


University	Peter the Great St. Petersburg Polytechnic University
Level of English proficiency	Fluent
Courses and fields of studies offered for applicants	2.1.1. Construction, Buildings and Structures 2.1.2. Bases and Foundations, Underground Structures 2.1.6. Hydrotechnical Construction, Hydraulics and Engineering Hydrology
Projects for potential academic supervision	Stochastic methods for determining loads, Dynamic models of ice impacts, Models of freezing in ice
Topics offered for prospective researches	Numerical methods for calculating ice loads, Constructions in cold environment (Arctic)
 <p>Research supervisor: Sharapov Dmitry, PhD in Marine and Coastal Management, PhD in Engineering (Peter the Great St. Petersburg Polytechnic University)</p>	<i>Construction &amp; building technology</i>
	Supervisor's research interests Numerical modeling, Arctic constructions, ice impacts, soil foundations, ice loads, wave loads
	Study program highlights Development of numerical models of ice impacts
	Supervisor's specific requirements: Preliminary research plan on a chosen topic. At least basic knowledge of the planned research topic. Desire and knowledge on how to publish articles.
	Supervisor's publications 1. Sharapov D.A., Sumtsova, A.S. Rockfill Stability to Ice Shearing by the Finite Element Method. Power Technol Eng (2023). <a href="https://doi.org/10.1007/s10749-023-01646-1">https://doi.org/10.1007/s10749-023-01646-1</a> 2. Andreeva S.A., Sharapov, D. Hoek–Brown model for ice breaking simulation. Magazine of Civil Engineering. 2023. 123(7). Article no. 12303. DOI: 10.34910/MCE.123.3 3. Sharapov D., Improving quality of 2D ice load estimation on freezed piles / D. Sharapov, Y. Klochkov // International Journal for Quality Research. – 2023. – Vol. 17, No. 4. – P. 1141-1150. – DOI 10.24874/IJQR17.04-11 4. Sharapov D., Water circulation to improve the quality of port ice management, International Journal for Quality Research v18, n2, 2024, DOI: 10.24874/IJQR18.02-18 5. Sharapov, D. A. Features of the Calculation of Ice Load Due to Thermal Expansion / D. A. Sharapov, S. A. Andreeva // Power Technology and Engineering. – 2024. – Vol. 57, No. 5. – P. 697-704. – DOI 10.1007/s10749-024-01721-1.
	Impacts of Supervisor's research 1. Sharapov, D. A. Freezing of marine and river hydraulic structures into ice / Book, D. A. Sharapov. - St. Petersburg: Federal State Autonomous Educational Institution of Higher Education "Peter the Great St. Petersburg Polytechnic University", 2023. - 167 p. - ISBN 978-5-7422-8232-7. 2. Computer program No. 2023664429 Russian Federation.

	<p>Hydrotechnical construction - ice reinforcement: No. 2023663862: declared. 04.07.2023: published. 04.07.2023 / D. A. Sharapov, S. A. Andreeva.</p> <p>3. Computer program No. 2023664430 Russian Federation. Hydrotechnical construction – ice berth: No. 2023663863: declared 07/05/2023: published 07/05/2023 / D. A. Sharapov, S. A. Andreeva.</p> <p>4. Computer program No. 2023615538 Russian Federation. Hydrotechnical construction - ice engineering laboratory: No. 2023614672: declared 03/16/2023: published 03/16/2023 / D. A. Sharapov.</p> <p>5. Computer program No. 2024610262 Russian Federation. Ice Rubble Recognition: No. 2023688594: declared 12/19/2023: published 01/09/2024 / D. A. Sharapov; applicant Federal State Autonomous Educational Institution of Higher Education “Peter the Great St. Petersburg Polytechnic University”.</p>
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