

**Alongshore sediment transport analysis for a semi-enclosed basin: a case study of the Gulf of Riga, the Baltic Sea**  
**Soomere, Tarmo; Jankowski, Mikolaj Zbigniew; Eelsalu, Maris; Parnell, Kevin Ellis; Viška, Maija** Ocean Science 2025 / p. 619-641 <https://doi.org/10.5194/os-21-619-2025>

**Alongshore sediment transport in the Eastern Baltic Sea**  
**Jankowski, Mikolaj Zbigniew; Soomere, Tarmo; Parnell, Kevin Ellis; Eelsalu, Maris** Journal of coastal research 2024 / p. 261-265 <https://doi.org/10.2112/JCR-SI113-052.1>

**Attribution of alterations in coastal processes in the southern and eastern Baltic Sea to climate change-driven modifications of coastal drivers**  
**Eelsalu, Maris; Soomere, Tarmo; Parnell, Kevin Ellis; Viška, Maija** Oceanologia 2025 / art. 67103 <https://doi.org/10.5697/LXTZ5389>

**Attribution of coastline changes in the southern and eastern Baltic Sea to climate change driven modifications of main coastal drivers**  
**Eelsalu, Maris; Soomere, Tarmo; Parnell, Kevin Ellis; Viška, Maija** 4th Baltic Earth Conference Assessing the Baltic Sea Earth System : Jastarnia, Hel Peninsula, Poland, 30 May to 3 June 2022 : Conference Proceedings 2022 / p. 96-97  
[https://baltic.earth/imperia/md/assets/baltic\\_earth/baltic\\_earth/baltic\\_earth/4bec\\_proceedings\\_web.pdf](https://baltic.earth/imperia/md/assets/baltic_earth/baltic_earth/baltic_earth/4bec_proceedings_web.pdf)

**Climate change driven alongshore variations of directional forcing of sediment transport on the eastern Baltic Sea coast**  
**Eelsalu, Maris; Soomere, Tarmo; Jankowski, Mikolaj Zbigniew** Journal of coastal research 2024 / p. 256-260  
<https://doi.org/10.2112/JCR-SI113-051.1>

**Coastal vulnerability of the eastern Baltic Sea with respect to extreme minima of sea level**  
**Viigand, Katri; Eelsalu, Maris; Soomere, Tarmo** New challenges for Baltic Sea Earth System research : conference proceedings 2024 / p. 78-79 [https://baltic.earth/imperia/md/assets/baltic\\_earth/baltic\\_earth/baltic\\_earth/5bec\\_proceedings.pdf](https://baltic.earth/imperia/md/assets/baltic_earth/baltic_earth/baltic_earth/5bec_proceedings.pdf)

**Combined laser scanning to monitor coastal processes**  
**Eelsalu, Maris; Julge, Kalev; Grünthal, Erko; Märdla, Silja; Ellmann, Artur; Soomere, Tarmo; Tõnisson, Hannes** MEME'2014 : Mathematics and Engineering in Marine and Earth Problems : 22-25 July 2014, Aveiro, Portugal : book of abstracts 2014 / p. 106-108 : ill

**Combining airborne and terrestrial laser scanning to monitor coastal processes**  
**Julge, Kalev; Eelsalu, Maris; Grünthal, Erko; Märdla, Silja; Ellmann, Artur; Soomere, Tarmo; Tõnisson, Hannes** 2014 IEEE/OES Baltic International Symposium : 26-29 May 2014, Tallinn, Estonia : [proceedings] 2014 / [10] p. : ill

**Combining airborne and terrestrial laser scanning to monitor coastal processes**  
**Julge, Kalev; Eelsalu, Maris; Grünthal, Erko; Märdla, Silja; Ellmann, Artur; Tõnisson, Hannes** Measuring and Modeling of Multi-Scale Interactions in the Marine Environment : IEEE/OES Baltic Symposium 2014, May 26.-29.2014, Tallinn, Estonia : book of abstracts 2014 / p. 49

**Comparison of the wave power for the open and sheltered segments of the Baltic Sea coast**  
**Kovaleva, Olga; Soomere, Tarmo; Eelsalu, Maris** 10th Baltic Sea Science Congress : Science and innovation for future of the Baltic and the European regional seas : 15-19 June, 2015, Riga, Latvia : abstract book 2015 / p. 210 [http://www.bssc2015.lv/wp-content/uploads/2015/07/10th\\_BSSC\\_AbstractBook\\_final.pdf](http://www.bssc2015.lv/wp-content/uploads/2015/07/10th_BSSC_AbstractBook_final.pdf)

**Determination of closure depths for sheltered areas of the eastern part of the Baltic Sea**  
**Kovaleva, Olga; Soomere, Tarmo; Eelsalu, Maris; Ryabchuk, Daria** 10th Baltic Sea Science Congress : Science and innovation for future of the Baltic and the European regional seas : 15-19 June, 2015, Riga, Latvia : abstract book 2015 / p. 233  
[http://www.bssc2015.lv/wp-content/uploads/2015/07/10th\\_BSSC\\_AbstractBook\\_final.pdf](http://www.bssc2015.lv/wp-content/uploads/2015/07/10th_BSSC_AbstractBook_final.pdf)

**Doktoritöö heidab valgust Läänemere ja selle ranniku tangole [Võrguväljaanne]**  
**Oldermaa, Jaan-Juhan; Eelsalu, Maris** novaator.err.ee 2020 / fot [Doktoritöö heidab valgust Läänemere ja selle ranniku tangole](http://www.bssc2015.lv/wp-content/uploads/2015/07/10th_BSSC_AbstractBook_final.pdf)

**Ensemble approach for projections of return periods of extreme water levels in Estonian waters**  
**Eelsalu, Maris; Soomere, Tarmo; Pindsoo, Katri; Lagemaa, Priidik** Continental shelf research 2014 / p. 201-210 : ill  
<https://doi.org/10.1016/j.csr.2014.09.012> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Ensemble approach for the projections of extreme water levels reveals bias in water level observations**  
**Eelsalu, Maris; Soomere, Tarmo; Pindsoo, Katri; Lagemaa, Priidik** 10th Baltic Sea Science Congress : Science and innovation for future of the Baltic and the European regional seas : 15-19 June, 2015, Riga, Latvia : abstract book 2015 / p. 85  
[http://www.bssc2015.lv/wp-content/uploads/2015/07/10th\\_BSSC\\_AbstractBook\\_final.pdf](http://www.bssc2015.lv/wp-content/uploads/2015/07/10th_BSSC_AbstractBook_final.pdf)

**Evaluating coastal vulnerability by temporal and spatial variation of parameters of the GEV distribution along the Baltic Sea coast**  
**Viigand, Katri; Eelsalu, Maris; Soomere, Tarmo** Journal of coastal research 2024 / p. 996-1000 <https://doi.org/10.2112/JCR-SI113-195.1>

**Exponential distribution of wave-driven near-bed water speeds under short-crested waves: a case study in the eastern Gulf of Riga, the Baltic Sea**

**Eelsalu, Maris; Piho, Laura;** Aigars, Juris; Kelpšaitė-Rimkienė, Loreta; Kondrat, Vitalijus; **Kruusmaa, Maarja; Parnell, Kevin Ellis; Ristolainen, Asko;** Šakurova, Ilona; Skudra, Māris; Viška, Maija; **Soomere, Tarmo** Proceedings of the Estonian Academy of Sciences 2025 / p. 23-42 : map, ill <https://doi.org/10.3176/proc.2025.1.03>

**Field experiments with different fractions of painted sediments to study material transport in three coastal sites in Estonia**

Tõnisson, Hannes; **Eelsalu, Maris; Pindsoo, Katri** Journal of coastal research 2014 / p. 229-234 : ill <https://doi.org/10.2112/SI70-039.1>  
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Hot-spots of large wave energy resources in relatively sheltered sections of the Baltic Sea coast**

**Kovaleva, Olga; Eelsalu, Maris; Soomere, Tarmo** Renewable and sustainable energy reviews 2017 / p. 424-437 : ill <https://doi.org/10.1016/j.rser.2017.02.033> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**In search for management options of shores of the City of Tallinn, Estonia**

**Eelsalu, Maris; Männikus, Rain; Pindsoo, Katri; Soomere, Tarmo** 7th IEEE/OES Baltic Symposium Clean and Safe Baltic Sea and Energy Security for the Baltic countries : abstract book : 12–15 June 2018 Klaipėda, Lithuania 2018 / p. 27  
[http://balticvalley.lt/baltic2018/wp-content/uploads/2018/06/abstract-book\\_7th\\_Baltic-Symposium\\_20180528.pdf](http://balticvalley.lt/baltic2018/wp-content/uploads/2018/06/abstract-book_7th_Baltic-Symposium_20180528.pdf)

**Inherent non-stationarity in the GEV distribution for extreme sea levels : Implications for coastal vulnerability in the Baltic Sea**

**Viigand, Katri; Eelsalu, Maris; Soomere, Tarmo** Ocean engineering 2025 / art. 122681  
<https://doi.org/10.1016/j.oceaneng.2025.122681>

**Interannual coastal processes in Estonia, Peraküla beach monitored by laser scanning technology [Online resource]**

**Eelsalu, Maris; Pindsoo, Katri; Soomere, Tarmo; Julge, Kalev** 2nd Baltic Earth Conference The Baltic Sea in Transition : Helsingør, Denmark, 11 to 15 June 2018 : conference proceedings 2018 / p. 115-116 : ill [https://www.baltic-earth.eu/publications/IBESPublications/No\\_13\\_Helsingor\\_Proceedings/2ndBalticEarthConferenceProceedings\\_IBESP\\_No13\\_web.pdf](https://www.baltic-earth.eu/publications/IBESPublications/No_13_Helsingor_Proceedings/2ndBalticEarthConferenceProceedings_IBESP_No13_web.pdf)

**Laineenergia ja selle kasutamise varjukülgedest Läänemeres**

**Eelsalu, Maris; Soomere, Tarmo** Põlevad ja mitte põlevad energiaallikad = Combustible and non-combustible energy resources 2016 2016 / lk. 16-19 : ill [http://ise.elnet.ee/record=b2918095~S2\\*est](http://ise.elnet.ee/record=b2918095~S2*est)

**Laser scanning reveals detailed spatial structure of sandy beaches**

**Eelsalu, Maris; Julge, Kalev;** Grünthal, Erko; Ellmann, Artu; **Soomere, Tarmo** IUTAM Symposium on Complexity of Nonlinear Waves : book of abstracts 2014 / p. 45

**Linking changes in the directional distribution of moderate and strong winds with changes in wave properties in the eastern Baltic proper**

**Soomere, Tarmo; Eelsalu, Maris; Viigand, Katri; Giudici, Andrea** Journal of coastal research 2024 / p. 190-194  
<https://doi.org/10.2112/JCR-SI113-038.1>

**Major changes to directional forcing of sediment transport along the eastern Baltic Sea coast**

**Eelsalu, Maris; Soomere, Tarmo** New challenges for Baltic Sea Earth System research : conference proceedings 2024 / p. 57-58  
[https://baltic.earth/imperia/md/assets/baltic\\_earth/baltic\\_earth/baltic\\_earth/5bec\\_proceedings.pdf](https://baltic.earth/imperia/md/assets/baltic_earth/baltic_earth/baltic_earth/5bec_proceedings.pdf)

**Modelling suitable layout for a small island harbour: A case study of Ruhnu in the Gulf of Riga, eastern Baltic Sea**

**Männikus, Rain;** Wang, W. W.; **Eelsalu, Maris; Najafzadeh, Fatemeh;** Bihs, H.; **Soomere, Tarmo** Latvian journal of physics and technical sciences 2024 / p. 3-24 <https://doi.org/10.2478/lpts-2024-0040>

**Modification of closure depths by synchronisation of severe seas and high water levels**

**Soomere, Tarmo; Männikus, Rain; Pindsoo, Katri; Kudryavtseva, Nadezhda; Eelsalu, Maris** Geo-marine letters 2017 / p. 35-46 : ill <https://doi.org/10.1007/s00367-016-0471-5> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**On the proper choice of tools for the projections of extreme water levels in the Baltic Sea**

**Pindsoo, Katri; Eelsalu, Maris; Soomere, Tarmo** 7th IEEE/OES Baltic Symposium Clean and Safe Baltic Sea and Energy Security for the Baltic countries : abstract book : 12–15 June 2018 Klaipėda, Lithuania 2018 / p. 52 [http://balticvalley.lt/baltic2018/wp-content/uploads/2018/06/abstract-book\\_7th\\_Baltic-Symposium\\_20180528.pdf](http://balticvalley.lt/baltic2018/wp-content/uploads/2018/06/abstract-book_7th_Baltic-Symposium_20180528.pdf)

**On the wave energy potential along the eastern Baltic Sea coast**

**Soomere, Tarmo; Eelsalu, Maris** Renewable energy 2014 / p. 221-233 : ill <https://doi.org/10.1016/j.renene.2014.05.025> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Preventive management of undesired changes in alongshore sediment transport in the planning of a waterfront infrastructure**

**Käard, Arvo;** Valdmann, Ain; **Eelsalu, Maris; Pindsoo, Katri; Männikus, Rain; Soomere, Tarmo** The Sustainable City XI 2016 / p.

**Quantification of changes in the beach volume by applying an inverse Bruun's Rule and laser scanning technology in Pirita Beach, Tallinn Bay**

**Eelsalu, Maris; Soomere, Tarmo; Julge, Kalev** Climate modelling and impacts from the global to the regional to the urban scale : an international scientific seminar at HafenCity University Hamburg, 10 March 2015 : poster abstracts 2015 / p. 8

**Quantification of changes in the beach volume by the application of an inverse of the Bruun Rule and laser scanning technology**

**Eelsalu, Maris; Soomere, Tarmo; Julge, Kalev** Proceedings of the Estonian Academy of Sciences 2015 / p. 240-248 : ill [https://artiklid.elnet.ee/record=b2740531\\*est](https://artiklid.elnet.ee/record=b2740531*est) <https://doi.org/10.3176/proc.2015.3.06> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Quantification of longshore sediment transport and compartments in urban areas : a case study of shores of Tallinn, the Baltic Sea**

**Eelsalu, Maris; Viigand, Katri** Regional studies in marine science 2023 / art. 103199 <https://doi.org/10.1016/j.rsma.2023.103199> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Quantification of the changes in sediment volume in a small beach applying laser scanning technology**

**Eelsalu, Maris; Soomere, Tarmo; Julge, Kalev; Grünthal, Erko** 10th Baltic Sea Science Congress : Science and innovation for future of the Baltic and the European regional seas : 15-19 June, 2015, Riga, Latvia : abstract book 2015 / p. 197 [http://www.bssc2015.lv/wp-content/uploads/2015/07/10th\\_BSSC\\_AbstractBook\\_final.pdf](http://www.bssc2015.lv/wp-content/uploads/2015/07/10th_BSSC_AbstractBook_final.pdf)

**Quantification of the evolution of a small beach applying laser scanning technology**

**Eelsalu, Maris; Julge, Kalev; Soomere, Tarmo; Grünthal, Erko** Baltic Earth - Gulf of Finland Year 2014 Modelling Workshop : Modelling as a tool to ensure sustainable development of the Gulf of Finland-Baltic Sea ecosystem : Finnish Environment Institute SYKE, Helsinki, 24-25 November 2014 : Programme, abstracts, participants 2014 / p. 10

**Quantification of the impact of vessel wakes on a shinglegravel beach**

**Pindsoo, Katri; Soomere, Tarmo; Eelsalu, Maris; Tõnisson, Hannes** 10th Baltic Sea Science Congress : Science and innovation for future of the Baltic and the European regional seas : 15-19 June, 2015, Riga, Latvia : abstract book 2015 / p. 201 [http://www.bssc2015.lv/wp-content/uploads/2015/07/10th\\_BSSC\\_AbstractBook\\_final.pdf](http://www.bssc2015.lv/wp-content/uploads/2015/07/10th_BSSC_AbstractBook_final.pdf)

**Quantification of the reaction of Estonian beaches to changing wave loads = Eesti rannikute reaktsioon muutuvatele lainekoormustele**

**Eelsalu, Maris** 2020 [https://www.ester.ee/record=b5368081\\*est](https://www.ester.ee/record=b5368081*est) <https://digikogu.taltech.ee/et/Item/f73e001a-2f7c-4832-a4b0-ea10a4894ab6>

**Quantifying exposedness of the eastern Baltic Sea shores with respect to extremely high and low water levels**

**Viigand, Katri; Eelsalu, Maris; Soomere, Tarmo** Estuarine, coastal and shelf science 2025 / art. 109267 <https://doi.org/10.1016/j.ecss.2025.109267>

**Rannaprotsesside anatoomia laserskaneerimise skalpelliga**

**Eelsalu, Maris; Ellmann, Artur; Julge, Kalev; Märdla, Silja; Soomere, Tarmo** Kaugseire Eestis 2014 : artiklikogumik 2014 / lk. 47-58 : ill., kaart

**Return periods of extreme water levels along Lithuanian sea coast based on a simple ensemble of projections**

**Mingėlaite, Toma; Eelsalu, Maris; Pindsoo, Katri; Soomere, Tarmo; Dailidienė, Inga** 10th Baltic Sea Science Congress : Science and innovation for future of the Baltic and the European regional seas : 15-19 June, 2015, Riga, Latvia : abstract book 2015 / p. 238 [http://www.bssc2015.lv/wp-content/uploads/2015/07/10th\\_BSSC\\_AbstractBook\\_final.pdf](http://www.bssc2015.lv/wp-content/uploads/2015/07/10th_BSSC_AbstractBook_final.pdf)

**Sandy beach evolution in the low-energy microtidal Baltic Sea : attribution of changes to hydrometeorological forcing**

**Eelsalu, Maris; Parnell, Kevin Ellis; Soomere, Tarmo** Geomorphology 2022 / art. 108383 <https://doi.org/10.1016/j.geomorph.2022.108383> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Separation of the Baltic Sea water level into daily and multi-weekly components**

**Soomere, Tarmo; Eelsalu, Maris; Kurkin, Andrey; Rybin, Artem** Continental shelf research 2015 / p. 23-32 : ill., map <https://doi.org/10.1016/j.csr.2015.04.018> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Separation of the Baltic Sea water level into short-term and multi-weekly components**

**Soomere, Tarmo; Eelsalu, Maris** 10th Baltic Sea Science Congress : Science and innovation for future of the Baltic and the European regional seas : 15-19 June, 2015, Riga, Latvia : abstract book 2015 / p. 84 [http://www.bssc2015.lv/wp-content/uploads/2015/07/10th\\_BSSC\\_AbstractBook\\_final.pdf](http://www.bssc2015.lv/wp-content/uploads/2015/07/10th_BSSC_AbstractBook_final.pdf)

**Spatial and temporal variability of wave energy resource in the eastern Pacific from Panama to the Drake passage**

**Eelsalu, Maris; Montoya, Ruben D.; Aramburo, Darwin; Osorio, Andres F.; Soomere, Tarmo** Renewable energy 2024 / art. 120180 <https://doi.org/10.1016/j.renene.2024.120180> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Spatial variation of statistical properties of extreme water levels along the eastern Baltic Sea coast**

**Pindsoo, Katri; Eelsalu, Maris; Soomere, Tarmo** 1st Baltic Earth Conference Multiple Drivers for Earth System Changes in the Baltic Sea Region : Nida, Curonian Spit, Lithuania, 13-17 June 2016 : conference proceedings 2016 / p. 126-127 : ill [http://www.baltic-earth.eu/events/nida2016/material/BalticEarth\\_Nida2016\\_Proceedings.pdf](http://www.baltic-earth.eu/events/nida2016/material/BalticEarth_Nida2016_Proceedings.pdf)

**Spatial variations of wave loads and closure depths along the coast of the eastern Baltic Sea**

**Soomere, Tarmo; Viška, Maija; Eelsalu, Maris** Estonian journal of engineering 2013 / p. 93-109 : ill  
[https://artiklid.elnet.ee/record=b2621589\\*est](https://artiklid.elnet.ee/record=b2621589*est) <https://doi.org/10.3176/eng.2013.2.01> [Article at Scopus](#)

**Systematic analysis of alongshore sediment transport patterns in varying sea level conditions for evaluating stability of the coastal areas in the microtidal Baltic Sea**

**Eelsalu, Maris; Viigand, Katri; Soomere, Tarmo; Parnell, Kevin Ellis** Journal of coastal research 2024 / p. 53-57  
<https://doi.org/10.2112/JCR-SI113-011.1>

**Variability of distributions of wave set-up heights along a shoreline with complicated geometry**

**Soomere, Tarmo; Pindsoo, Katri; Kudryavtseva, Nadezhda; Eelsalu, Maris** Ocean science 2020 / p. 1047-1065  
<https://doi.org/10.5194/os-16-1047-2020> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Variations in parameters of extreme value distributions of water level along the eastern Baltic Sea coast**

**Soomere, Tarmo; Eelsalu, Maris; Pindsoo, Katri** Estuarine, coastal and shelf science 2018 / p. 59-68 : ill  
<https://doi.org/10.1016/j.ecss.2018.10.010> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Water level extremes signal changes in the wind direction in the northeastern Baltic Sea**

**Soomere, Tarmo; Eelsalu, Maris; Pindsoo, Katri** 1st Baltic Earth Conference Multiple Drivers for Earth System Changes in the Baltic Sea Region : Nida, Curonian Spit, Lithuania, 13-17 June 2016 : conference proceedings 2016 / p. 132-133 [http://www.baltic-earth.eu/events/nida2016/material/BalticEarth\\_Nida2016\\_Proceedings.pdf](http://www.baltic-earth.eu/events/nida2016/material/BalticEarth_Nida2016_Proceedings.pdf)

**Veetasemete ekstreemumid ja korduvusperioodid Eesti rannikul**

**Soomere, Tarmo; Pindsoo, Katri; Eelsalu, Maris** 2016 [http://www.ester.ee/record=b4558801\\*est](http://www.ester.ee/record=b4558801*est)