

Curriculum Vitae

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DMYTRO SAVCHUK

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RESEARCH INTERESTS

PUBLICATIONS

Preprints and in Preparation

1. **Explicit Generators for the Stabilizers of Rational Points in Thompson's Group F** (with K. Baker), submitted, 2023, 19 pages,
<https://arxiv.org/abs/2401.00404>
- 2.

14. Orbit automata as a new tool to attack the order problem in automaton groups (with I. Klimann

28. **Groups generated by 3-state automata over a 2-letter alphabet, I**, (with I. Bondarenko, R. Grigorchuk, R. Kravchenko, Y. Muntyan, V. Nekrashevych and Z. Sunic), *São Paulo Journal of Math. Sciences*, 1 (2007), no.1, 1–40, <http://arxiv.org/abs/math.GR/0612178>
29. **On Sushchansky p -groups** (with I. Bondarenko), *Algebra Discrete Math.*, 2007, no.2, 22–42, <http://arxiv.org/abs/math.GR/0612200>
30. **On word problem in contracting automorphism groups of rooted trees**, *Bulletin of the University of Kiev, Series: Physics & Mathematics*, 2003, no.1, 51–56

Reports

31. **About classification of groups generated by automata with three states over an alphabet with two letters, and about some questions concerning these groups** (with I. Bondarenko, R. Grigorchuk, R. Kravchenko, Y. Muntyan, V. Nekrashevych and Z. Sunic), *Bulletin of Chernivtsi National University, Mathematics*, Issue 336–337 (2007), 29–39.

Undergraduate Exposition

32. (with N. Rudomino-Dusyatska) **Is gambling worth it?** (Ukrainian), *In the world of Mathematics*, V.5 (1999), no.3, 77–82
33. (with N. Rudomino-Dusyatska) **About D. Grave and some of his t?M(b)-1.6878298(o)-7613TJ /R27**

- (PI) Conference Support Grant “International Conference: Developments in Language Theory 2022”, NSA (\$15,400) 2021
- (PI) Conference Support Grant, ResearchOne, USF (\$1,000) 2020
- (Co-PI) Conference Support Grant “International Conference: Developments in Language Theory 2020”, NSF (\$10,000) – Extended to DLT-2022 due to COVID pandemic 2019
- (Co-PI) Conference Support Grant “International Conference: Developments in Language Theory 2020”, NSA (\$15,400) – Cancelled due to COVID pandemic 2019
- (PI) Conference Support Grant, ResearchOne, USF (\$1,000) 2018
- (PI) Conference Support Grant, USF Internal Award (\$5,000) 2017
- (PI) AIM SQuaREs Program Award (<https://aimath.org/programs/squares/>) 2017-2022
- Grant from Helmsley foundation to enhance Calculus Curriculum at USF (\$2,500) 2016
- (PI) Collaboration Grant for Mathematicians, Simons Foundation (\$35,000) 2014-2022
- (PI) Proposal Enhancement Grant, USF Internal Award (\$16,504) 2014
- (PI) New Researcher Grant, USF Internal Award (\$8,439) 2013
- Ostrogradsky Prize for Researchers among Ukrainian University Students at the Institute of Mathematics of NAS in Ukraine, Kyiv, Ukraine 2001
- Soros Foundation Fellowship for Undergraduate Students, Kyiv, Ukraine 1998

SELECTED TALKS

Conference Talks

- October 2023 (invited) [SIAM-NNP Annual Meeting](#)
NJIT, Newark, NJ
- September 2023 (invited) [Mathematics and Information Technology](#) (online)
Chernivtsi, Ukraine
- September 2023 (5-minute talk) [GoTh Workshop: Groups of Thompson and their relatives](#)
Magdeburg, Germany
- July 2023 (plenary) [12th International Algebraic Conference in Ukraine](#) (online),
Ukraine
- May 2023 (invited) [Joint Spectra and related Topics in Complex Dynamics and Representation Theory](#)
[Video of the talk](#)
Ban International Research Station, Ban , Alberta, Canada
- August 2022 (invited) [2022 Combinatorics, Computing, Group Theory and Applications in South Florida](#)

FAU, Boca Raton, Florida
July 2022 (substitution as an organizer)

May 2013

Talks for Students and K-12

MAS 5311	Algebra I (graduate level) Fall 2015
MAS 5312	Algebra II (graduate level) Spring 2016
MAT 4471	Cryptography and Coding Theory Fall 2013, Fall 2014 (new course development)
MAS 4302	Elementary Abstract Algebra II Spring 2017
MTG 4302	Introduction to Topology Spring 2019, Spring 2022
MAS 3105	Linear Algebra Fall 2012, Fall 2013, Spring 2014, Spring 2018, Fall 2018 Fall 2019
MAC 2312	Calculus II Spring 2013, Fall 2018, Fall 2019
MAC 2282	Engineering Calculus II Spring 2015
MAC 2311	Calculus I (including course coordination) Spring 2015, Fall 2016, Spring 2017, Summer 2018, Summer 2019 Summer 2021
MAC 2281	Engineering Calculus I Fall 2014, Fall 2015, Spring 2015, Spring 2016

Binghamton University

Math 130	Mathematics in Action Spring 2011 (250 students), Fall 2011 (280 students)
Math 304	Linear Algebra Fall 2009 (44 students), Fall 2010 (50 students)
Math 330	Number Systems Spring 2010 (25 students)
Math 371	Ordinary Differential Equations Fall 2009 (40 students)
Math 372	Dynamical Systems Fall 2010 (36 students)
Math 375	Complex Variables

Spring 2012

Math 461 **Topology I (undergraduate level)**
Fall 2011 (21 students)

Texas A&M University

Math 142 **Business Mathematics II**
Instructor (Summer 2006)

Math 152 **Calculus II (with Maple)**
Teacher Assistant (Fall 2007 (honors), Spring 2007, Fall 2005)

Math 253 **Calculus III (with Maple)**
Teacher Assistant (Fall 2006 (honors), Spring 2005)

Grader for the following courses:

Math 166 **Topics in Contemporary Mathematics II**

Math 308 **Differential Equations**

Math 367 **Basic Concepts of Geometry**

Math 414 **Fourier Series and Wavelets**

Math 416 **Modern Algebra II**

Math 433 **Applied Algebra**

Math 645

- Organizer and PC-chair of DLT-2020 (Developments in Language Theory) conference, University of South Florida, Tampa, FL, May 2020 (cancelled due to COVID pandemic)
- Organizer of a Special Session "Groups and topological dynamics" at the Joint Meeting of AMS-MAA, Denver, January 2020
- Organizer of "Zassenhaus groups and friends" international conference, University of South Florida, Tampa, FL, April 6-8, 2018
- Organizer of a Special Session "Combinatorial/Geometric/Probabilistic Methods in Group Theory" at the AMS Fall Central Sectional Meeting (#1131), Denton, TX, September 2017
- Organizer of a conference "Geometric and Probabilistic Methods in Group Theory and Dynamical Systems", Texas A&M University, College Station, TX, November 9-12, 2015
- Organizer of a Special Session "New trends in automata groups and semigroups" at the Joint International Meeting of AMS-EMS-PMS (#1111), Porto, June 2015
- Organizer of "Groups and Dynamics Workshop", Texas A&M University, May 6, 2014
- Organizer of "Groups Acting on Rooted Trees and Around" workshop, Institut Henri Poincaré, Paris, France, February 24-28, 2014
- Organizer of Geometry and Topology seminar at Binghamton University (2011-2012)
- Organizer of Toeholds in Topology seminar for graduate students at Binghamton University (2010-2012)

UNIVERSITY SERVICE

- Chair of the Department of Mathematics and Statistics (August 2022 – present)
- Associate Chair (January 2020 – August 2022)
 - Overseeing the graduate programs
 - Updating the graduate catalog (submitted 15 course proposals)
 - Supervising teaching assistants
 - Overseeing the registration issues for both undergraduate and graduate students
 - Scheduling the classes for the Tampa campus at the Math and Stats Department
- Chair of the graduate committee (January 2020 – August 2022)
- Member of the School and College Graduate Curriculum Committees (September 2020 – May 2022)
- Graduate Admissions Director at the Mathematics and Statistics Department at USF (September 2018 – January 2020)
- Developed the curriculum for an undergraduate course on "Crypt

- Advisor of Undergraduate Math Club at Binghamton University (2009-2012)
- Chapter Advisor for Pi Mu Epsilon Honor Society (2010-2012)

STUDENTS

- Arsalan Malik (Ph.D., Current), USF
- Kainna Cabral (Undergraduate from Northeastern University), REU at USF 2023
- Elsayed Ahmed (Ph.D., December 2018), USF
- Krystofer Baker (B.S. Honors Thesis, May 2017), USF
- Allen Pennington (M.S., May 2017), USF
- Suzana Milea (M.A., May 2014), USF
- Louis Caponi (M.A., May 2014), USF
- Tracy Stefanovic (B.S. Honors Thesis, 2014), USF

SKILLS

Languages	Ukrainian and Russian (native), English (fluent)
Computer	I have experience working and programming in different Computer Algebra Systems, including GAP, Maple, R Proficient in publishing scientific documents with L ^A T _E X