

CURRICULUM VITAE
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EDUCATION

B.S. (Mathematics), Taras Shevchenko National University of Kyiv, 2003.
M.S. (Statistics), Taras Shevchenko National University of Kyiv, 2005.
Ph.D. (Differential Equations), Taras Shevchenko National University of Kyiv, 2016.

ACADEMIC POSITIONS

PhD Student, Department of General Mathematics, Taras Shevchenko National University of Kyiv, 2005-2011.
Junior researcher, Research Department of System Mathematics, Institute for Applied System Analysis, NTUU “Kyiv Polytechnic Institute”, 2011-2015.
Researcher, Research Department of System Mathematics, Institute for Applied System Analysis, NTUU “Kyiv Polytechnic Institute”, since 2015.
Assistant (part time), Department of Mathematical Methods of System Analysis, ESC “Institute for Applied System Analysis”, NTUU “Kyiv Polytechnic Institute”, since 2013.

FELLOWSHIPS, GRANTS, AND AWARDS

Researches were partially supported by:

Grants of the President of Ukraine

GP/F44/076 “Differential-operator inclusions for Earth data analysis problems”, Order of President of Ukraine №188/2012-рп (October 6, 2012), 2012;

GP/F49/070 “Structural properties of attracting sets for some nonlinear boundary value problems of Geophysics and Mechanics”, Order of President of Ukraine № 316/2013-рп (October 4, 2013), 2013;

GP/F50/049 “Strong solutions of three-dimensional Navier-Stokes equations”, Order of President of Ukraine № 1038/2014-рп (September 24, 2014), 2014;

GP/F61/017 “Long-term forecasts for non-autonomous dissipative dynamical systems of different nature”, Order of President of Ukraine № 638/2015-рп (July 30, 2014), 2015.

Grants of the NAS of Ukraine for young scientists

F-2264/12 “Evolution inclusions and variational inequalities for problems of data analysis about Earth”, Order of Presidium of National Academy of Science of Ukraine № 83 (February 9, 2012), 2012;

F-2273 “Long-term forecasts for state functions and regularity of limit cycles of diffusion type controlled processes”, Order of Presidium of National Academy of Science of Ukraine № 85 (June 12, 2013) and № 31 (February 12, 2014), 2013-2014;

F-2284 “The development and research of qualitative and structural properties for state functions of controlled multidimensional systems with nonlinearities of Caratheodory’s type”, Order of Presidium of National Academy of Science of Ukraine № 168 (June 17, 2015) and № 65 (March 2, 2014), 2015-2016.

JOURNAL ARTICLES AND BOOK CHAPTERS

1. Mark O. Gluzman , Nataliia V. Gorban , Pavlo O. Kasyanov. Lyapunov Functions for Differential Inclusions and Applications in Physics, Biology, and Climatology// Continuous and Distributed Systems II Theory and Applications (Studies in Systems, Decision and Control, Sadovnichiy Viktor A., Zgurovsky Mikhail Z. (Eds.)) –2015. – Vol. 30. – P. 233-243.
2. Natalya V. Gorban, Oleksiy V. Kapustyan, Elena A. Kapustyan, Olha V. Khomenko. Strong Global Attractor for the Three-Dimensional Navier–Stokes System of Equations in Unbounded Domain of Channel Type// Journal of Automation and Information Sciences. – 2015. – Vol. 47. Iss. 11 – P. 19 – 21.
3. Mark O. Gluzman , Nataliia V. Gorban , Pavlo O. Kasyanov. Lyapunov type functions for classes of autonomous parabolic feedback control problems and applications // Applied Mathematics Letters. – 2015. – Vol. 39. – P. 48 – 59.
4. Mark O. Gluzman , Nataliia V. Gorban , Pavlo O. Kasyanov. Lyapunov Functions for Weak Solutions of Reaction-Diffusion Equations with Discontinuous Interaction Functions and its Applications // Nonautonomous Dynamical Systems. – 2015. – Vol. 1. Iss.1 – P. 1 – 11.
5. Nataliia V. Gorban, Oleksiy V. Kapustyan, Pavlo O. Kasyanov. Uniform Trajectory Attractor for Non-Autonomous Reaction–Diffusion Equations with Carathéodory’s Nonlinearity // Nonlinear Analysis: Theory, Methods & Applications. – 2014. – Vol. 98. – P. 13–26.
6. Nataliia V. Gorban, Pavlo O. Kasyanov. On Regularity of All Weak Solutions and Their Attractors for Reaction-Diffusion Inclusion in Unbounded Domain // Continuous and Distributed Systems. Theory and Applications / M.Z. Zgurovsky, V.A. Sadovnichiy eds. – Springer, 2014. – 205-220.
7. Nataliia V. Gorban, , Oleksiy V. Kapustyan, Pavlo O. Kasyanov, Liliia S. Paliichuk. On Global Attractors for Autonomous Damped Wave Equation with Discontinuous Nonlinearity// Continuous and Distributed Systems. Theory and Applications / M.Z. Zgurovsky, V.A. Sadovnichiy eds. – Springer, 2014. – 221-237.
8. Gorban N.V. Long-term forecasts for state functions of autonomous inclusions of reaction-diffusion type in \mathbb{R}^N // System Research and Information Technologies. – 2014.–Vol.1 .– P. 92–101.(in Ukrainian)
9. Gorban N.V. Long-time forecasts for state functions of quasilinear hyperbolic systems in \mathbb{R}^N // System Research and Information Technologies. – 2011.– Vol.4 .– P. 134 – 139. (in Ukrainian)
10. Stanzhitsky A., Gorban N. On the dynamics of solutions for autonomous reaction-diffusion equation in \mathbb{R}^N with multivalued nonlinearity // Ukrainian Mathematical Bulletin. – 2009. – Vol. 6, Iss. 2. – P. 235–251.
11. Stanzhitsky A., Gorban N. Global attractor for autonomous wave equation in \mathbb{R}^N with continuous nonlinearity// Ukrainian Mathematical Journal. –2008. – Vol. 60, Iss.2. – P. 260–267.

CONFERENCES

1. Stanzhitsky A., Gorban N. Global attractor for autonomous wave equation in \mathbb{R}^N with continuous nonlinearity // XII International Conference to the memory of M. Kravchuk – Kyiv, 2008, P. 798.
2. Gorban N. Multivalued dynamics for autonomous wave equation in \mathbb{R}^N // International conference "Bogolyubov Readings – Melitopol, 2008. – P.37.
3. Gorban N.V. On the dynamics of solutions for autonomous reaction-diffusion equation in \mathbb{R}^N with multivalued nonlinearity// Nonlinear Analysis and Applications: Book of Abstracts. – Kyiv, 2009. – P. 84.

4. Gorban N.V. Long-Time Forecasts for State Functions of Quasilinear Hyperbolic Systems in \mathbb{R}^N / N.V. Gorban // Nonlinear Analysis and Applications: Book of Abstracts. - Kyiv, 2012. - P. 31.
5. Gorban N.V. On regularity of all weak solutions and their attractors for reaction-diffusion inclusion in unbounded domain / N.V. Gorban // Crimea International Mathematical Conference: Book of Abstracts. - Sudak, 2013. - С. 68-69.
6. Gorban N.V. On the dynamics of solutions for nonautonomous reaction-diffusion equation with Carathéodory's Nonlinearity // System Analysis and Information Technologies. - Kyiv, 2014. - P. 76.
7. Gorban N.V. Strong Global Attractor for the Three-Dimensional Navier–Stokes System of Equations in Unbounded Domain of Channel Type // System Analysis and Information Technologies. - Kyiv, 2015. - P. 60.

TUTORIALS

1. Системний аналіз стохастично розподілених систем [Електронний ресурс]: навчальний посібник / П. О. Касьянов, Н. В. Задоянчук, Н. В. Горбань [та ін.]. – Київ : НТУУ «КПІ», 2011.
2. Диференціальні рівняння: теорія та застосування. Навчальний посібник/ Н.В. Горбань, Ю.В. Ловейкін, А.В. Сукретна, І.Д. Фартушний.— К.: НТУУ «КПІ», 2014. —218с., лист МОН України №1/11-8442 від 03.06.2014.
3. Елементи нелінійного аналізу. Частина I: Вступ до прикладного функціонального аналізу. Навчальний посібник / О.В.Капустян, Н.В. Горбань, Л.С. Палійчук, І.Д. Фартушний, О.В. Хоменко. – К.: НТУУ «КПІ», 2015. – 206с.; (витяг з протоколу №5 від 8 червня 2015 року засідання Вченої ради НТУУ «КПІ»).

PROFESSIONAL VISITS:

8th Elgersburg School 2016 on Mathematical Systems Theory, Elgersburg, Germany, 2016.