

# Salganik Alexander

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<b>Research Interests</b>	I am interested in using data from X-ray telescopes to study X-ray pulsars. Most of my work is devoted to the study of observational effects of accretion and radiation transfer.		
<b>Education</b>	<i>Bachelor + Master of Science in Astrophysics (6-year program)</i>	Sep 2018 - present	
	St. Petersburg State University, St. Petersburg, Russia		
	Average unweighted GPA: 4.0/4.0		
<b>Research Experiences</b>	<i>Senior Laboratory Assistant at Space Research Institute of the Russian Academy of Sciences (IKI RAS)</i> Aug. 2021 - present		
	<ul style="list-style-type: none"><li>• Spectral and temporal analysis of data from <i>NuSTAR</i>, <i>Swift</i> and SRG observatories.</li><li>• Interpretation of optical and infrared data to study the nature of Be/X-ray binaries.</li><li>• Study of observational manifestations of the effects of radiation transfer and accretion in X-ray pulsars.</li></ul>		
<b>Awards and Honors</b>	St. Petersburg Government Physics Scholarship for Gifted Students	2018	
	Enhanced State Academic Scholarship	2018	
<b>Publications</b>	<ul style="list-style-type: none"><li>• “On the nature of the X-ray pulsar XTE J1859+083 and its broadband properties” <b>Salganik A.</b>, Tsygankov S. S., Djupvik A. A., Karasev D. I., Lutovinov A. A., Buckley D. A. H., Gromadzki M., Poutanen J., 2022, <i>MNRAS</i>, <b>509</b>, 5955</li><li>• Two more publications with me as the first author are being prepared.</li></ul>		
<b>Atels</b>	<ul style="list-style-type: none"><li>• “eRASSU J050810.4-660653 in the LMC: Discovery of X-ray pulsations with XMM-Newton and NuSTAR” Haberl, F.; <b>Salganik, A.</b>; Maitra, C.; Doroshenko, V.; Ducci, L.; Kaltenbrunner, D.; Kreykenbohm, I.; Lutovinov, A.; Maggi, P.; Mereminskiy, I.; Molkov, S.; Rau, A.; Semena, A.; Tsygankov, S.; Vasilopoulos, G.; Weber, P.; Wilms, J., The Astronomer’s Telegram, <a href="#">15133</a>, 1</li></ul>		
<b>Accepted observational proposals</b>	PI of <i>Swift</i> (6 ks) TOO observations of Swift J1808.4–1754	Aug 2021	
	PI of <i>NuSTAR</i> (56 ks) TOO observations of eRASSU J050810.4–660653	Dec 2021	
	PI of <i>Swift</i> (16.5 ks) TOO observations of eRASSU J050810.4–660653	2021-2022	
<b>Talks</b>	“On the nature of the X-ray pulsar XTE J1859+083 and its broadband properties”		
	<ul style="list-style-type: none"><li>• Conference “Fundamental and Applied Space Research 2021”, IKI RAS, Moscow</li><li>• Saint Petersburg State University, Saint Petersburg, Russia</li><li>• University of Turku, Turku, Finland</li></ul>		
		Apr 2021	
		Dec 2021	
		Dec 2021	

	<ul style="list-style-type: none"> <li>• Conference "Astronomy and space exploration", online</li> </ul>	Jan 2022
<b>Posters</b>	<p>Conference "High-Energy Astrophysics Today and Tomorrow HEA-2019" "X-ray pulsars in Small Magellanic Cloud"</p> <p>Conference "High-Energy Astrophysics Today and Tomorrow HEA-2021" "On the nature of the X-ray pulsar XTE J1859+083 and its broadband properties"</p>	<p>Dec 2019</p> <p>Dec 2021</p>
<b>Hackathons</b>	Member of the Winning Team of Machine Learning for Science (ML4SCI) 2021 Hackathon (CGM challenge)	Nov 2021
<b>Relevant Coursework</b>	<p>Physics: Classical Mechanics, Electromagnetism, Quantum Mechanics, Statistical Physics, Thermal Physics, Radiation transfer theory, Optics, General Relativity.</p> <p>Mathematics: Calculus, Differential Equations, Linear &amp; Higher Algebra, Statistics, Equations of mathematical physics, Numerical Methods, Time Series Analysis, Differential geometry.</p> <p>Astrophysics: General Astrophysics, Celestial Mechanics, General Astronomy</p>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Programming languages: Python, Fortran, C language</li> <li>• Operating systems: Mac OS, Linux</li> <li>• Software: L<sup>A</sup>T<sub>E</sub>X, HEASoft, CIAO, XMM-SAS, IRAF/ds9, Git, Midas</li> <li>• General techniques: Machine Learning, Advanced Statistics, Monte-Carlo simulations, physical simulations</li> </ul>	
<b>Extracurricular Activities</b>	<p><i>Popularization of science</i></p> <ul style="list-style-type: none"> <li>• I help in popularizing science and holding competitions to solve astrophysical problems.</li> <li>• Jury member of the St. Petersburg Astronomical Olympiad for schoolchildren.</li> </ul>	