

CURRICULUM VITAE OF AIGERIM KALYBAY

Date of birth: 25/06/1977

Address: Mitin St. 4, Apt. 458, Almaty 050020, Kazakhstan

Tel.: +7 701 570 4807, +7 777 223 3868

E-mail: kalybay@kimep.kz

Education:

1994 - 1997	Al-Farabi Kazakh National University, Almaty, Mathematical Department
1997 - 1998	L.N. Gumilyov Eurasian National University, Astana, Mathematical Department
1998 - 2001	Institute of Mathematics and Mathematical Modeling, Academy of Sciences, Ministry of Science and Higher Education, Almaty, postgraduate studies
2004 - 2006	Luleå University of Technology, Sweden, and L.N. Gumilyov Eurasian National University, Kazakhstan, PhD studies

Diplomas:

June 2006	PhD in Mathematics <ul style="list-style-type: none">• Doctoral dissertation defended at Luleå University of Technology, Sweden
February 2002	Candidate in Physical and Mathematical Sciences <ul style="list-style-type: none">• Candidate dissertation defended at the Institute of Mathematics and Mathematical Modeling, Academy of Sciences, Ministry of Science and Higher Education, Almaty, Kazakhstan
1998	L.N. Gumilyov Eurasian National University, Astana <ul style="list-style-type: none">• Specialization: Mathematics and Informatics

Work experience:

August 2006 – Present	KIMEP University, Professor
2002 – 2004	Institute of Mathematics and Mathematical Modeling, Academy of Sciences, Ministry of Science and Higher Education, Almaty, Researcher
2003 – 2004	Almaty Management University (AlmaU), Almaty, Lecturer

Other information:

January 2024	Full Professor title conferred by the Ministry of Science and Higher Education
2023	Awarded the “ Best Researcher 2023 ” State Award

2023 – 2025	Supervisor of the State Grant “New development of Hardy-type inequalities and their various applications” supported by the Ministry of Science and Higher Education of Kazakhstan
2021 – 2023	Supervisor of the State Grant “Oscillation and spectral characteristics of some classes of higher order differential operators and related weighted differential inequalities” supported by the Ministry of Science and Higher Education of Kazakhstan

Publications (last 5 years):

1. Kalybay A. Boundary value conditions for linear differential equations with power degenerations. *Boundary Value Problems*, Volume 2020, Article number 110 (2020); <https://doi.org/10.1186/s13661-020-01412-6>
2. Kalybay A., Oinarov R. Weighted Hardy inequalities with sharp constants. *Journal Korean Mathematical Society*, Volume 57, Number 3 (2020), 603–616; <https://doi.org/10.4134/JKMS.j190266>
3. Kalybay A., Oinarov R. Boundedness of Riemann-Liouville operator from weighted Sobolev space to weighted Lebesgue space. *Eurasian Mathematical Journal*, Volume 12, Number 1 (2021), 39–48; <https://doi.org/10.32523/2077-9879-2021-12-1-39-48>
4. Kalybay A.A., Keulimzhayeva Zh. A., Oinarov R. On the density of compactly supported functions in a space with multiweighted derivatives. *Proceedings of the Steklov Institute of Mathematics*, Volume 312 (2021), 179–193; <https://doi.org/10.1134/S0081543821010107>
5. Kalybay A., Oinarov R., Sultanaev Ya.T. Oscillation and spectral properties of some classes of higher order differential operators and weighted n -th order differential inequalities. *Electronic Journal of Qualitative Theory of Differential Equations*, Number 3 (2021), 1–20; <https://doi.org/10.14232/ejqtde.2021.1.3>
6. Kalybay A., Oinarov R., Sultanaev Ya.T. Weighted second-order differential inequality on set of compactly supported functions and its applications. *Mathematics*, Volume 9, Issue 21 (2021); <https://doi.org/10.3390/math9212830>
7. Kalybay A., Oinarov R., Sultanaev Ya.T. Weighted differential inequality and oscillatory properties of fourth order differential equations. *Journal of Inequalities and Applications*, Volume 2021, Article number 199 (2021); <https://doi.org/10.1186/s13660-021-02731-7>
8. Kalybay A. Alternative criteria for boundedness of one class of integral operators in Lebesgue spaces. *Filomat*, Volume 35, Issue 14 (2021), 4825–4836; <https://doi.org/10.2298/FIL2114825K>
9. Kalybay A., Oinarov R. Boundedness of Riemann-Liouville operator from weighted Sobolev space to weighted Lebesgue space for $1 < q < p < \infty$. *Mathematical Inequalities and Applications*, 2022, Volume 25, Number 1, 17–26; <https://doi.org/10.7153/mia-2022-25-02>
10. Kalybay A., Karatayeva D. Oscillation and non-oscillation criteria for second order half-linear difference equation and extended discrete Hardy inequality. *Ukrainian Mathematical Journal*, Volume 74, Number 1 (2022), 50–68; <https://doi.org/10.1007/s11253-022-02047-9>

11. Kalybay A. Boundedness of one class of integral operators from second order weighted Sobolev space to weighted Lebesgue space. *Journal of Function Spaces*, Volume 2022, Article ID 5257476 (2022); <https://doi.org/10.1155/2022/5257476>
12. Kalybay A. Two-sided estimates of the norm for a class of matrix operators. *Siberian Advances in Mathematics*, Volume 32, Number 1 (2022), 29–34; <https://doi.org/10.1134/S1055134422010035>
13. Baiarystanov A., Kalybay A., Oinarov R. Oscillatory and spectral properties of fourth-order differential operator and weighted differential inequality with boundary conditions. *Boundary Value Problems*, Volume 2022, Article number 78 (2022); <https://doi.org/10.1186/s13661-022-01659-1>
14. Kalybay A., Oinarov R. On weighted inequalities for a class of quasilinear integral operators. *Banach Journal of Mathematical Analysis*, Volume 17, Article number 3 (2023); <https://doi.org/10.1007/s43037-022-00226-1>
15. Oinarov R., Temirkhanova A., Kalybay A. Boundedness of one class of integral operators from L_p to L_q for $1 < q < p < \infty$. *Annals of Functional Analysis*, Volume 14, Article number 65 (2023); <https://doi.org/10.1007/s43034-023-00287-9>
16. Kalybay A., Temirkhanova A., Zhangabergenova N. On iterated discrete Hardy type inequalities for a class of matrix operators. *Analysis Mathematica*, Volume 49 (2023), 137–150; <https://doi.org/10.1007/s10476-022-0182-2>
17. Kalybay A., Zhangabergenova N. On iterated discrete Hardy type operators. *Operators and Matrices*, Volume 17, Number 1 (2023), 79–91; <https://doi.org/10.7153/oam-2023-17-07>
18. Oinarov R., Kalybay A. Second-order Hardy-type inequality and its applications, *Transactions of A. Razmadze Mathematical Institute*, Volume 177, Issue 2 (2023), 237–245, [v177\(2\)-7.pdf \(tsu.ge\)](https://doi.org/10.1007/s10476-022-0182-2)
19. Oinarov R., Kalybay A. Description of the closure of the set of infinitely differentiable compactly supported functions in a weighted Sobolev space. *Journal of Mathematical Sciences*, Volume 280, 61–72 (2024) <https://doi.org/10.1007/s10958-023-06672-y>
20. Kalybay A., Shalginbayeva S. Estimate of the best constant of discrete Hardy-type inequality with matrix operator satisfying the Oinarov condition. *Eurasian Mathematical Journal*, Volume 15, Number 2 (2024), 42–47; <https://doi.org/10.32523/2077-9879-2024-15-2-42-47>
21. Oinarov R., Kalybay A., Persson L.-E. Oscillatory and spectral properties of a class of fourth-order differential operators via a new Hardy-type inequality. *Mathematical Inequalities and Applications*, Volume 27, Number 1 (2024), 63–83; <https://doi.org/10.7153/mia-2024-27-05>
22. Kalybay A. Hardy-type inequalities for a class of iterated operators and their application to Morrey-type spaces. *Open Mathematics*, Volume 22, Issue 1, Article number 20240046 (2024); <https://doi.org/10.1515/math-2024-0046>
23. Kalybay A., Temirkhanova A. New weighted Hardy-type inequalities for monotone functions. *Eurasian Mathematical Journal*, Volume 15, Number 4 (2024), 54–65; <https://doi.org/10.32523/2077-9879-2024-15-4-54-65>

24. Oinarov R., Temirkhanova A., Kalybay A. Criteria for boundedness of a class of integral operators from L_p to L_q for $1 < q < p < \infty$. Analysis and Mathematical Physics. 15, 58 (2025). <https://doi.org/10.1007/s13324-025-01053-x>
25. Kalybay A., Temirkhanova A. Alternative criteria for boundedness of one class of matrix operators in weighted spaces of sequences. Operators and Matrices. Volume 19, Number 2 (2025), 197–213, <https://doi.org/10.7153/oam-2025-19-13>