistic Method for Ice-Going Vessels in Inland Waterways. , 2018, , .		0
59	Propeller torque load and propeller shaft torque response correlation during ice-propeller interaction. Journal of Marine Science and Application, 2017, 16, 1-9.	1.7	10
60	The Influence of model fidelity and uncertainties in the conceptual design of Arctic maritime transport systems. Ship Technology Research, 2017, 64, 40-64.	2.5	13
61	Semi-empirical level ice resistance prediction methods. Ship Technology Research, 2017, 64, 1-14.	2.5	24
62	Methodology to assess the floe size and distribution along a ship hull during model scale ice tests for self-propelled ships sailing ahead in level ice. Ships and Offshore Structures, 2017, 12, S100-S108.	1.9	11
63	Parametric structural analysis for a platform supply vessel at conceptual design phase " a sensitivity study via design of experiments. Ships and Offshore Structures, 2017, 12, S209-S220.	1.9	4
64	Experimental and numerical analysis of a membrane cargo containment system for liquefied natural gas. Ships and Offshore Structures, 2017, 12, S257-S267.	1.9	7
65	A Finite Element Method-Based Potential Theory Approach for Optimal Ice Routing. Journal of Offshore Mechanics and Arctic Engineering, 2017, 139, .	1.2	9
66	Assessing the safety effects of cooperative intelligent transport systems: A bowtie analysis approach. Accident Analysis and Prevention, 2017, 99, 125-141.	5.7	36
67	Numerical Prediction of Ship-Ice Interaction: A Project Presentation. , 2017, , .		3
68	Towards mission-based structural design for arctic regions. Ship Technology Research, 2017, 64, 115-128.	2.5	4
69	Influence of Nonsymmetric Steel Sandwich Panel Joints on Response and Fatigue Strength of Passenger Ship Deck Structures. Journal of Ship Production and Design, 2017, 33, 135-143.	0.4	0
70	Transient simulation of the propulsion machinery system operating in ice " Modeling approach. Ocean Engineering, 2016, 124, 437-449.	4.3	12
71	Assessment of the applicability of goal- and risk-based design on Arctic sea transport systems. Ocean Engineering, 2016, 128, 183-198.	4.3	18
72	Assessment of Helicopter Emergency Response Capacity in the Barents Sea. , 2016, , .		1

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73	A Rubber Bag for Liquid Cargo to Improve Ship Collision Safety. , 2016, , .		0
74	A FEM Based Potential Theory Approach for Optimal Ice Routing. , 2016, , .		0
75	Optimizing integrated reference cases in the OCTAVIUS project. International Journal of Greenhouse Gas Control, 2016, 50, 23-36.	4.6	20
76	Influence of bow design on ice breaking resistance. Ocean Engineering, 2016, 119, 217-232.	4.3	29
77	Comparison of Natural Gas Combined Cycle Power Plants with Post Combustion and Oxyfuel Technology at Different CO2 Capture Rates. Energy Procedia, 2016, 86, 2-11.	1.8	40
78	Emission Reduction Technology and Cost Efficiency for Ships Operating on the Northern Sea Route: A Case Study. , 2015, , .		0
79	Probabilistic Design Load Method for the Northern Sea Route. , 2015, , .		4
80	A Decision-based Design Approach for Ships Operating in Open Water and Ice. Journal of Ship Production and Design, 2015, 31, 209-219.	0.4	8
81	On the Scalability of Model-Scale Ice Experiments. Journal of Offshore Mechanics and Arctic Engineering, 2015, 137, .	1.2	3
82	Delay risk analysis of ship sailing the northern sea route. Ship Technology Research, 2015, 62, 26-35.	2.5	25
83	A Novel Data Processing Method for Ice Pressure Area Relations. , 2014, , .		0
84	Benchmarking and Comparing First and Second Generation Post Combustion CO2 Capture Technologies. Energy Procedia, 2014, 63, 27-44.	1.8	18
85	A Numerical Model to Initiate the Icebreaking Pattern in Level Ice. , 2014, , .		1
86	Simulation-Based Analysis of Arctic LNG Transport Capacity, Cost and System Integrity. , 2014, , .		1
87	Numerical Simulation of an Ice Beam in Four-Point Bending Using SPH. , 2014, , .		4
88	Ice Condition Database for the Arctic Sea. , 2014, , .		1
89	Shaft Response as a Propulsion Machinery Design Load. , 2014, , .		1
90	Challenges for Using LNG Fueled Ships for Arctic Routes. , 2014, , .		0

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91	Optimization-based material parameter identification for the numerical simulation of sea ice in four-point bending. Proceedings of the Institution of Mechanical Engineers Part M: Journal of Engineering for the Maritime Environment, 2014, 228, 70-80.	0.5	3
92	A framework for risk assessment for maritime transportation systemsâ€”A case study for open sea collisions involving RoPax vessels. Reliability Engineering and System Safety, 2014, 124, 142-157.	8.9	194
93	Scenario Based Risk Management for Arctic Shipping and Operations. , 2014, , .		4
94	Development of an Approach Towards Mission-Based Design of Arctic Maritime Transport Systems. , 2014, , .		4
95	Challenges With Oil Spill Risk Assessment in Arctic Regions: Shipping Along the Northern Sea Route. , 2014, , .		5
96	A Response Comparison of a Stiffened Panel Subjected to Rule-Based and Measured Ice Loads. , 2014, , .		6
97	Transportation Risk Analysis Framework for Arctic Waters. , 2014, , .		11
98	On the Scalability of Model-Scale Ice Experiments. , 2014, , .		2
99	Theoretical Investigation on Ice Resistance Prediction Methods for Ships in Level Ice. , 2014, , .		1
100	Energetic Evaluation of Different Flow Sheet Modifications of Post-Combustion CO2 Capture Plant at Coal and Natural Gas Fired Power Plant for a Generic Improved Solvent. Energy Procedia, 2014, 63, 1029-1039.	1.8	4
101	A Case Study of the Influence on Crashworthiness From the Implementation of Ice Strengthening. , 2014, , .		0
102	Impact scenario models for probabilistic risk-based design for shipâ€”ship collision. Marine Structures, 2013, 33, 238-264.	3.8	47
103	Model-scale ice â€” Part A: Experiments. Cold Regions Science and Technology, 2013, 94, 74-81.	3.5	20
104	Risk of collision between service vessels and offshore wind turbines. Reliability Engineering and System Safety, 2013, 109, 18-31.	8.9	82
105	Model scale ice â€” Part B: Numerical model. Cold Regions Science and Technology, 2013, 94, 53-60.	3.5	21
106	Collision consequence estimation model for chemical tankers. Proceedings of the Institution of Mechanical Engineers Part M: Journal of Engineering for the Maritime Environment, 2013, 227, 98-106.	0.5	3
107	Ship Performance Assessment for Arctic Transport Routes. , 2013, , .		1
108	Decision Support Framework for Exploiting Northern Sea Route Transport Opportunities. Ship Technology Research, 2012, 59, 34-42.	2.5	45

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109	Preface for the Collision and Grounding Special Issue. Ships and Offshore Structures, 2012, 7, 3-3.	1.9	0
110	Iceberg Shape Sensitivity in Ship Impact Assessment in View of Existing Material Models. , 2012, , .		1
111	Increased crashworthiness due to arctic conditions – The influence of sub-zero temperature. Marine Structures, 2012, 28, 86-100.	3.8	35
112	A combined numerical and semi-analytical collision damage assessment procedure. Marine Structures, 2012, 28, 101-119.	3.8	19
113	Modelling risk of a collision between a LNG tanker and a harbour tug. Marine Systems and Ocean Technology, 2012, 7, 3-13.	1.0	4
114	Collision Consequence Assessment of ROPAX Vessels Operating in the Baltic Sea. , 2012, , .		1
115	A Particle Swarm Algorithm-Based Optimization for High-Strength Steel Structures. Journal of Ship Production and Design, 2012, 28, 1-9.	0.4	2
116	A Particle Swarm Algorithm-Based Optimization for High-Strength Steel Structures. Journal of Ship Production and Design, 2012, 28, .	0.4	9
117	Ice Model Tests in Context of the Investment Value of an Offshore Vessel. , 2012, , .		2
118	Heave and pitch motions of a ship in model ice: An experimental study on ship resistance and ice breaking pattern. Cold Regions Science and Technology, 2011, 68, 49-59.	3.5	12
119	A review of collision and grounding damage assessment methods. Marine Systems and Ocean Technology, 2011, 6, 5-15.	1.0	8
120	A procedure to Assess the Damage of a Grounded Ship: A Full-Scale Validation Case Study. Ship Technology Research, 2011, 58, 90-99.	2.5	4
121	An Assessment Procedure of the Crashworthiness of an LNG Tanker Side Structure. Ship Technology Research, 2010, 57, 108-119.	2.5	3
122	The influence of the material relation on the accuracy of collision simulations. Marine Structures, 2010, 23, 462-474.	3.8	60
123	Strain and stress relation until fracture for finite element simulations of a thin circular plate. Thin-Walled Structures, 2010, 48, 1-8.	5.3	63
124	A Multi-Objective Optimisation-Based Structural Design Procedure for the Concept Stage – A Chemical Product Tanker Case Study. Ship Technology Research, 2010, 57, 182-196.	2.5	4
125	Strain and stress relation for non-linear finite element simulations. Thin-Walled Structures, 2009, 47, 1203-1217.	5.3	55
126	Optimization of crashworthy marine structures. Marine Structures, 2009, 22, 670-690.	3.8	33

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127	Analysis of the scatter in fatigue life testing of thick thermal cut plate edges. Ships and Offshore Structures, 0, , 1-14.	1.9	2