

Alexander Salganik

PhD Researcher in Astrophysics

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Last CV Update: Wednesday 15th October, 2025

Summary

I am a highly motivated PhD researcher at the University of Turku with five first-author publications in *MNRAS* and *A&A*. My research focuses on X-ray Astrophysics, particularly on X-ray pulsars. I have extensive experience in spectral and timing analyses using data from leading space missions and observatories. My primary goal is to expand my research to include X-ray polarimetric observations of pulsars, aspiring to become a world-leading researcher or professor in the field of high-energy astrophysics.

Education

St. Petersburg State University 2018–2024
Integrated Bachelor's and Master's Degree in Astrophysics (with Distinction)

University of Turku 2024–present
PhD in Astrophysics (Self-funded research supported by EDUFI and Wihuri grants)

Work Experience

Space Research Institute (IKI RAS) 2019–2023
Senior Laboratory Assistant (part-time)

University of Turku 2025
Teaching Assistant/Demonstrator – Observational X-ray and Gamma-ray Astrophysics Course

Professional Service

- Peer-review for *The Astrophysical Journal* 2024–present
- Peer-review for *Advances in Space Research* 2024–present
- Member of the Finnish Astronomical Society (FAS) 2025–present
- NewAthena Science Community Member 2025–present

Grants

- **EDUFI Fellowship:** Highly competitive fellowship supporting doctoral research (€17,100) Oct 2024
- **Wihuri Foundation Grant:** Highly competitive grant supporting doctoral research (€30,000). Awarded to only ~7% of applicants. Oct 2024
- **Wihuri Foundation Grant:** Highly competitive grant supporting doctoral research (€32,000) Oct 2025

Travel Grants

- Frontiers in X-ray Polarimetry (FiXP) Academy travel grant (€1200) Mar 2025

- University of Turku EXACTUS travel grant (€1000) Jun 2025
- AAS High Energy Astrophysics Division (HEAD) travel grant (\$500) Oct 2025

Publications — First Author

1. *On the nature of the X-ray pulsar XTE J1859+083 and its broadband properties* 2022
Salganik A., Tsygankov S. S., Djupvik A. A., Karasev D. I., Lutovinov A. A., Buckley D. A. H., Gromadzki M., Poutanen J.
MNRAS 509, 5955. [DOI](#)
2. *Discovery of a pulse-phase-transient cyclotron line in the X-ray pulsar Swift J1808.4–1754 and identification of an optical companion* 2022
Salganik A., Tsygankov S. S., Lutovinov A. A., Djupvik A. A., Karasev D. I., Molokov S.V.
MNRAS 514, 2707. [DOI](#)
3. *First characterization of a new high-mass X-ray binary in LMC eRASSU J050810.4–660653 with SRG/ART-XC, NuSTAR, and Swift* 2022
Salganik A., Tsygankov S. S., Lutovinov A. A., Mushtukov A. A., Mereminskiy I. A., Molokov S.V., Semena A.N.
MNRAS 514, 4018. [DOI](#)
4. *RX J0440.9+4431: another supercritical X-ray pulsar* 2023
Salganik A., Tsygankov S. S., Doroshenko V., Molokov S.V., Lutovinov A. A., Mushtukov A. A., Poutanen J.
MNRAS 524, 5213. [DOI](#)
5. *Discovery of a bimodal luminosity distribution in persistent Be/X-ray pulsar 2RXP J130159.6-635806* 2025
Salganik A., Tsygankov S. S., Chernyakova M., Malyshev D., Poutanen J.
A&A 698, A71. [DOI](#)
6. *Discovery of a 0.8-mHz quasi-periodic oscillation in the transient X-ray pulsar SXP31.0 and associated timing transitions* 2025
Salganik A., Tsygankov S. S., Molokov S.V., Lapshov Igor Yu., Lutovinov A.A., Tkachenko A. Yu., Mushtukov A. A., Poutanen J.
in press

Awards and Honors

- Personal Scholarship of the Government of St. Petersburg in the field of Physics 2018–2020
- IKI RAS Best Scientific Work Prize (for researchers under 35) ([press release](#)) 2023
- Enhanced Academic Scholarship of St. Petersburg State University for academic and research excellence 2020–2024

Accepted Proposals

General Observer:

- PI: IXPE proposal for GX 1+4 observations. 2024
- PI: Insight-HXMT proposal for observations of cyclotron line harmonics. 2024
- Co-I: IXPE proposal for 4U 1907+09 observations. 2023

Director's Discretionary:

- PI: Swift 6 ks TOO observations of Swift J1808.4–1754 Aug 2021

- PI: NuSTAR 56 ks TOO observations of eRASSU J050810.4–660653 Dec 2021
- PI: Swift 39 ks TOO observations of eRASSU J050810.4–660653 Dec 2021
- PI: NuSTAR 59 ks TOO observations of LS V +44 17 Jan–Apr 2023
- PI: NuSTAR 140 ks TOO observations of SXP 31.0 May 2025

Research Press Releases

- INTEGRAL Picture of the Month: Observations of RX J0440.9+4431 in the supercritical accretion regime ([link](#)) Jun 2023
- IKI RAS Press Release: RX J0440.9+4431 switched to the super-critical accretion regime ([link](#)) Jun 2023
- Main RAS Press Release: RX J0440.9+4431 transitions into super-critical accretion ([link](#)) Jun 2023

Talks

On the nature of the X-ray pulsar XTE J1859+083 and its broad-band properties:

- Conference Fundamental and Applied Space Research 2021, IKI RAS Apr 2021
- Invited Talk at St. Petersburg State University Dec 2021
- Conference Astronomy and Space Exploration, Ural Federal University Jan 2022

Study of the X-ray pulsars Swift J1808.4-1754 and eRASSU J050810.4-660653 based on space observatories' data:

- Conference Fundamental and Applied Space Research 2023, IKI RAS Apr 2023

Study of the transition of the pulsar RX J0440.9+4431 to the super-critical accretion regime:

- Conference Physics of Neutron Stars 2023, Ioffe Institute Jul 2023
- Invited Talk, Princeton University Sep 2023
- Invited Talk, Ioffe Institute Sep 2023
- Conference High-energy Astrophysics Today and Tomorrow HEA-2023, IKI RAS Dec 2023

Discovery of a bimodal luminosity distribution in persistent Be/X-ray pulsar 2RXP J130159.6-635806:

- Invited Talk, THEAPA Group Meeting, University of Maryland Mar 2025

Discovery of a 0.8-mHz quasi-periodic oscillation in the transient X-ray pulsar SXP31.0 and associated timing transitions:

- The 22nd meeting of the AAS High Energy Astrophysics Division Oct 2025

Workshops

- Frontiers in X-ray Polarimetry (FiXP) Academy Apr 2025