

# Vladimir Mikhailets

**Work:** Laboratory of partial differential equations,  
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## PERSONAL

Born on February 14, 1950.

Ukraine Citizen

## EDUCATION

1994	<b>Professor</b>	Kiev Military Aviation Engineering Academy
1990	<b>Dr. Hab. (Math.)</b>	Institute of Mathematics, NAS of Ukraine Thesis: Spectral problems with general boundary conditions
1976	<b>Ph. D. (Math.)</b>	Institute of Mathematics, NAS of Ukraine Thesis: Spectral theory of boundary value problems for Sturm-Liouville equation with operator coefficients Supervisor: Prof. M. L. Horbachuk
1972	<b>Diploma with honours (Math.)</b>	Kyiv State Taras Shevchenko University

## EMPLOYMENT

since 2019	Head of Lab.	Institute of Mathematics, NAS of Ukraine
since 2013	Professor	National Technical University of Ukraine "Kyiv Polytechnic Institute"
2003 – 2015	Professor	Taras Shevchenko National University of Kyiv
1994 – 1998	Professor	Warsaw University in Białystok, Poland
1991 – 2019	Leading researcher	Institute of Mathematics, NAS of Ukraine
1983 – 1991	Senior researcher	Institute of Mathematics, NAS of Ukraine
1975 – 1983	Junior researcher	Institute of Mathematics, NAS of Ukraine

## AWARDS AND GRANTS

- M. M. Bogolyubov Prize of the NAS of Ukraine for outstanding scientific works in the field of mathematics and theoretical physics, 2020
- Distinction of the NAS of Ukraine "For training new generations of scientists", 2020
- Grant of SFFR and DFG (Germany) F81/41686 "Partial differential equations in generalized Sobolev spaces", 2019
- M. G. Krein Prize of the NAS of Ukraine for outstanding scientific works in the field of functional analysis and theory of functions, 2017
- Participated in Grant of NAS of Ukraine and Siberian Branch of Russian Academy of Sciences

- "Inverse Problems of Modern Mathematical Physics", 2013 – 2014
- Participated in Grant of NAS of Ukraine and Russian Foundation for Basic Research 01-01-12 "Modern theory of evolution problems: fractional equations, integrated semigroups, numerical analysis, spectral theory", 2012 – 2013
- Bogolyubov Medal, Ukrainian Mathematical Congress, 2009
- Grant of Royal Society, Great Britain, 1998, 1999
- Grant of Royal Swedish Academy of Sciences, 1996, 1999

## **ACTIVITIES**

- Vice-chairman of the Expert Council in mathematics and mechanics of Ministry of Education and Science of Ukraine, since 2010
- Member of the editorial board of the Ukrainian Mathematical Journal
- Member of the editorial board of the Methods of Functional Analysis and Topology
- Member of Specialized Council for defence of doctoral and candidate theses D 26.206.01 at Institute of Mathematics, NAS of Ukraine.
- Member of Academic Council of Institute of Mathematics, NAS of Ukraine, since 2010
- Scientific advisor of 2 Dr. Hab. and supervisor of 10 PhD.

## **RESEARCH INTERESTS**

Functional analysis, operator theory, differential equations, spectral problems of mathematical physics

## **PUBLICATIONS**

More than 200 publications, including 2 monographs and more than 120 papers.  
h=23 (Google Scholar), h=14 (Scopus), h=12 (Web of Science).

### **Monographs**

1. Mikhailets V. A., Murach A. A. Hörmander Spaces, Interpolation, and Elliptic Problems. – Kyiv: Institute of Mathematics NASU. – 2010. – 372 p. (In Russian).
2. Mikhailets V. A., Murach A. A. Hörmander Spaces, Interpolation, and Elliptic Problems. – Berlin/Boston: De Gruyter, 2014. – 309 p. <https://doi.org/10.1515/9783110296891>

### **Selected Papers**

1. Mikhailets V. A., Sobolev A. V. Common eigenvalue problem and periodic Schrödinger operators // J. Funct. Anal. – 1999. – v. 165, no. 1. – p. 150-172. <https://doi.org/10.1006/jfan.1999.3406>
2. Goriunov A. S., Mikhailets V. A., Pankrashkin K. Formally self-adjoint quasi-differential operators and boundary-value problems // Electron. J. Diff. Equ. – 2013. – № 101. – P. 1-16. <https://ejde.math.txstate.edu/Volumes/2013/101/abstr.html>
3. Mikhailets V. A., Murach A. A. Interpolation Hilbert spaces between Sobolev spaces // Results Math. – 2015. – 67, no. 1–2. – P. 135–152. <https://doi.org/10.1007/s00025-014-0399-x>
4. Mikhailets V., Murach A., Soldatov O. Continuity in a parameter of solutions to generic boundaryvalue problems // Electron. J. Qual. Theory Differ. Equ.– 2016. – № 87. – P. 1-16.

<https://doi.org/10.14232/ejqtde.2016.1.87>

5. Los V. M., Mikhailets V. A., Murach A. A. An isomorphism theorem for parabolic problems in Hörmander spaces and its applications // *Commun. Pure Appl. Anal.* – 2017. – v. 16, no. 1. – P. 69-97. <https://doi.org/10.3934/cpaa.2017003>
6. Hnyp, Ye., Mikhailets V., Murach A. Parameter-dependent one-dimensional boundary-value problems in Sobolev spaces // *Electron. J. Diff. Equ.* – 2017. – № 81. – P. 1-13. <https://ejde.math.txstate.edu/Volumes/2017/81/abstr.html>
7. Kasirenko T., Mikhailets V., Murach A. Sobolev-Like Hilbert spaces induced by elliptic operators // *Complex Analysis and Operator Theory.* – 2019. – V. 13, №3. – P. 1431-1440. <https://doi.org/10.1007/s11785-018-00886-8>
8. Atlasyuk, O. M., Mikhailets V. A. Fredholm one-dimensional boundary value problems in Sobolev spaces // *Ukrainian Math. J.* – 2019. – V. 70, no. 10. – P. 1526-1537. <https://doi.org/10.1007/s11253-019-01588-w>
9. Atlasyuk, O. M., Mikhailets V. A. Fredholm one-dimensional boundary value problems with a parameter in Sobolev spaces // *Ukrainian Math. J.* – 2019. – V. 70, no. 11. – P. 1677-1687. <https://doi.org/10.1007/s11253-019-01599-7>
10. Los V. M., Mikhailets V. A., Murach A. A. Parabolic problems in generalized Sobolev spaces // *Commun. Pure Appl. Anal.* – 2021. – v. 20, no. 10. – P. 3589-3620. <https://doi.org/10.3934/cpaa.2021123>