

Address

Department of Mathematics-Malott Hall
Cornell University
Ithaca, NY 14853
igorsgor@math.cornell.edu

Cell Phone: 1 (607) 229-4080
<http://www.math.cornell.edu/~igorsgor/>

Education

2006–present Cornell University:
Ph.D. in Mathematics expected in August 2012
Thesis advisor: Yulij Ilyashenko
Thesis co-advisor: Robert Connelly
2001–2006 Moscow State University:
B.S. June 2006, with High Honors in Mathematics
Undergraduate thesis title: Homoclinic tangencies are not typical for
volume-preserving polynomial automorphisms of $\mathbb{C}^2$
Undergraduate thesis advisor: Yulij Ilyashenko

Field of research

Dynamical systems, complex analysis, analytic differential equations, discrete geometry

Languages

English (fluently)
Russian (fluently)
Latvian (fluently)

Publications

1. **Kupka-Smale theorem for volume-preserving polynomial automorphisms of $\mathbb{C}^2$ of dynamical degree $d \geq 3$**
(In preparation)
2. **Algebraic independence of multipliers of two periodic orbits in the space of polynomials of degree $d \geq 3$**
(Near completion)
Current version: http://www.math.cornell.edu/~igorsgor/indep_mult2.pdf
3. **On multi-dimensional Fatou bifurcation**
(Near completion)
Current version: <http://www.math.cornell.edu/~igorsgor/note14a.pdf>

4. Kneser-Poulsen conjecture for a small number of intersections

(Submitted)

arXiv:1006.0529

5. Strict Kneser-Poulsen conjecture for large radii

(Submitted)

arXiv:1006.0531

6. Normal forms of families of maps in the Poincaré domain*Proc. Steklov Inst. Math.* **2006**, no. 3 (254), 94–102**Talks****1. Multi-dimensional Fatou bifurcation**

University of Toronto, Dynamical Systems Seminar, September 2011

Cornell University, Dynamical Systems Seminar, October 2010

Summer School on Dynamical Systems, Poprad, Slovakia, July 2010

2. Kupka-Smale property for volume-preserving automorphisms of $\mathbb{C}^2$

Cornell University, Dynamical Systems Seminar, September 2011

Summer School on Dynamical Systems, Dubna, Russia, July 2011

3. Kneser-Poulsen conjecture for low density configurations

University of Texas at Brownsville, Geometry and Topology Conference, April 2010

Banff, Workshop on Volume Inequalities, March 2010

Cornell University, Discrete Geometry and Combinatorics Seminar, February 2010

4. Kneser-Poulsen conjecture for large radii

Fields Institute, Workshop on Sphere Arrangements, November 2011

Cornell University, Analysis Seminar, February 2010

Eötvös Loránd University, Budapest, Workshop on Discrete Geometry, July 2009

Cornell University, Discrete Geometry and Combinatorics Seminar, December 2008

5. Normal forms of families of maps in the Poincaré domain

Moscow State University, Dynamical Systems Seminar, March 2004

Teaching experience

Fall 2010 Instructional TA for Calculus I (MATH 1110)

Fall 2009 Recitation TA for Differential Equations for Engineers (MATH 2930)

Fall 2008 Recitation TA for Calculus II for Engineers (MATH 1910)

Fall 2007 Recitation TA for Theoretical Linear Algebra and Calculus (MATH 2230)

Fellowships and awards (selected)

York award from the Department of Mathematics, December 2008
(given to one graduate student each year based on their achievements)
Cornell University fellowship, 2006-2007 academic year
International Mathematical Olympiad for high school students (IMO):
Silver medal, July 2001
Bronze medal, July 2000
International Olympiad in Informatics for high school students (IOI):
Silver medal, September 2000

Conferences and workshops attended

Workshop on Sphere Arrangements, Fields Institute, 14–18 November 2011
(invited speaker)
Midwest Dynamical Systems Seminar, Indianapolis, 14–16 October 2011
Thematic Program on Discrete Geometry and Applications, Fields Institute,
12–23 September 2011
Geometric and Algebraic Structures in Mathematics, a conference to celebrate
Dennis Sullivan's 70th birthday, Stony Brook University, May 26-June 4, 2011
Frontiers in Complex Dynamics, a conference to celebrate John Milnor's 80th birthday,
Banff, 21–25 February 2011
Winter School "Recent Trends in Nonlinear Science", Vilanova i la Geltru, Spain,
24–28 January 2011
Geometry and Topology Conference, Brownsville TX, 15–18 April 2010 (invited speaker)
Workshop on Volume Inequalities, Banff, March 28–April 2, 2010 (invited speaker)
Workshop on Discrete Geometry, Budapest, July 2009
Conference on Convex and Discrete Geometry, on the occasion of the retirement of
Peter M. Gruber, Vienna, 13–17 July 2009
Annual Summer School on Dynamical Systems,
Dubna, Russia, July 2011, 2006, 2004, 2003
Poprad, Slovakia, July 2010, 2009

Other activities

Translator of the book "Lectures on analytic differential equations"
by Yu. Ilyashenko and S. Yakovenko to Russian.
Teaching assistant in annual summer camps for gifted middle school students in Latvia.
The goal of the program is to develop students' creative and scientific thinking.
2001–2010
Instructor in annual mathematical summer camps for high school students in Latvia,
2001–2005
Member of Cornell Chess Club, 2006–2009