

CURRICULUM VITAE
VOLODYMYR V. NEKRASHEVYCH

Official address:

Department of Mathematics
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Current position: Professor, Texas A&M University

Research interests:

Group theory (groups generated by finite automata, self-similar and branch groups, hyperbolic groups); Dynamical systems (hyperbolic dynamics, holomorphic dynamics, groups acting on the Cantor set, étale groupoids); Operator algebras (algebras associated to self-similar group actions, hyperbolic dynamical systems and tilings)

Education and degrees:

2006: Habilitation (Doctor of Sciences), thesis title: “*Self-similar groups*”, Kyiv Taras Shevchenko University, Ukraine

1998: Ph.D., thesis title: “*Metric properties of nonamenable groups*,” advisor: Prof. Vitaliy I. Sushchansky, Kyiv Taras Shevchenko University, Ukraine

1997: M.S. in Mathematics (with honors), Kyiv Taras Shevchenko University, Ukraine

Professional career:

2009 – present: Professor, Texas A&M University

2005 – 2009: Associate Professor, Texas A&M University

2003 – 2005: Visiting Assistant Professor, International University Bremen, Germany

1997 – 2005: Assistant Professor, Kyiv National Taras Shevchenko University, Ukraine

Grants and Awards:

2022: “Groups and hyperbolic dynamical systems,” NSF grant DMS-2204379, 7/1/2022 – 6/30/2025

2021: Fellow of the American Mathematical Society

2017: “Groups and topological dynamics,” NSF grant DMS-1709480, 8/15/2017 – 7/31/2020

2016: “Groups and dynamical systems,” Collaboration Grants for Mathematicians, Simons Foundation, 9/1/2016 – 8/31/2021

2010: “Iterated monodromy groups,” NSF grant DMS-1006280, 7/15/2010 — 5/31/2014

2007: “Groups generated by automata,” NSF conference travel grant DMS-0757988, 2/1/2008 – 1/31/2009

2006: “Iterated Monodromy Groups,” NSF grant DMS-0605019, 9/1/2006 – 8/31/2009

2001: Alexander von Humboldt Foundation research fellowship, Germany, 1/1/2001–12/31/2001

2000: Kyiv Taras Shevchenko University award for young scientists

1999: Kasa Mianowskiego grant (Poland)

- 1998: Petryshyn foundation award for young mathematicians
- 1997: Ukrainian National Academy of Sciences award for university students for the work “*Equivalence of nets in non-amenable groups*”
- 1995, 1997: International Soros Science Foundation grant for university students

Organized conferences:

- 2022: Co-organizer, special session “Groups and Topological Dynamics” of the AMS-SMF-EMS Joint International Meeting, Grenoble, France.
- 2020: Co-organizer, “Self-similar and self-replicating groups,” at Bernoulli Centre, Lausanne, Switzerland
- 2019: Co-organizer, Special Session on “Groups and Topological Dynamics,” Joint Mathematical Meeting, Denver, CO
- 2017: Co-organizer, Special Session on “Combinatorial/Geometric/Probabilistic Methods in Group Theory,” AMS Fall Central Sectional Meeting, University of North Texas, Denton, TX
- 2016: Co-organizer, AIM workshop “Amenability of discrete groups,” September, 2016, San Jose, CA
- 2015: Co-organizer, conference “Geometric and Probabilistic Methods in Group Theory and Dynamical Systems,” College Station, TX
- 2014: Co-organizer, conference “Groups acting on rooted trees and around (IHP),” Paris, France
- 2014: Co-organizer, workshop “Groups, Groupoids and Dynamics,” College Station, TX
- 2008: Co-organizer, conference “Groups Generated by Automata,” Ascona, Switzerland
- 2008: Co-organizer, special session “Group Theory” at Joint AMS International Meeting Rio de Janeiro, Brazil

Recent invited conference talks:

- 2022: “Self-similarity of groups, trees and fractals,” May 30 – June 3, Institut Henri Poincaré, Paris, France.
- 2022: “DLT 2022,” May 9–13, Tampa, Florida.
- 2022: “Adventurous Berkeley Complex Dynamics,” May 2–6, MSRI, Berkeley, California.
- 2021: “Advancing Bridges in Complex Dynamics,” September 20–24, CIRM, Luminy, France.
- 2020: “Quasiworld Workshop,” July 14–15, UCLA (online).
- 2020: “International Algebraic conference,” June 13–14, Kyiv, Ukraine (online).
- 2020: “Groups and dynamics,” Kervaire Seminar, March 8–13, Les Diablerets, Switzerland.
- 2019: “Algorithms in Complex Dynamics and Mapping Class Groups,” November 2–3, ICERM, Brown University, Providence, RI
- 2019: “Measurable, Borel, and Topological dynamics,” October 7–11, CIRM, Luminy, France
- 2019: “Topology and Measure in Dynamics and Operator Algebras,” September 8–13, Banff, Canada
- 2019: “Analytic Low-Dimensional Dynamics: a celebration of Misha Lyubich’s 60th birthday,” May 27 – June 7, Fields Institute, Toronto, Canada
- 2019: “GAGTA 2019,” May 26-30, Bar Ilan University, Israel
- 2019: “Antalya Algebra Days,” May 15–19, Izmir, Turkey

2019: “Algorithmic Problems in Group Theory,” March 24–29, Schloss Dagstuhl, Germany

2019: “Workshop: groups of dynamical origin II,” January 21–25, UNAM, Ciudad de Mexico, Mexico

2018: “Solving problems in Florence,” November 19–23, Florence, Italy

2018: “1-2-3 September workshop on Analysis on Groups and Measured Group Theory,” September 1–3, Austin, TX

2018: “Geometric Group Theory in Campinas,” July 28–31, Campinas, Brasil

2018: “Group Theory,” July 23–27, Cabo Frio, Rio de Janeiro, Brasil

2018: “Dynamics: Topology and Numbers,” July 2–6, MPI, Bonn, Germany

2018: “Zassenhaus Groups and Friends Conference,” April 6–8, Tampa, FL

2017: “Conference on Geometric and Combinatorial Methods in Group Theory,” May 16–18, Urbana Champaign, IL

2017: “Dynamics, Geometry, and Groups,” May 19–22, Bremen, Germany

2017: “Geometric and probabilistic properties of infinite groups,” June 5–9, Lille, France

2017: “Applications of operator algebras: order, disorder and symmetry,” June 26-30, Edinburgh, UK

2016: “Workshop on Dynamical Systems and Related Topics,” April 15–17, University of Maryland, MD

2016: “Groups, Dynamics, and Operator Algebras,” July 18–22, London, UK

2016: “Connections Between Complex Dynamics, Statistical Physics, and Limiting Spectra of Self-similar Group Actions,” August 15–19, IUPUI, Indianapolis, IN

2016: “Groups and Actions: Geometry and Dynamics,” December 19–22, Kyiv, Ukraine

2015: “Computability, Analysis, and Geometry,” March 8–13, Banff, Canada

2015: “Growth, Symbolic Dynamics and Combinatorics of Words in Groups,” June 1–5, Paris, France

2015: “Noncommutative Geometry,” June 14–20, Oberwolfach, Germany

2015: “Dynamical Developments: a conference in Complex Dynamics and Teichmüller theory,” in honor of the 70th birthday of John H. Hubbard, August 17–21, Jacobs University, Bremen, Germany

2015: “Random walks and harmonic functions on groups,” December 7–11, EPFL, Lausanne, Switzerland

2014: “Dynamics and Numbers,” July 21-25, Max Planck Institute, Bonn, Germany

2014: “The international algebraic conference dedicated to the 100th anniversary of L.A.Kaluzhnin,” July 7-12, Kyiv, Ukraine

2014: “Holomorphic and Symbolic Dynamics,” January 20-24, Toulouse, France

2013: “Geometric and Cohomological Group Theory,” Durham, UK

2013: “Advanced School and Workshop in Real and Complex Dynamics,” ICTP, Trieste, Italy

2013: “Non-Smooth Geometry,” workshop of the IPAM program “Interactions Between Analysis and Geometry,” Los Angeles, CA

2013: “Dynamics of Groups and Rational Maps,” workshop of the IPAM program Interactions Between Analysis and Geometry, Los Angeles, CA

2013: “Geometry of groups,” Les Diablerets, Switzerland

2012: “Groups and their actions,” Bedlewo, Poland

2012: “Geometric and Analytic Aspects of Group Theory,” Institut Mittag-Leffler, Stockholm, Sweden

2012: “Complex Dynamics Conference of Academic Year 2011–2012,” RIMS, Kyoto, Japan

Recent minicourses:

2020: A minicourse of three one hour lectures, “Groups and dynamics,” Kervaire Seminar, March 8–13, 2020, Les Diablerets, Switzerland.

2018: “*Topological Dynamics and Groups*,” minicourse of 4 lectures at “Trees, dynamics, and locally compact groups,” June 25–29, Duesseldorf, Germany

2018: “*Groups of Dynamical Origin*,” minicourse of 4 lectures at “Young Geometric Group Theory VII,” March 12–16, Les Diablerets, Switzerland

2017: “*Full groups of étale groupoids*,” minicourse of 4 lectures at “Workshop: Groups of dynamical origin,” February 27 – March 3, Mexico City, Mexico

2017: “*Groups of intermediate growth and dynamical systems*,” minicourse of 3 lectures at “Workshop on groups of intermediate growth, amenability and related topics,” March 12–17, Les Diablerets, Switzerland

2017: “*Dynamical systems and groups of intermediate growth*,” minicourse of 9 lectures at “Groups of Intermediate Growth in Seville,” July 10–14, Seville, Spain

2014: “*Self-similar groups and hyperbolicity*” minicourse of 3 lectures at “Random walks and asymptotic geometry of groups,” IHP trimester, January 6 - April 4, Paris, France

2012: “*Self-similar groups and hyperbolic groupoids*,” minicourse of 4 lectures at Orléans University, France

2010: “*Self-similar and branch groups*,” minicourse of 3 lectures at “Group actions and dynamics,” CRM, Montreal, Canada

2009: “*Iterated monodromy groups*,” minicourse of 4 lectures at “Groups St Andrews 2009 in Bath,” Bath, UK

2007: “*Contracting groups*,” minicourse of 5 lectures at “Amenability,” semester at Erwin Schroedinger Institute, Vienna, Austria

PhD Students:

- Josiah Owens (current)
- Zheng Kuang (current)
- Justin Cantu
- Yevgen Muntyan
- Dmytro Savchuk

Service:

2021 – present: Award Committee member

2014 – 2016, 2018–2020: Postdoc Committee member

2007 – 2009, 2012 – 2014, 2019–2021: Graduate Committee member

2016 – 2017: Subcommittee P member and chair

2011 – 2013: Teaching Committee member

2009 – 2010: Subcommittee T member and chair

2020 – present: Chair Editor for Book Reviews, “Bulletin of the American Mathematical Society,” AMS

2017 – present: Editorial board member, “Journal of Combinatorial Algebra,” EMS

2013 – present: Editorial board member, “Journal of Fractal Geometry,” EMS

2008 – present: Editorial board member, “Algebra and Discrete Mathematics”

2006 – present: Editorial board member, “Groups, Geometry, and Dynamics,” EMS

1995 – 2005: Editorial board member, scientific-popular journal “U sviti Matematyky” (“In the world of Mathematics”), TBiMC Publisher, Kyiv, Ukraine

2007 – present: Award committee executive secretary, Competition for young Mathematicians in Ukraine, sponsored by Shevchenko Scientific Society (USA) and U.S.-Ukraine Foundation

1993 – 2001: Organizing committee member, Ukrainian Mathematical Competitions for schoolchildren (regional and national level)