List of Publications

1. Eller M., Karabash I.M., Euler-Lagrange equations for full topology optimization of the Q-factor in leaky cavities, arXiv preprint (2019), arXiv:1904.09840, 16 p., submitted.

2. Albeverio S., Karabash I.M., On the multilevel internal structure of the asymptotic distribution of resonances, *Journal of Differential Equations* (2019); https://doi.org/10.1016/j.jde.2019.06.020

3. Karabash I.M., Koch H., Verbytskyi I.V., Pareto optimization of resonances and minimum-time control, arXiv preprint (2018), arXiv:1808.09186, 44 p., submitted.

4. Albeverio S., Karabash I.M., Generic asymptotics of resonance counting function for Schrödinger point interactions, *"Analysis as a tool in Mathematical Physics: in Memory of Boris Pavlov"*, ed. Kurasov, P., Laptev, A., Naboko, S., and Simon, B., to appear in Operator Theory Analysis and Applications, Birkhäuser, 2019; arXiv preprint (2018), arXiv:1803.06039, 13 p.

5. Karabash I.M., Prestin J., Recovery of periodicities hidden in heavy-tailed noise, *Mathematische Nachrichten* 291 (2018), pp. 86–102.

6. Karabash I.M., Logachova O.M., Verbytskyi I.V., Nonlinear bang-bang eigenproblems and optimization of resonances in layered cavities, *Integral Equations and Operator Theory* 88 (2017), no.1, pp. 15–44.

7. Albeverio S., Karabash I.M., Resonance free regions and non-Hermitian spectral optimization for Schrödinger point interactions, *Operators and Matrices* 11 (2017), no.4, pp. 1097–1117.

8. Karabash I.M., Logachova O.M., Verbytskyi I.V., Overdamped modes and optimization of resonances in layered cavities, *Methods of Functional Analysis and Topology* 23 (2017), no. 3, pp. 252–260.

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11. 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 (see also preprint arXiv:1103.4117v2 [math.SP]).

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15. 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.

16. 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.

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18. Karabash I., Kostenko A., Malamud M., The similarity problem for J-nonnegative Sturm-Liouville operators, *J. Differential Equations* 246 (2009), pp. 964–997.

19. 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.

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