

Analytical approach to investigate the effect of gas channel draft angle on the performance of PEMFC and species distribution

Ahmadi, Nima; Kõrgesaar, Mihkel International journal of heat and mass transfer 2020 / art. 119529

<https://doi.org/10.1016/j.ijheatmasstransfer.2020.119529> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Application of equivalent single layer approach for ultimate strength analyses of ship hull girder

Putranto, Teguh; Kõrgesaar, Mihkel; Tabri, Kristjan Journal of marine science and engineering 2022 / art. 1530

<https://doi.org/10.3390/jmse10101530> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Approach to account for external dynamics in fluid-structure interaction analysis in Abaqus

Sahk, Tarmo; Kõrgesaar, Mihkel; Yu, Zhaolong Innovations in the Analysis and Design of Marine Structures 2025 / p. 289-294

<https://doi.org/10.1201/9781003642411-35>

Collision consequence assessment of ROPAX vessels operating in the Baltic Sea

Tabri, Kristjan; Ehlers, Sören; Kõrgesaar, Mihkel; Stahlberg, Kaarle; Heinvee, Martin Proceedings of the ASME 2012 31st

International Conference on Ocean, Offshore and Arctic Engineering : OMAE2012 : July 1-6, 2012, Rio de Janeiro, Brazil 2012 /

OMAE2012-83626, [9] p.: ill <https://asmedigitalcollection.asme.org/OMAE/proceedings/OMAE2012/44892/375/268786>

Combined strain rate, mesh size and calibration test influence on structural failure : Miniature ship grounding test

Calle, Miguel A. G.; Oshiro, Roberto E.; Kõrgesaar, Mihkel Ocean engineering 2019 / p. 215-226 : ill

<https://doi.org/10.1016/j.oceaneng.2019.01.002> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Comparing rock shape models in grounding damage modelling

Sormunen, Otto-Ville Edvard; Kõrgesaar, Mihkel; Tabri, Kristjan; Heinvee, Martin; Urbel, Annika; Kujala, Pentti Marine structures

2016 / p. 205-223 : ill <https://doi.org/10.1016/j.marstruc.2016.07.004> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#)

[Article at WOS](#)

A comprehensive approach to scenario-based risk management for Arctic waters

Bergström, Martin; Browne, Thomas; Ehlers, Sören; Helle, Inari; Hermring, Hauke; Khan, Faisal; Kubiczek, Jan; Kujala, Pentti;

Kõrgesaar, Mihkel; Leira, Bernt Johan; Parviainen, Tuuli; Polojärvi, Arttu; Suominen, Mikko; Taylor, Rocky; Tuhkuri, Jukka;

Vanhatalo, Jarno; Veitch, Brian Ship Technology Research 2022 / p. 129-157 <https://doi.org/10.1080/09377255.2022.2049967> [Journal](#)

[metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of weld modelling on crashworthiness optimization

Kõrgesaar, Mihkel; Romanoff, Jani; St-Pierre, L.; Varsta, Petri Trends in the analysis and design of marine structures : proceedings

of the 7th International Conference on Marine Structures (MARSTRUCT 2019, Dubrovnik, Croatia, 6-8 May 2019) 2019 / p. 231-237 :

ill <https://doi.org/10.1201/9780429298875>

Emerging challenges for numerical simulations of quasi-static collision experiments on laser-welded thin-walled steel structures

Romanoff, Jani; Kõrgesaar, Mihkel; Remes, Heikki Journal of marine science and application 2020 / p. 567-583 : ill

<https://doi.org/10.1007/s11804-020-00174-y> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Equivalent single layer approach for ultimate strength assessment of ship structures = Ekvivalentne koorikelement laeva konstruktsioonide piirtugevuse hindamiseks

Putranto, Teguh 2023 <https://doi.org/10.23658/taltech.5/2023> <https://digikogu.taltech.ee/et/Item/69201156-a60b-46da-a589-5c106c424eec>

Estonia vrakilt avastatud vigastus tekkis merepõhjas [Võrguväljaanne]

Kõrgesaar, Mihkel err.ee 2020 / fot [Estonia vrakilt avastatud vigastus tekkis merepõhjas](#)

Evaluation of the limit ice thickness for the hull of various Finnish-Swedish ice class vessels navigating in the Russian Arctic

Kujala, Pentti; Kõrgesaar, Mihkel; Kämäräinen, Jorma International journal of naval architecture and ocean engineering 2018 / p.

376-384 : ill <https://doi.org/10.1016/j.ijnaoe.2018.02.004>

Experimental and numerical assessment of fracture initiation in laser-welded webcore sandwich panels

Kõrgesaar, Mihkel; Romanoff, Jani; Palokangas, Pekka Proceedings of the Eighth International Conference on Thin-Walled

Structures, Lisbon, 24-27 July 2018 2018 / [17 p.]

Experimental and numerical penetration response of laser-welded stiffened panels

Kõrgesaar, Mihkel; Romanoff, Jani; Remes, Heikki; Palokangas, Pekka International journal of impact engineering 2018 / p. 78-92 :

ill <https://doi.org/10.1016/j.ijimpeng.2017.12.014>

Experimental investigations on stiffened and Web-core sandwich panels made for steel under quasi-static penetration

Romanoff, Jani; Kõrgesaar, Mihkel; Lehto, Pauli; Berntsson, Kennie; Remes, Heikki Procedia Structural Integrity, Vol. 37, C 2021 /

Experimental testing of spray rails for the resistance reduction of planing crafts

Lakatoš, Mikloš; Sahk, Tarmo; Kaarma, R.; **Tabri, Kristjan; Kõrgesaar, Mihkel**; Andreasson, Henrik Trends in the analysis and design of marine structures : proceedings of the 7th International Conference on Marine Structures (MARSTRUCT 2019, Dubrovnik, Croatia, 6-8 May 2019) 2019 / p. 334–343 : ill <https://www.scc.ee/ee/?mdocs-file=2121> <https://doi.org/10.1201/9780429298875>

Finite element based meta-modeling of ship-ice interaction at shoulder and midship areas for ship performance simulation

Li, Fang; **Kõrgesaar, Mihkel**; Kujala, Pentti; Goerlandt, Floris Marine structures 2020 / art. 102736

<https://doi.org/10.1016/j.marstruc.2020.102736> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Fracture estimation based on deformation history with recurrent neural networks

Yatkin, Muhammed Adil; Kõrgesaar, Mihkel 2023 International Conference on Machine Learning and Applications (ICMLA) : proceedings 2023 / p. 1025-1030 <https://doi.org/10.1109/ICMLA58977.2023.00152>

Ice-induced loads on offshore wind turbines in the Baltic Sea

Tabri, Kristjan; Tõns, Tõnis; Suominen, Mikko; **Kõrgesaar, Mihkel** Proceedings of the ASME 2022 41st International Conference on Ocean, Offshore and Arctic Engineering. Volume 6: Polar and Arctic Sciences and Technology 2022 / art. OMAE2022-79035, V006T07A022; 9 pages <https://doi.org/10.1115/OMAE2022-79035>

Influence of longitudinal and transverse bulkheads on ship grounding resistance and damage size

Heinvee, Martin; Tabri, Kristjan; Kõrgesaar, Mihkel; **Urbel, Annika** The 7th International Conference on Collision and Grounding of Ships and Offshore Structures : ICCGS 2016 : 15th-18th June, 2016, University of Ulsan, Ulsan, Korea 2016 / p. 99-109 : ill

ISSC 2025 Committee III.1 - Compressive test of a transversely stiffened thin-plated structure with expected early nonlinear response prior to the ultimate capacity: preliminary comparison of the numerical results

Gaiotti, M.; Barsotti, B.; Brubak, L.; Chen, B. Q.; Darie, I.; Georgiadis, D.; Ishibashi, K.; **Kõrgesaar, Mihkel**; Lv, Y.; Nahshon, K.; Paredes, M.; Ringsberg, J. Proceedings of the International Conference on Offshore Mechanics and Arctic Engineering - OMAE 2024 ; Vol. 2: Structures, Safety, and Reliability 2024 / art. OMAE2024-126382, V002T02A087 ; 8 p. <https://doi.org/10.1115/OMAE2024-126382> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Kui oskad ehitada laevu, siis oskad ehitada kõike

Metsmaa, Monika saartehaal.postimees.ee 2024 [Kui oskad ehitada laevu, siis oskad ehitada kõike](#)

Level ice-structure interaction simulations using solid and shell elements

Kõrgesaar, Mihkel; Tabri, Kristjan; Avi, Eero Proceedings of the International Conference on Offshore Mechanics and Arctic Engineering - OMAE 2024 ; Vol. 6 2024 / art. v006t07a008 <https://doi.org/10.1115/OMAE2024-128141> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Limit state analyses in design of thin-walled marine structures - some aspects on length-scales

Romanoff, Jani; Remes, Heikki; Varsta, Petri; **Kõrgesaar, Mihkel** ASME 2018 37th International Conference on Ocean, Offshore and Arctic Engineering June 17–22, 2018, Madrid, Spain 2018 / Paper No. OMAE2018-78304, p. V11BT12A047, 8 p. <http://doi.org/10.1115/OMAE2018-78304>

Limit state analyses in design of thin-walled marine structures—some aspects on length-scales

Romanoff, Jani; Remes, Heikki; Varsta, Petri; Goncalves, Bruno Reinaldo; **Kõrgesaar, Mihkel**; Lillemäe-Avi, Ingrid; Jelovica, Jasmin; Liinalampi, Sami Journal of offshore mechanics and arctic engineering 2020 / 8 p <https://doi.org/10.1115/1.4045371>

Machine learning enabled identification of sheet metal localization

Yatkin, Muhammed Adil; Kõrgesaar, Mihkel International journal of solids and structures 2024 / art. 112592 <https://doi.org/10.1016/j.ijsolstr.2023.112592> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

MARSTRUCT benchmark study on nonlinear FE simulation of an experiment of an indenter impact with a ship side-shell structure

Ringsberg, Jonas W.; Amdahl, Jörgen; Chen, Bai Qiao; Cho, Sang-Rai; **Kõrgesaar, Mihkel; Tabri, Kristjan** Marine structures 2018 / p. 142-157 <https://doi.org/10.1016/j.marstruc.2018.01.010> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Meretaguses kõrgkoolis Kuressaares

Afanasjev, Mihhail; Kõrgesaar, Mihkel; Sääsk, Helen; Sahk, Tarmo Meremees. Veeteede Ameti teataja 2020 / lk. 4-7, 12 : fot https://www.taltech.ee/public/m/meretakadeemia/ajakiri-meremees/Meremees_2020_1-4._VA_Teataja_2020_1-4.pdf https://www.ester.ee/record=b4646644*est

Numerical investigation on the buckling response of stiffened panel subjected to biaxial compression with non-linear equivalent single layer approach

Putranto, Teguh; Kõrgesaar, Mihkel 31st International Ocean and Polar Engineering Conference, ISOPE 2021 Virtual, Online 20 June 2021 through 25 June 2021 : proceedings of the International Offshore and Polar Engineering Conference 2021 / p. 2893–2900 https://publications.iso.org/proceedings/ISOPE/ISOPE%202021/data/pdfs_Vol4/4206-21TPC-0462.pdf [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Numerical simulations of grounding scenarios – benchmark study on key parameters in FEM modelling

Brubak, Lars; Hu, Zhiqiang; **Kõrgesaar, Mihkel**; Schipperen, Ingrid; **Tabri, Kristjan** Practical Design of Ships and Other Floating Structures : Proceedings of the 14th International Symposium, PRADS 2019, September 22-26, 2019, Yokohama, Japan, Vol. II 2020 / p. 257-269 https://doi.org/10.1007/978-981-15-4672-3_16 [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Numerical study on the structural behavior of intact and damaged box beams under four-point bending load

Putranto, Teguh; Kõrgesaar, Mihkel Developments in the Collision and Grounding of Ships and Offshore Structures : Proceedings of the 8th International Conference on Collision and Grounding of Ships and Offshore Structures (ICCGS 2019), 21-23 October, 2019, Lisbon, Portugal 2019 / p. 139–143 <https://www.taylorfrancis.com/books/e/9781003002420/chapters/10.1201/9781003002420-17>

On the influence of modelling a weld effect when optimizing thin-walled structures for crashworthiness

Berntsson, K.; **Kõrgesaar, Mihkel**; Goncalves, B.; Romanoff, Jani The 29th International Ocean and Polar Engineering Conference : 16-21 June 2019, Honolulu, Hawaii, USA 2019 / ISOPE-I-19-316, 8 p [On the influence of modelling...](#) [Conference proceedings at Scopus](#) [Article at Scopus](#)

Performance prediction of a Hard-Chine Planing Hull by employing different CFD models

Hosseini, Azim; Tavakoli, Sasan; **Dashtimanesh, Abbas**; Sahoo, Prasanta K.; **Kõrgesaar, Mihkel** Journal of marine science and engineering 2021 / art. 481, 26 p. : ill <https://doi.org/10.3390/jmse9050481> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Probabilistic analysis of operational ice damage for Polar class vessels using full-scale data

Suominen, Mikko; **Kõrgesaar, Mihkel**; Taylor, Rocky; Bergstrom, Martin Structural safety 2024 / art. 102423 <https://doi.org/10.1016/j.strusafe.2023.102423> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A Quasi-dynamic approach for the evaluation of structural response in ship collisions and groundings

Kim, Sang-Jin; **Kõrgesaar, Mihkel**; Taimuri, Ghalib; Kujala, Pentti; Hirdaris, Spyros Proceedings of the Thirtieth (2020) International Ocean and Polar Engineering Conference Shanghai, China, October 11-16, 2020 2020 / p. 3174–3180 ["Quasi-dynamic approach" Conference proceeding at Scopus](#) [Article at Scopus](#)

Saarlased soomlaste, eestlaste ja kasahhide järel neljandad

Mesila, Evelin saartehaal.postimees.ee 2024 [Saarlased soomlaste, eestlaste ja kasahhide järel neljandad](#)

Scenario-Based Risk Management for Arctic Waters

Bergström, Martin; Browne, Thomas; Ehlers, Sören; Helle, Inari; Hermring, Hauke; Khan, Faisal; Kubiczek, Jan; Kujala, Pentti; **Kõrgesaar, Mihkel**; Leira, Bernt Johan; Parviainen, Tuuli; Polojärvi, Arttu; Suominen, Mikko; Taylor, Rocky; Tuhkuri, Jukka; Vanhatalo, Jarno; Veitch, Brian Proceedings of the ASME 2022 41st International Conference on Ocean, Offshore and Arctic Engineering. Volume 6: Polar and Arctic Sciences and Technology 2022 / p. V006T07A004-01-V006T07A004-13 <https://doi.org/10.1115/OMAE2022-80767> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Ship collision simulations using different fracture criteria and mesh size

Kõrgesaar, Mihkel; Tabri, Kristjan; Naar, Hendrik; Reinhold, Edvin Proceedings of the ASME 2014 33rd International Conference on Ocean, Offshore and Arctic Engineering : OMAE2014 : June 8-13, 2014, San Francisco, California, USA 2014 / p. 1-9 : ill <https://doi.org/10.1115/OMAE2014-23576> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

A simplified approach to predict the bottom damage in tanker grounding

Heinvee, Martin; Tabri, Kristjan; **Kõrgesaar, Mihkel** Collision and grounding of ships and offshore structures : proceedings of the 6th International Conference, ICCGS, Trondheim, Norway, 17-19 June 2013 2013 / p. 161-169 : ill

Spray rail performance in off-design conditions

Lakatoš, Mikloš; Sahk, Tarmo; Andreasson, Henrik; Tabri, Kristjan; Kõrgesaar, Mihkel Ship & Boat International 2018 / p. 68-72 : ill https://www.scc.ee/wp-content/uploads/2018/11/Spray-rail-performance-SBI_Sep-Oct18_68-72.pdf

Teeme Eestist merenduse keskuse!

Kopti, Madli; Kõrgesaar, Mihkel; Heering, Dan Äripäev 2020 / lk. 12 https://www.ester.ee/record=b2122331*est [Teeme Eestist merenduse keskuse!](#)

The effect of low stress triaxialities and deformation paths on ductile fracture simulations of large shell structures

Kõrgesaar, Mihkel Marine structures 2019 / p. 45-64 : ill <https://doi.org/10.1016/j.marstruc.2018.08.004> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The influence of fluid structure interaction modelling on the dynamic response of ships subject to collision and

grounding

Kim, Sang Jin; **Körgesaar, Mihkel**; Ahmadi, Nima; Taimuri, Ghalib; Kujala, Pentti; Hirdaris, Spyros Marine structures 2021 / art. 102875, 17 p. : ill <https://doi.org/10.1016/j.marstruc.2020.102875> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Treatment of bending deformations in maritime crash analyses

Körgesaar, Mihkel; Storheim, Martin ASME 2020 : 39th International Conference on Ocean, Offshore and Arctic Engineering, August 3-7, 2020 : Virtual, Online : proceedings papers 2020 / Paper No: OMAE2020-19272, V02AT02A017 ; 9 pages
<https://doi.org/10.1115/OMAE2020-19272> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Ultimate strength assessment of stiffened panel under uni-axial compression with non-linear equivalent single layer approach

Putranto, Teguh; **Körgesaar, Mihkel**; Jelovica, Jasmin; **Tabri, Kristjan**; **Naar, Hendrik** Marine structures 2021 / art. 103004, 17 p. : ill <https://doi.org/10.1016/j.marstruc.2021.103004> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Ultimate strength assessment of stiffened panels using Equivalent Single Layer approach under combined in-plane compression and shear

Putranto, Teguh; **Körgesaar, Mihkel**; Jelovica, Jasmin Thin-Walled Structures 2022 / art. 109943
<https://doi.org/10.1016/j.tws.2022.109943> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Ultimate strength of ship hull girder with grounding damage

Tabri, Kristjan; **Naar, Hendrik**; **Körgesaar, Mihkel** Ships and offshore structures 2020 / p. S161-S175
<https://doi.org/10.1080/17445302.2020.1827631> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)