


University	Peter the Great St. Petersburg Polytechnic University
Level of English proficiency	Elementary (A2)
Educational program and field of the educational program for which the applicant will be accepted	<p>URBANISM &amp; CIVIL ENGINEERING</p> <p>2.1.1. Engineering constructions, buildings and structures</p> <p>2.1.8. Design and construction of roads, subways, airfields, bridges and transport tunnels</p>
List of research projects of the potential supervisor (participation/leadership)	<ul style="list-style-type: none"> <li>• Study of hands-on experience in the field of design and calculation of road pavement of the sections of public roads</li> <li>• Development of road traffic management projects for the period of service</li> <li>• Study of cohesive strength in the adhesive joint "bitumen - mineral material" in the modification of bitumen</li> <li>• Conducting research on the physical and mechanical properties of materials, products and structures</li> </ul>
List of the topics offered for the prospective scientific research	<ul style="list-style-type: none"> <li>• Issues of substantiation of regulatory requirements for transport facilities (their technical characteristics and parameters) and transport infrastructure facilities</li> <li>• Development and improvement of theoretical and experimental methods for design, construction, reconstruction and operation of transport facilities</li> <li>• Design of transport structures, their elements and objects of transport infrastructure, with taking into account the relationship between all components of natural and technical systems: material - product - design - structure - a complex of functionally related structures - man-made and natural environment</li> <li>• Improving methods for calculating constructions, structures and their elements</li> </ul>
 <p>Research supervisor:</p>	<i>2.01. Transportation science &amp; technology</i>
	<p>Supervisor's research interests</p> <p>Development and improvement of methods for substantiating the placement of transport structures and transport infrastructure facilities in underground and surface spaces, taking into account the requirements of technical, environmental and social safety.</p>
	<p>Supervisor's main publications</p> <p>1. Lazarev, Y., Gravit, M., Dmitriev, I. (2019). Validation of the temperature gradient in steel structures under fire load in SOFiSTiK program software <i>Advances in Intelligent Systems and Computing</i>, Springer, Vol. 983, pp. 929-938, 2019/ DOI: 10.1007/978-3-030-19868-8_92</p>

<p>Yuri Lazarev, Dr. Tech. Sc., Professor, full member of the RAT (Russian Academy of Transport)</p>	<ol style="list-style-type: none"> <li>2. Lazarev, Y., Gravit, M., Serdjuks, D., Vatin, N., Yuminova, M. (2020). Single burning item test for timber with fire protection. Magazine of Civil Engineering. №03 (95), pp. 19-30, 2020</li> <li>3. Lazarev, Y., Pinevich, E., Bolgarov, N., Altynov, D., Fatyushin, Y. (2021). Mathematical model of the influence of the rheology of lubricating compositions on the safety of rolling stock movemen. Journal of Physics: Conference Series, Volume 2131 022021</li> <li>4. Lazarev, Y., Zanina, A., Radaev, A. (2022). Determination of the structure for the road construction machinery fleet on the basis of fractional linear optimization. Transportation Research Procediathis, 63, pp. 27–40</li> <li>5. Lazarev, Y., Kirik, E., Bogdanov, A., Sushkova, O., Vitova, T., (2022). Fire safety in museums: simulation of fire scenarios for development of control evacuation schemes from the Winter Palace of the Hermitage. Buildings 2022, 12 (10), 1546; <a href="https://doi.org/10.3390/buildings12101546">https://doi.org/10.3390/buildings12101546</a> (registering DOI) - 27 Sep 2022.</li> </ol>
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