

Rasa Janušaitė

CONTACT INFORMATION

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EDUCATION AND ACADEMIC DEGREE

2018–2022 Natural Sciences, Physical Geography (N 006) / Doctor of Philosophy. (Nature Research Centre, Vilnius University, Klaipėda University).
PhD thesis: “Investigation of Nearshore Sandbar Dynamics Using Remote Sensing Methods (on the Example of the Baltic Sea’s Nearshore in the Curonian Spit)”; Supervisor – dr. D. Jarmalavičius; Consultant – dr. L. Jukna.
Research area: Coastal geomorphology; Nearshore morphodynamics; Application of optical remote sensing methods in nearshore sandbar studies; GIS-based algorithm development; Feedback mechanisms between the beach and nearshore morphology.

2016–2018 Vilnius University, Institute of Geosciences, Geography and Land Management / Master of Science.
Master thesis: “The Influence of Nearshore Sandbar Dynamics on Beach Recreational Zones in the Curonian Spit”.
Research area: coastal geomorphology; nearshore morphodynamics; Geomorphometry; Nearshore sandbar morphological classification; Changes in nearshore sandbar morphology.

2012–2016 Vilnius University, Faculty of Natural Sciences, Physical and Human Geography / Bachelor of Science.
Bachelor thesis: “The Structural Changes in the Landscape Components of the Šešuvis River Catchment from 1950 to 2015”.
Research area: Landscape transformations during the Soviet era and post-independence; Changes in natural and anthropogenic landscape elements based on historical-cartographic material and public spatial datasets.

PROFESSIONAL EXPERIENCE

2023 01–present **Researcher**
(Laboratory of Geoenvironmental Research, Nature Research Centre)

2018 10–2022 12 **PhD Student**
(Laboratory of Geoenvironmental Research, Nature Research Centre)

RESEARCH INTERESTS

Research area: Study of the morphology and dynamics of the nearshore, beach, and foredune, using optical and acoustic remote sensing, as well as field topographic surveys; Algorithm development based on geographic information systems (GIS) for the studies of the coastal dynamics; Use of satellite imagery for nearshore sandbar studies; Modification of traditional coastal research methods for satellite-derived data; Nearshore sandbar morphodynamics; Interaction between nearshore and

beach-foredune system morphology; Coastal zone management; The influence of port anthropogenisation on morphological changes within the coastal zone; Geomorphometry; Echo-sounding surveys; Mapping of coastal and nearshore processes; Baltic Sea.

PUBLICATIONS

Scientific articles published in journals (books), indexed in „Clarivate Analytics Web of Science“ database (with citation index):

1. **Janušaitė R.**, Jarmalavičius D., Pupienis D., Žilinskas G., Jukna L. 2023. Nearshore sandbar switching episodes and their relationship with coastal erosion at the Curonian Spit, Baltic Sea. *Oceanologia*, 65, 75–89. <https://doi.org/10.1016/j.oceano.2021.11.004>
2. **Janušaitė R.**, Jarmalavičius D., Jukna L., Žilinskas G., Pupienis D. 2022. Analysis of Interannual and Seasonal Nearshore Bar Behaviour Observed from Decadal Optical Satellite Data in the Curonian Spit, Baltic Sea. *Remote Sensing*, 14(14): 3423. <https://doi.org/10.3390/rs14143423>
3. **Janušaitė R.**, Jukna L., Jarmalavičius D., Pupienis D., Žilinskas G. 2021. A Novel GIS-Based Approach for Automated Detection of Nearshore Sandbar Morphological Characteristics in Optical Satellite Imagery. *Remote Sensing*, 13(11), 2233. <https://doi.org/10.3390/rs13112233>
4. Žilinskas G., **Janušaitė R.**, Jarmalavičius D., Pupienis D. 2020. The impact of Klaipėda Port entrance channel dredging on the dynamics of coastal zone, Lithuania. *Oceanologia*, 62, 489–500. <https://doi.org/10.1016/j.oceano.2020.08.002>
5. Jarmalavičius D., Pupienis D., Žilinskas G., **Janušaitė R.**, Karaliūnas V. 2020. Beach-Foredune Sediment Budget Response to Sea Level Fluctuation. Curonian Spit, Lithuania. *Water*, 12(2), 583. <https://doi.org/10.3390/w12020583>
6. Karaliūnas V., Jarmalavičius D., Pupienis D., **Janušaitė R.**, Žilinskas G., Karlonienė D. 2020. Shore nourishment impact on coastal landscape transformation. On example of Lithuanian Baltic Sea coast. *Journal of Coastal Research*, SI 95, 840-844. <https://doi.org/10.2112/SI95-163.1>

Scientific articles published in journals (books), indexed in „Clarivate Analytics Web of Science“ database (without citation index):

1. **Janušaitė R.**, Karaliūnas V., Bevainis L. 2019. Application of remote sensing methods in research of nearshore sandbars, Curonian Spit, Lithuania. *Baltic Journal of Modern Computing*, 7(4), 550 – 562. <https://doi.org/10.22364/bjmc.2019.7.4.0>

Other reviewed scientific publications (books, books' chapters, collections of articles, articles, textbooks and etc.):

1. Jarmalavičius D., Žilinskas G., Pupienis D., Karaliūnas V., **Janušaitė R.** 2020. Natural and human control of the coastal development. Baltic Sea, Lithuania. *Geografijos metraštis*, 53, 3–12. <https://doi.org/10.5200/GM.2020.1>
2. **Janušaitė R.**, Jukna L. 2017. Morphology of Curonian Spit Nearshore Zone Bars. *Geografijos metraštis*, 50, –20.

INTERNSHIP AND TRAINING

28 Jun 2021 Short Course *Dune Dynamics*. Netherlands Centre for Coastal Research, Delft, Netherlands.

- 16 Oct 2020 *Practical training about the preparation of projects*. Scholarly Communication and Information Centre, Vilnius University, Vilnius, Lithuania.
- Aug–Sept 2020 NASA Applied Remote Sensing Training program: *Remote Sensing of Coastal Ecosystems*. Online training.
- Oct–Nov 2019 Wageningen University & Research C3S User Learning Services Blended Training, Lithuania (on the use of Climate Data and the Climate Data Store), Vilnius University, Vilnius, Lithuania, and Online.
- 1–2 Oct 2019 COST Training School: *Coastal management out of geological perspective*. Polish Geological Institute – National Research Institute, Gdansk, Poland.
- 17–24 Oct 2019 Training *Introduction to R*. Faculty of Mathematics and Informatics, Vilnius University, Vilnius, Lithuania.
- 23 Aug 2019 7th BONUS Young Scientist Club science communication training session, Stockholm University, Stockholm, Sweden.

PARTICIPATION IN SCIENTIFIC CONFERENCES

International scientific conferences:

1. **Janušaitė R.**, Jarmalavičius D., Jukna L., Žilinskas G., Pupienis D. 2022. Evaluation of seasonal and interannual nearshore sandbar morphodynamics using optical satellite remote sensing. *Fourth ICES PICES Early Career Scientists Conference*, St. John's, Newfoundland, Canada, 17–21 July 2022. <https://www.ices.dk/events/symposia/ecsc4/Pages/default.aspx>
2. **Janušaitė R.**, Jarmalavičius D., Jukna L. 2021. Examining the Potential of Medium Resolution Satellite Imagery for High Frequency Observation of Nearshore Sandbars. *Coastal Dynamics 2021*, Delft, Netherlands, 28 June–2 July 2021. <https://www.coastaldynamics2021.nl/>
3. **Janušaitė R.**, Jarmalavičius D., Pupienis D., Žilinskas G., Karaliūnas V. 2020. Sandbar switching as a factor controlling coastal erosion during storm events, Curonian Spit, Lithuania. *3rd Baltic Earth Conference: Earth system changes and Baltic Sea coasts*, 2–3 June 2020, Conference proceedings, p. 99-100. https://archive.baltic.earth/hel2020/material/3rd_BalticEarth_Conference_Proceedings.pdf
4. **Janušaitė R.**, Jarmalavičius D., Karaliūnas V., Jukna L., Žilinskas G., Pupienis D. 2019. The influence of multiple sandbar system behavior on coastal erosion and accretion. *12th Baltic Sea Science Congress*, Stockholm, Sweden, 19–23 August 2020, Abstracts, p.144. https://www.su.se/polopoly_fs/1.446756.1566224624!/menu/standard/file/abstracts_A5_ny.pdf
5. Karaliūnas V., Jarmalavičius D., Žilinskas G., Pupienis D., **Janušaitė R.** 2019. Beach-foredune sediment budget response to sea level fluctuation. Lithuanian Curonian Spit coast. *12th Baltic Sea Science Congress*, Stockholm, Sweden, 19–23 August 2020, Abstracts, p. 119. https://www.su.se/polopoly_fs/1.446756.1566224624!/menu/standard/file/abstracts_A5_ny.pdf
6. **Janušaitė R.**, Karaliūnas V., Bevainis L. 2019. Application of remote sensing methods in research of nearshore sandbars. *77th International Scientific Conference of University of Latvia: Geodynamics and geospatial research*, Riga, Latvia, 3rd March 2019, Conference abstracts and papers, p.25. <https://www.lu.lv/en/institute-of-geodesy-and-geoinformatics/conferences/organised-conferences/ul-77th-international-scientific-conference-geodynamics-and-geospatial-research-2019/>

National scientific conferences:

1. **Janušaitė R.**, Jarmalavičius D., Karaliūnas V., Jukna L., Žilinskas G., Pupienis D. 2020. The Influence of Nearshore Sandbar Morphodynamics on the Development of the Curonian Spit Coast (on the example of Preila). *13th National Conference on Research of Sea And Coasts 2020*, Klaipėda, Klaipėda University, 7–9 October 2020, Conference proceedings, p. 74–77. http://apc.ku.lt/wp-content/uploads/2020/09/knygele_2020_10-05-2.pdf

2. Karaliūnas V., **Janušaitė R.**, Bevainis L., Jukna L. 2019. Short-term sediment exchange between the beach and sea nearshore. *12th National conference on Research of Sea and Coasts 2019*, Klaipėda, Klaipėda University, 9–10 May 2019, Conference proceedings, p. 97–99. http://apc.ku.lt/krantai2019/wp-content/uploads/2019/05/knygele_maketas_2019_20180426.pdf
3. **Janušaitė R.**, Karaliūnas V., Bevainis L. 2018. Application of remote sensing methods in research of nearshore sandbars. Conference *CartoCon2018*, Vilnius, Vilnius University, Scholarly Communication and Information Centre, 30 November 2018. <https://cartocon.lt/konferencijos-medziaga-2018/>
4. **Janušaitė R.** 2017. Morphology of Curonian Spit Nearshore Zone Sandbars.. Conference *ScienceStartup*, Vilnius, Vilnius University, Institute of Geosciences, 16 November 2017. <https://sciencestartup.weebly.com/2017-m-konferencija.html>

OTHER

Science promotion:

1. Interview for the Science and IT section of LRT.lt portal about the coastal research (in Lithuanian). 2021-09-09. <https://www.lrt.lt/naujienos/mokslas-ir-it/11/1492433/palangos-papludimys-siuo-metu-yra-ten-kur-jo-niekada-neturejo-buti-jeigu-nenorime-atiduoti-jo-juraismeli-teks-pilstyti-amzinai>

Awards, Scholarships:

1. Doctoral Scholarship for Academic Achievements for 2022 by Research Council of Lithuania (No. P-DAP-22-234).