

List of publications of Illia Karabash

1. Karabash I.M., Pareto optimal structures producing resonances of minimal decay under L^1 -type constraints, *Journal of Differential Equations* 257 (2014), no.2, 374–414.
2. Braverman E., Karabash I., Structured stability radii and exponential stability tests for Volterra difference systems, *Computers and Mathematics with Applications* 66 (2013), pp. 2259–2280.
3. Karabash I., Optimization of quasi-normal eigenvalues for 1-D wave equations in inhomogeneous media; description of optimal structures, *Asymptotic Analysis* 81 (2013), no. 3-4, pp. 273-295.
4. Karabash I., Optimization of quasi-normal eigenvalues for Krein-Nudelman strings, *Integral Equations and Operator Theory* 75 (2013), no.2, 235-247.
5. Karabash I.M., Nonlinear eigenvalue problem for optimal resonances in optical cavities, *Math. Model. Nat. Phenom.* 8 (2013), no.1, pp. 143-155.
6. Braverman E., Karabash I., Bohl-Perron type stability theorems for linear difference equations with infinite delay, *Journal of Difference Equations and Applications* 18 (2012), No. 5, pp. 909-939.
7. Binding P., Browne P., Karabash I. Sturm-Liouville problems for the p-Laplacian on a half-line, *Proc. Roy. Soc. Edinburgh* 53 (2010) pp. 271–291.
8. Karabash I. A functional model, eigenvalues, and finite singular critical points for indefinite Sturm-Liouville operators, *Oper. Theory Adv. Appl. Vol. 203*, pp. 247–287, Birkhäuser, Basel, 2010.
9. Binding P., Karabash I. Absence of existence and uniqueness for forward-backward parabolic equations on a half-line, *Oper. Theory Adv. Appl. Vol. 203*, pp. 89–98, Birkhäuser, Basel, 2010.
10. Karabash I., Kostenko A., Malamud M. The similarity problem for J -nonnegative Sturm-Liouville operators, *J. Differential Equations* 246 (2009), pp. 964–997.
11. Chugunova M., Karabash I., Pyatkov S.G. On the nature of ill-posedness of the forward-backward heat equation. *Integral Equations Operator Theory* 65 (2009), no. 3, pp. 319–344.
12. Karabash I., Kostenko A. On the similarity of a J -nonnegative Sturm-Liouville operator to a self-adjoint one, *Functional Analysis and Its Applications* 43 (2009), no. 1, pp. 65–68.
13. Karabash I., Trunk C. Spectral properties of singular Sturm-Liouville operators with indefinite weight $\operatorname{sgn} x$, *Proc. Roy. Soc. Edinburgh* 139A (2009), pp. 1–21.
14. Karabash I., Kostenko A., Indefinite Sturm-Liouville operators with the singular critical point zero, *Proc. Roy. Soc. Edinburgh* 138A (2008), pp. 801-820.
15. Karabash I. Abstract kinetic equations with positive collision operators, *Oper. Theory Adv. Appl. Vol. 188*, 183-203, Birkhäuser, Basel, 2008.
16. Karabash I., Malamud M. Indefinite Sturm-Liouville operators $(\operatorname{sgn} x)(-d^2/dx^2 + q)$ with finite-zone potentials, *Operators and Matrices* 1 (2007), no. 3, pp. 301-368.
17. Karabash I., Kostenko A. Spectral analysis of differential operators with indefinite weights and a local point interaction, *Oper. Theory Adv. Appl. Vol. 175*, pp. 169-192, Birkhäuser, Basel, 2007.
18. Karabash I. Existence and uniqueness of solutions of stationary transport equations, *PAMM* 6 (2006), no. 1, pp. 635-636.

19. Karabash I. Stationary transport equations; the case when the spectrum of collision operators has a negative part, *Spectral and Evolution problems, Proc. of the Sixth Crimean Autumn Math. School-Symposium*, Simferopol, 16 (2006), pp. 149-153.
20. Karabash I., Khassi S. Similarity between J-self-adjoint Sturm-Liouville operators with operator potential and self-adjoint operators. *Math. Notes* 78 (2005), no.4, pp. 581–585
21. Karabash I. On eigenvalues in the essential spectrum of Sturm-Liouville operators with the indefinite weight $\operatorname{sgn} x$, *Spectral and Evolution problems, Proc. of the Fifteenth Crimean Autumn Math. School-Symposium*, Simferopol, 15 (2005), pp. 55-60.
22. Karabash I., Malamud M. The similarity of a J-self-adjoint Sturm-Liouville operator with finite-gap potential to a self-adjoint operator. *Doklady Mathematics* 69 (2004), no.2, pp. 195–199.
23. Karabash I., Kostenko A. Similarity of $(\operatorname{sgn} x)(-\frac{d^2}{dx^2} + c\delta)$ type operators to normal and self-adjoint operators, *Math. Notes* 74 (2003), no.1, pp. 127–131 (English translation from *Matematicheskije Zametki*).
24. Karabash I. On the similarity of J-self-adjoint differential operators of odd order to normal operators, *Math. Notes* 71 (2002), no.3, pp. 436–440 (English translation from *Matematicheskije Zametki*).
25. Karabash I. On ordinary differential operators of an odd order nonsimilar to normal operators. *Methods of Functional Analysis and Topology* 7 (2001), no.1, pp. 17–27.
26. Karabash I. J-selfadjoint ordinary differential operators similar to selfadjoint operators. *Methods of Functional Analysis and Topology* 6 (2000) no.2, pp. 22–49.
27. Karabash I. On J-selfadjoint differential operators similar to selfadjoint operators, *Math. Notes* 68 (2000), no.6, pp. 798–799 (English translation from *Matematicheskije Zametki*).
28. Karabash I. On differential operators of the first order nonsimilar to selfadjoint ones, *Spectral and evolutionary problems, Proc. of the Tenth Crimean Autumn Math. School-Symposium*, Simferopol, 10 (2000), pp. 22–25.
29. Karabash I. On differential operators nonsimilar to selfadjoint ones, *Spectral and evolutionary problems, Proc. of the Ninth Crimean Autumn Math. School-Symposium*, Simferopol, 9 (1999), pp. 145–150.
30. Karabash I. The operator $-(\operatorname{sgn} x)\frac{d^2}{dx^2}$ is similar to a selfadjoint operator in $L^2(R)$, *Spectral and evolutionary problems, Proc. of the Eighth Crimean Autumn Math. School-Symposium*, Simferopol 8 (1998), pp. 23–26.
31. Karabash I. On one inverse problem of matrix theory, *Spectral and evolutionary problems Proc. of the Sixth Crimean Autumn Math. School-Symposium*, Simferopol, 6 (1996), pp. 198–200.