

Vitalii Marchenko

Curriculum Vitae

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Researcher, ILTPE of NASU, PhD



Education

- 2006–2010 **Bachelor of Applied Mathematics**, *V.N. Karazin Kharkiv National University, Kharkiv, Faculty of Mathematics and Mechanics.*
- 2010–2011 **Master of Applied Mathematics, Second speciality – Teacher, Lecturer of Mathematics and Computer Science**, *V.N. Karazin Kharkiv National University, Kharkiv, Faculty of Mathematics and Mechanics.*
Diploma with Honours

PhD thesis

- title *On spectral basis properties of operators of evolution equations*
- supervisor Prof. Dr. Grigory M. Sklyar, Institute of Mathematics, University of Szczecin, Poland & V.N. Karazin Kharkiv National University, Ukraine
- date, place 23 September 2016, V.N. Karazin Kharkiv National University

Experience

- 2012–2015 **Lecturer**, *V.N. Karazin Kharkiv National University, Faculty of Mathematics and Mechanics, Kharkiv.*
Courses taught:
 - Methods of functional analysis in control theory – 2012/2013, 2013/2014, 2014/2015;
 - Problems of functional analysis – 2012/2013, 2013/2014, 2014/2015;
 - Seminar on Riesz bases – 2013/2014.
- 2013–2014 **Junior researcher**, *V.N. Karazin Kharkiv National University, Faculty of Mathematics and Mechanics, Kharkiv.*
- 2015–2017 **Junior researcher**, *Mathematical Division, B. Verkin Institute for Low Temperature Physics and Engineering of the National Academy of Sciences of Ukraine, Kharkiv.*
- Since June 2017 **Researcher**, *Mathematical Division, B. Verkin Institute for Low Temperature Physics and Engineering of the National Academy of Sciences of Ukraine, Kharkiv.*

Languages

- Ukrainian **native speaker**
Russian **native speaker**

English **fluent**

Research interests

- C_0 -semigroups and evolution equations
- Spectral theory of nonselfadjoint operators
- Banach spaces and Schauder decompositions
- Spectral methods in an infinite-dimensional linear systems theory

Publications

- [1] Sklyar G.M. and Marchenko V., Hardy inequality and the construction of infinitesimal operators with non-basis family of eigenvectors, *J. Funct. Anal.*, February 2017, 272(3), pp. 1017-1043.
- [2] Sklyar G.M. and Marchenko V., Hardy inequality and the construction of the generator of the C_0 -group with eigenvectors not forming a basis, *Dopov. Nac. Akad. Nauk Ukr.*, 2015, 9, pp. 13-17. (in Ukrainian).
- [3] Marchenko V., Isomorphic Schauder decompositions in certain Banach spaces, *Open Mathematics (formerly Central European Journal of Mathematics)*, November 2014, 12(11), pp. 1714-1732.
- [4] Marchenko V., Stability of unconditional Schauder decompositions in ℓ_p spaces, *Bull. Aust. Math. Soc.*, December 2015, 92(3), pp. 444-456.
- [5] Marchenko V., Stability of unconditional Schauder decompositions in Hilbert spaces, *Visn. Khark. Univ., Ser. Mat. Prykl. Mat. Mekh.*, 2014, 70, pp. 103-113.
- [6] Marchenko V., Symmetrically-spectral operators in ℓ_p ($1 \leq p < \infty$) and c_0 spaces, *Visn. Khark. Univ., Ser. Mat. Prykl. Mat. Mekh.*, 2013, 68, pp. 33-44. (in russian).

Conferences and workshops

- 14-15 May **2010, Kharkiv, Ukraine**, *IV Scientific conference of students and PhD students "Contemporary problems of mathematics and its applications to natural sciences and information technologies"*, Contributed talk.
- 17-22 April **2011, Kharkiv, Ukraine**, *International Conference "Contemporary problems of mathematics and its applications to natural sciences and information technologies"*, Contributed talk.
- 25-26 April **2014, Kharkiv, Ukraine**, *IX International scientific conference of young scientists "Contemporary problems of mathematics and its applications to natural sciences and information technologies"*, Contributed talk.
- 16-20 June **2014, Kharkiv, Ukraine**, *II International conference "Analysis and Mathematical Physics"*, Contributed talk.
- 24-25 April **2015, Kharkiv, Ukraine**, *X International scientific conference of young scientists "Contemporary problems of mathematics and its applications to natural sciences and information technologies"*, Contributed talk.

- 3-6 June **2015, Kyiv, Ukraine**, *International Conference of Young Mathematicians*, Contributed talk.
- 8-12 June **2015, Lille, France**, *International Conference "Recent trends in Operator Theory and Function Theory"*.
- 15-19 June **2015, Kharkiv, Ukraine**, *III International conference "Analysis and Mathematical Physics"*, Contributed talk.
- 22-26 June **2015, Kyiv, Ukraine**, *International Conference "Dynamical Systems and Their Applications"*, Contributed talk.
- 25-28 August **2015, Drohobych, Ukraine**, *V.Ya. Skorobohatko International Mathematical Conference*, Contributed talk.
- 13-17 June **2016, Kharkiv, Ukraine**, *IV International conference "Analysis and Mathematical Physics"*, Contributed talk.
- 18-22 July **2016, Berlin, Germany**, *7th European Congress of Mathematics*, Contributed talk.
- 4-15 Sep. **2016, Mainz, Germany**, *A trilateral German-Russian-Ukrainian summer school "Spectral Theory, Differential Equations and Probability"*, Contributed talk.
- 26-28 Sep. **2016, Kharkiv, Ukraine**, *International Conference "Differential Equations and Control Theory"*, Contributed talk.
- 19-24 June **2017, Kharkiv, Ukraine**, *V International conference "Analysis and Mathematical Physics"*, Poster session.
- 14-18 August **2017, Chemnitz, Germany**, *International Workshop on Operator Theory and its Applications*, Contributed talk.
- 18-23 Sep. **2017, Lviv, Ukraine**, *International Conference in Functional Analysis dedicated to the 125th anniversary of Stefan Banach*, Contributed talk.

Grants and awards

Scholarships

- 2011 **Scholarship of the N.I. Akhiezer Foundation.**
- 2016 **Scholarship of the N.I. Akhiezer Foundation.**
- 2016 **Scholarship of the National Academy of Sciences of Ukraine for young scientists**, for 2 years: September 2016 – September 2018.

Travel grants

- 2015 **Travel grant**, *Conference "Recent Trends in Operator Theory and Function Theory"*, June 2015, Universite de Lille 1 Sciences et Technologies, Lille, France.
- 2016 **Travel grant**, *7th European Congress of Mathematics*, July 2016, TU Berlin, Berlin, Germany.
- 2016 **Travel grant**, *A trilateral German-Russian-Ukrainian summer school "Spectral Theory, Differential Equations and Probability"*, September 2016, Johannes Gutenberg Universität Mainz, Germany.
- 2017 **Travel grant**, *International Workshop on Operator Theory and its Applications*, August 2017, Technische Universität Chemnitz, Chemnitz, Germany.

Grants

- 2015 **Grant of the National Academy of Sciences of Ukraine for young scientists**,
Project "Linear evolution equations in a Hilbert space and the Boltzmann equation",
June 2015 – December 2016.