Volodymyr Molyboga - Curriculum Vitae

Professional address

Institute of Mathematics
National Academy of Science of Ukraine
Department of Nonlinear Analysis
3, Tereshchenkivska str.
01601 MSP, Kyiv-4
UKRAINE

Current position

Senior Researcher

Contact information:

Mobile Phone	+38-063-568-95-46
E-mail	molyboga@imath.kiev.ua, vm.imath@gmail.com
Homepage	My Homepage

Personal information:

Name	Volodymyr Molyboga
Date of Birth	1976.04.27
Place of Birth	Ichnya, Chernihiv Region, Ukraine

RESEARCH FIELD

Operator Theory, Spectral Theory, Periodic Problems, Sturm–Liouville Operators, 1-D Schödinger Operators, Hill's Equation, Hill-Schrödinger Operators, Singular Coefficients, m-Accretivity, Self-adjointness, Spectrum, Eigenvalues, Spectral Gaps

EDUCATION

PhD in Mathematics, Institute of Mathematics of NAS of Ukraine, Kyiv, 2005
PhD Thesis: Spectra of Periodic Problems with Generalized Functions (Ukrainian), Kyiv, 2005
Advisor: Prof. Dr. Hab. Vladimir Mikhailets

Specialist: Teacher in Mathematics, Physics, Informatics and Computing Techniques, Chernihiv State Pedagogical University named after Taras Shevchenko, Chernihiv, 1998
Diploma Thesis: About a Generalized Solvability of the Two Order Boundary Elliptic Problems (Ukrainian), Chernihiv, 1998
Advisors: Dr. Inna Roitberg, Prof. Dr. Hab. Yakov Roitberg

EMPLOYMENT:

Since 2010 - Senior Researcher at Department of Nonlinear Analysis of Institute of Mathematics of NAS of Ukraine, Kyiv

2008-2010 - Researcher at Department of Nonlinear Analysis of Institute of Mathematics of NAS of Ukraine, Kyiv

2003-2008 - Junior Researcher at Department of Nonlinear Analysis of Institute of Mathematics of NAS of Ukraine, Kyiv

2000-2003 - Post-Graduate Student at Department of Nonlinear Analysis of Institute of Mathematics of NAS of Ukraine, Kyiv

1999-2000 - Teacher of Mathematics at Physics and Mathematics School (Middle School no. 12) of Chernihiv, Ukraine

1998-1999 - Teacher of Mathematics, Physics and Chemistry at School of Arhypivka of Chernihiv Region, Ukraine

1993-1998 - Student at Physics and Mathematics Department of Chernihiv State Pedagogical University, Ukraine

*

ATTENDED CONFERENCES AND SCHOOLS

[1] *Molyboga V.* One-dimensional Schrödinger operators with singular matrix potentials // International mathematical conference on the occasion of the 75th anniversary of academician A. M. Samoilenko: Bogolyubov readings DIF-2013, June 23-30, Sevastopol, Ukraine; Differential equations, theory of functions and their applications: Absracts – Sevastopol, 2013.

[2] *Molyboga V.* Forbidden zones of the Hill–Schrödinger operators with distributions as potentials // International Conference Dedicated to the 120th Anniversary of Stefan Banach, 17 – 21 September, 2012, Lviv, Ukraine: Abstracts of Reports – Lviv, 2012. – P. 55–56.

[3] *Molyboga V.* Spectral gaps of the 1-d Schrödinger operators with periodic distributional potentials // Workshop "Spectral Theory and Differential Operators", 27 – 31 August, TU Graz, Graz, Austria: Book of Abstracts – TU Graz, 2012. – P. 29.

[4] *Molyboga V.* Spectral gaps of the Hill–Schrödinger operators with distributional potentials // International Conference in Honor of Vladimir A. Marchenko's 90th birthday "Spectral Theory and Differential Equations" (STDE-2012), 20 – 24 August, 2012, Harkiv, Ukraine: Book of Abstracts – Kharkiv, 2012.– P. 74–75.

[5] *Mikhailets V., Molyboga V.* The 1-d Shrödinger operators with complex-valued distributions as potentials // 6th Europian Congress of Mathematics, 2 – 7 July, 2012, Krakow, Poland: Posters – http://www.6ecm.pl/docs/Molyboga_Volodymyr_821.pdf.

[6] *Molyboga V.* The 1-d Shrödinger operators with complex-valued distributional potentials // All-Ukrainian Scientific Conference, 11 – 13 June, 2012, Chernivtsi: Conference Materials – Chernivtsi, 2012. – P. 164.

[7] *Molyboga V.* The 1-d Schrödinger operators with complex-valued singular potentials // XIV International Scientific Kravchuk Conference, Kyiv, April 19-21, 2012: Conference Materials. – Kyiv, 2012.

[8] *Molyboga V.* Gaps in the spectrum of the Hill–Schrödinger operators // International V.Ya. Skorobohatko Mathematical Conference: Abstarcts, September 19–23, 2011, Drohobych, Ukraine, P. 140.

[9] *Molyboga V.* On a spectrum of the Hill–Schrödinger operators with singular potentials // International Scientific Conference Differential equations and it's applications: Materials of the conference. – Taras Shevchenko National University, June 8 – June 10, Kyiv, 2011.

[10] *Mikhailets V., Molyboga V.* Spectral properties of the Schrödinger operators with the Radon measures as potentials // International Conference of Functional Analysis dedicated to 90-anniversary of V.E. Lyantse: Materials of the conference. – Ivan Franko L'viv National University, November 17 – November 21, L'viv, 2010.

[11] *Molyboga V.* Smoothness of Hill's potential and lentghs of spectral gaps // 21th International Workshop on Operator Theory and Applications (IWOTA), Technical University Berlin, July 12 – July 16, Berlin, 2010.

[12] VW Summer school 2010: Infinite dimensional operator matrices theory and applications, Technical University Berlin, July 5 – July 9, Berlin, 2010.

[13] *Molyboga V.* Lentghs of spectral gaps of the Hill–Schrödinger operators and smoothness of their potentials // XIII International Scientific Kravchuk Conference, Kyiv, May 13-15, 2010: Conference Materials. – Kyiv, 2010.

[14] *Molyboga V.* Spectral gaps of the one dimensional Schrödinger operators with periodic potentials // Humboldt-Kolleg "Humboldt Cosmos: Science and Society", November 19-22, 2009, Kiev, Ukraine. – P. 35.

[15] *Molyboga V.* Hill's equation and its instability intervals // Ukrainian Mathematical Congress – 2009, Dedicated to the Centennial of Nikolai N. Bogoliubov. – Kyiv, Institute of Mathematics of NAS of Ukraine, August 27-29, 2009. – Kyiv, 2009; http://imath.kiev.ua/ congress2009/Abstracts/Molyboga.pdf.

[16] *Mikhailets V, Molyboga V.* Hill's potentials and their spectral gaps // Ukrainian Mathematical Congress – 2009, Dedicated to the Centennial of Nikolai N. Bogoliubov. – Kyiv, Institute of Mathematics of NAS of Ukraine, August 27-29, 2009. – Kyiv, 2009; http://imath.kiev.ua/∼congress2009/Abstracts/MikhailetsMolyboga.pdf.

[17] *Molyboga V.* Instability zones of the Hill-Schrodinger operators with distributions as potentials // International Conference "Analysis and Topology", Lviv, May 26 – June 7, Abstracts, Lviv, 2008. – P. 38–39.

[18] *Михайлец, В.А., Молибога В.Н.* Лакуны в спектре операторов Хилла-Шредингера: потенциалы-распределения // Bogolubov Readings 2007 Dedicated to Yu. A. Mitropolskii on the Occasion of His 90-th Birthday, Zhitomir-Kiev, Ukraine, 19 August – 2 September 2007: Program and Abstracts. – Kiev, Institute of Mathematics of NAS of Ukraine, 2007. - P. 84–85.

[19] *Mikhailets V, Molyboga V.* Instability zones of the Hill-Schrodinger operators with Schwartz distribution as potentials // Fifth Summer School "Algebra, Topology and Analysis", Lviv-Kozyova, August 6-18, 2007: Programs of invited lectures and abstracts of research reports. - Lviv, 2007.

[20] *Mikhailets V, Molyboga V.* Spectra of singular periodic differential operators of 2m order // International Conference "Modern Analysis and Applications" dedicated to the centenary of Mark Krein, Odessa, Ukraine, April 9-14, 2007: Book of abstracts. – Kyiv, 2007. – P. 93–94.

[21] *Molyboga V.* On singular Sturm-Liouville problem // XI International Scientific Kravchuk Conference: Conference Materials. – Kyiv, 2006. – P. 529.

[22] *Mikhailets V., Molyboga V.* Spectra of singular periodic and semi-periodic differential operators on the interval // Bunyakovsky International Conference: Abstracts. – Kyiv: Institute of Mathematics of NAS of Ukraine, 2004. – P. 172–173.

[23] *Molyboga V.* On singular spectral problems on the circle // X International scientific Kravchuk Conference: Conference Materials. – Kyiv, 2004. – P. 185.

[24] *Молибога В.М.* Про осциляцію розв'язків сингулярної задачі Штурма-Ліувілля // Міжнародна конференція. Шості Боголюбовські читання: Тези доповідей. – Київ, 2003. – Ст. 155.

[25] *Молибога В.Н.* О сингулярной задаче Штурма-Лиувилля // IX Міжнародна наукова конференція імені академіка М. Кравчука: Матеріали конференції. – Київ, 2002. – Ст. 139.

LIST OF PUBLICATIONS

1. V. Molyboga, *Characterization of the gaps in the spectrum of the Hill operator with distribution as potential* (Russian), Proceedings of Institute of Mathematics of the NAS of Ukraine **10** (2013), no. 2, 248–259.

2. V. Mikhailets, V. Molyboga, *Remarks on Schrödinger operators with singular matrix potentials*, Methods Funct. Anal. Topology **19** (2013), no. 2, 161–167.

3. V. Mikhailets, V. Molyboga, *Schrödinger operators with complex singular potentials*, Methods Funct. Anal. Topology **19** (2013), no. 1, 16–28.

4. V. Mikhailets, V. Molyboga, *On a spectrum of singular perturbations on a circle* (Russian), Matem. Zametki 91 (2012), no. 4, 629–632 (article); translated in Mathematical Notes 91 (2012), no. 4, 588–591 (article).

5. V. Mikhailets, V. Molyboga, *Smoothness of Hill's potential and lengths of spectral gaps*, Operator Theory: Advances and Applications, Vol. 221 (2012), 467–478.

6. V. Mikhailets, V. Molyboga, *On a spectrum of singular perturbations of semi-periodic operators* (Russian), Reports of the NAS of Ukraine (2011), no. 11, 36–43.

7. V. Mikhailets, V. Molyboga, *Hill's potentials in Hörmander spaces and their spectral gaps*, Methods Funct. Anal. Topology **17** (2011), no. 3, 235–243. (article)

8. V. Mikhailets, V. Molyboga, *Oscillation properties of solutions of the Sturm–Liouville problem with a singular coefficient* (Russian), Reports of the NAS of Ukraine (2010), no. 8, 20–24. (article)

9. V. Molyboga, *Completeness of the rootvector system some non-self-adjoint operators* (Ukrainian), Proceedings of Institute of Mathematics of the NAS of Ukraine: Approximation Theory of Functions and Closely Related Questions **7** (2010), no. 1, 128–144.

10. V. Molyboga, *Completeness of the rootvector system of the two-terms non-selfadjoint differential operators of an even order with periodic distribution potentials*, Bulletin of University of Kyiv: Physics and Mathematics (2010), no. 3, 68–73.

11. V. Mikhailets, V. Molyboga, *Spectral gaps of the one-dimensional Schrödinger operators with singular periodic potentials*, Methods Funct. Anal. Topology **15** (2009), no. 1, 31–40. (article)

12. V. Mikhailets, V. Molyboga, *One-dimensional Schrödinger operators with singular periodic potentials*, Methods Funct. Anal. Topology **14** (2008), no. 2, 184–200. (article)

13. V. Mikhailets, V. Molyboga, *Singularly perturbed periodic and semiperiodic differential operators*, Ukrainian Math. J. **59** (2007), no. 6, 785–797.

14. V. Mikhailets, V. Molyboga, *The perturbation of periodic and semiperiodic operators by Schwartz distributions* (Russian), Reports of the NAS of Ukraine (2006), no. 7, 26–31.

15. V. Mikhailets, V. Molyboga, *Uniform estimates for the semi-periodic eigenvalues of the singular differential operators*, Methods Funct. Anal. Topology **10** (2004), no. 4, 30–57.

16. V. Mikhailets, V. Molyboga, *Singular eigenvalue problems on the circle*, Methods Funct. Anal. Topology **10** (2004), no. 3, 44–53.

17. V. Molyboga, *Estimates for periodic eigenvalues of the differential operator $(-1)^m d^{2m}/dx^{2m} + V$ with V – distribution*, Methods Funct. Anal. Topology **9** (2003), no. 2, 163–178.