List of Publications by Anton Selitskiy

Books

1. A. Selitskii, *Introduction to the Semigroup Theory of Linear Operators and its Application to the Mathematical Physics Problems.* — Moscow: MAX Press, 2010, ISBN 978-5-317-03453-5 (in Russian)

Refereed Journal Publications

2. A. Selitskiy and M. Kocharekar, Discrete optimal transport and voice conversion // *IEEE Signal Processing Letters* (2025) . — Submitted

3. G. Zhu, F. Jiang, J. Darefsky, A. Selitskiy, and Zh. Duan, Music Source Separation with Generative Flow // *IEEE Signal Processing Letters*, 29 (2022), 2288–2292. DOI: 10.1109/lsp.2022.3219355 — Q1 (A*)

4. A. Selitskii, On the solvability of parabolic functional differential equations in Banach spaces II // *Eurasian Math. J.*, 11:2 (2020), 86–92. DOI: 10.32523/2077-9879-2020-11-2-86-92 — Q2 (B)

5. A. Selitskii, On the solvability of parabolic functional differential equations in Banach spaces // *Eurasian Math. J.*, 7:4 (2016), 85–91 — Q2 (B)

6. A. Selitskii, L_p-solvability of parabolic problems with operator satisfying the Kato conjecture // *Diff. Urav.*, 2015. V. 51, N 6, P. 764–770. English transl. in: *Differential Equations*, 2015. V. 51, N 6, P. 776–782. DOI: 10.1134/S0012266115060087 — Q2 (B)

7. A. Selitskii, Investigation of a mathematical model of nonlinear optical systems with 2-D feedback // *Matem. Mod.* 2015. V. 27, No. 7, P. 117-121 (in Russian)

8. A. Selitskii, Weak and strong solvability in L_p-spaces of the second boundary-value problem for parabolic differential-difference equation // *Contemporary Analysis and Applied Mathematics.* 2014. V. 2, N 2. P. 226-231. DOI: 10.18532/CAAM.65351

9. A. Selitskii, Space of initial data for the second boundary-value problem for a parabolic differential-difference equation in Lipschitz domains // *Mat. Zametki.* 2013. V. 94, No. 3. P. 477-480. English transl. in: *Mathematical Notes.* 2013. V. 94, N 3. P. 135-138. DOI: 10.1134/S0001434613090150 — Q2 (B)

10. A. Selitskii, The space of initial data for the Robin boundary-value problem for parabolic differential-difference equations // *Contemporary Analysis and Applied Mathematics.* 2013. V. 1, N 2. P. 91-97

11. A. Selitskii, The space of initial data for the second boundary-value problem for parabolic differential-difference equation // *Contemporary Analysis and Applied Mathematics.* 2013. V. 1, N 1. P. 34-41

12. M. Agranovich and A. Selitskii, Fractional powers of operators corresponding to coercive problems in Lipschitz domains // *Funktsional. Anal. i Prilozhen.* 2013. V. 47. Iss. 2. P. 2-17. English transl. in: *Functional Analysis and Its Applications.* 2013. V. 47, N 2. P. 83-95. DOI: 10.1007/S10688-013-0013-0 — Q2 (B) Top 10% cited in Math 2013 (Clarivate Analytics)

13. A. Selitskii, The space of initial data for the second boundary-value problem for parabolic differential-difference equation in 2-D case // *Advancement and Development in Mathematical Sciences.* 2012. V. 2, N 1-2. P. 1-17

14. A. Selitskii, The modeling of some optical systems on the base of parabolic differential-difference equation // *Matem. Mod.* 2012. V. 24, No. 12, P. 38-42 (in Russian)

15. A. Selitskii, The space of initial data of the 3d boundary-value problem for a parabolic differential-difference equation in the one-dimensional case // *Mat. Zametki.* 2012. V. 92, No. 4. P. 636-640. English transl. in: *Mathematical Notes.* 2012. V. 92, N 4. P. 580-584. DOI: 10.1134/S0001434612090313 Q2 (B)

16. A. Selitskii, The space of initial data of the second boundary-value problem for parabolic differential-difference equation // *Belgorod State University Scientific Bulletin. Mathematics & Physics.* 2011. No. 23(118). Iss. 25. P. 102-111 (in Russian)

17. A. Selitskii and A. Skubachevskii, The second boundary-value problem for parabolic differential-difference equations // *Tr. Semim. im. I. G. Petrovskogo,* 2007. Iss. 26. P. 323-346. English transl. in: *Journal of Mathematical Sciences,* 2007. V. 143, N 4. P. 3386-3400. DOI: 10.1007/S10958-007-0216-0

18. A. Selitskii, The third boundary value problem for parabolic differential-difference equation in one-dimensional case // *Functional Differential Equations,* 2007. V. 14. P. 373-395 Q2 (B)

19. A. Selitskii and A. Skubachevskii, Second boundary-value problem for parabolic differential-difference equations // *Uspekhi Mat. Nauk,* 2007. V. 62. Iss. 1. P. 207-208. English transl. in: *Russian Mathematical Surveys,* 2007. V. 62, No. 1. P. 191-192. DOI: 10.1070/RM2007V062N01ABEH004391 Q2 (B)

20. A. Selitskii, The third boundary-value problem for parabolic differential-difference equations // *Contemporary Mathematics. Fundamental Directions,* 2007. V. 21. P. 114-132. English transl. in: *Journal of Mathematical Sciences,* 2008. V. 153, N 5. P. 591-611. DOI: 10.1007/S10958-008-9138-8

Refereed Conference Publications

21. A. Selitskiy, A. Shahriyar, and J. Prakasan, Discrete optimal transport is a strong audio adversarial attack // ICASSP, May 4–8, 2026, Barcelona, Spain. In progress

22. D. Millard and A. Selitskiy, Deep Ritz method for elliptic differential-difference equations // AMS Spring Eastern Sectional Meeting, April 5-6, 2025, Hartford, CT.

23. A. Selitskii, On the smoothness of solutions of the second boundary-value problem for parabolic differential difference equation // Proceedings of the III International Conference: Mathematical Ideas by P.L. Chebyshov and Their Applications to the Problems of Science. Obninsk, 2008. P. 144–150

Conferences

24. A. Selitskii, Deep Ritz method for parabolic differential-difference equations // 2024 New York New Jersey Pennsylvania Section of SIAM Annual Meeting (poster)
25. G. Zhu, F. Jiang, J. Darefsky, A. Selitskiy, and Zh. Duan, Music Source Separation with Generative Flow// North East Music Information Special Interest Group 2022 (New Jersey) (poster)
26. A. Selitskii, On a new class of operators satisfying the Kato conjecture // The International Conference Mathematical and Computational Modelling in Science and Technology. Izmir – Turkey (August 02-07, 2015). Abstract Book. Izmir: Izmir University, 2015. P.162-163. (20-minute communication)
27. A. Selitskii, Investigation of a mathematical model of nonlinear optical systems with 2-D feedback // Modern Problems of Applied Mathematics and Informatics. Dubna, Russia, August, 2014. P. 187-189. (15-minute communication)
28. A. Selitskii, Maximal regularity of parabolic problems with operator satisfying the Kato conjecture // The Seventh International Conference on Differential and Functional Differential Equations. Abstracts. Moscow, Russia, August 15-29, 2014. — Moscow: Steklov Mathematical Institute, Lomonosov Moscow State University, Moscow Mathematical Society, 2014. P. 70. (15-minute communication)
29. A. Selitskii, The solvability in L_p spaces of parabolic equations with operators satisfying Kato's conjecture // International Conference "Spectral Theory and Differential Equations", dedicated to the Century of B.M. Levitan. Moscow, Russia, June, 2014. P. 117-118. (15-minute communication)
30. A. Selitskii, Maximal regularity of the 2-d mixed problem for parabolic differential-difference equations // Program of IWOTA 2014. Amsterdam. VU university. P. 94-95. (15-minute communication)
31. M. Agranovich and A. Selitskii, Strongly elliptic systems in Lipschitz domains and the Kato conjecture // International conference KROMSH-2013. Crimea, September, 2013. (45-minute lecture)
32. A. Selitskii and A. Skubachevskii, The space of initial data for parabolic differential-difference equations // Abstracts. 9th International ISAAC Congress. August 5-9, 2013 in Krakow, Poland. Gliwice: PKJS, 2013. P. 185. (15-minute communication)
33. M. Agranovich and A. Selitskii, Elementary approach to fractional powers of strongly elliptic operators in Lipschitz Domains // Abstracts. 9th International ISAAC Congress. August 5-9, 2013 in Krakow, Poland. Gliwice: PKJS, 2013. P. 16. (15-minute communication)
34. M. Agranovich and A. Selitskii, Elementary approach to fractional powers of strongly elliptic operators in Lipschitz Domains // 5-th St. Petersburg Conference in Spectral Theory dedicated to the memory of M.Sh. Birman. July 2-6, 2013. P. 8. (30-minute communication)

35. A. Selitskii and A. Skubachevskii, On the strong solution for the second parabolic problem with differential-difference operator // International conference "Contemporary methods and problems of operator theory and harmonic analysis". Rostov-na-Donu, Russia, June, 2013. P. 80. (15-minute communication)

36. M. Agranovich and A. Selitskii, Fractional powers of operators corresponding to boundary-value problems in Lipschitz domains // International conference "Contemporary methods and problems of operator theory and harmonic analysis". Rostov-na-Donu, Russia, June, 2013. P. 47. (45-minute lecture)

37. A. Selitskii, The space of initial data for the third boundary problem for parabolic differential-difference equation in one-dimensional case // III International Conference: Mathematical Ideas by P.L. Chebyshov and Their Applications to the Problems of Science. Obninsk, Russia, May, 2006. P. 106-107. (15-minute communication)

38. A. Selitskii, The third boundary value problem for parabolic differential-difference equation // The XLII Russian Conference on the Problems of Mathematics, Informatics and Chemistry. Moscow, Russia, April, 2006. P. 14. (15-minute communication)

39. A. Selitskii, The second mixed problem for parabolic differential-difference equation // The Fourth International Conference on Differential and Functional Differential Equations. Abstracts. Moscow, Russia, August 14-21, 2005. – Moscow: Steklov Mathematical Institute, Lomonosov Moscow State University, Moscow Mathematical Society, 2005. P. 70-71. (15-minute communication)

40. G. Izmailov and A. Selitskii, The solution of oscillation equation for a superconductive circuit // IV International Scientific Conference "The Chkalov Meeting". Engineering and Physical Problems of Aviation and Space Technology. Egoryevsk, Russia, June, 2002. (15-minute communication)