

Professor Vitaly Voloshin

Troy University
Mathematics
Email: vvoloshin@troy.edu

Education

Ph D, Cybernetics Institute of Ukrainian Academy of Sciences, Date Completed: June 1983.
Emphasis/Major(s): DSSCI
Supporting Areas of Emphasis: 01.01.09 -Mathematical Cybernetics

MS, Kishinev State University, Date Completed: June 1976.
Emphasis/Major(s): Applied Mathematics
Supporting Areas of Emphasis: Mathematics and Computer Science

Professional Positions

Other

Licensures and Certifications

DIPLOMA of Associate Professor of the Department of Mathematical Cybernetics of Moldova State University, State Committee of National Education of USSR, Moscow. (September 11, 1991 - Present).

DIPLOMA of Philosophy Doctor in Physical and Mathematical Sciences (specialization: 01.01.09 - Mathematical Cybernetics), Scientific Council of the Cybernetics Institute of the Ukrainian Academy of Sciences, USSR. (November 2, 1983 - Present).

DIPLOMA with Distinction of Master of Science in Applied Mathematics (Mathematics and Computer Science), State Examination Commission of the Republic of Moldova, USSR. (June 30, 1976 - Present).

Professional Memberships

Institute of Combinatorics and its Applications. (January 2, 2004 - Present).

Troy University Eta Chapter of Pi Mu Epsilon. (2003 - Present).

Moldavian Mathematical Society. (2001 - Present).

Hegel Society of America. (August 2003 - December 31, 2010).

Mathematical Association of America. (January 2004 - January 2010).

American Mathematical Society. (January 2003 - January 2010).

TEACHING

Teaching Experience

Troy University

CS 6625, Specialized Study in Computer and Information Science, 1 course.

MTH 1105, Intermediate Algebra, 5 courses.
 MTH 1110, Finite Mathematics, 105 courses.
 MTH 1112, Pre-Calculus Algebra, 1 course.
 MTH 1125, Calculus I, 9 courses.
 MTH 1126, Calculus II, 41 courses.
 MTH 2201, Business Calculus, 3 courses.
 MTH 2215, Applied Discrete Mathematics, 3 courses.
 MTH 2220, Computer Programming for Mathematics, 15 courses.
 MTH 2227, Calculus III, 4 courses.
 MTH 3318, Introduction to Advanced Mathematics, 16 courses.
 MTH 3364, Vector Calculus, 2 courses.
 MTH 4412, Discrete Mathematics, 8 courses.
 MTH 4420, Graph Theory, 9 courses.
 MTH 4424, Real Analysis I, 4 courses.
 MTH 4425, Real Analysis II, 3 courses.
 MTH 4426, Complex Analysis, 1 course.
 MTH 4491, Guided Independent Research, 2 courses.
 MTH 4493, Guided Independent Study, 5 courses.
 MTH 4494, Guided Independent Study, 1 course.
 MTH 5512, Discrete Mathematics, 3 courses.
 MTH 5520, Intro to Graph Theory, 3 courses.
 MTH 5524, Real Analysis I, 1 course.
 MTH 5525, Real Analysis II, 1 course.
 MTH 6612, Advanced Discrete Mathematics, 5 courses.
 MTH 6624, Applied Combinatorics, 3 courses.
 MTH 6625, Specialized Study in Area of Mathematics, 2 courses.

Directed Student Learning

Directed Individual/Independent Study, "TroyMathFest talk for 2022: Proofs about limits,"
 Mathematics. (October 12, 2021 - April 9, 2022).
 Advised: Ashik Kannan

Supervised Research, "Upper chromatic number of hypercube," Mathematics. (April 6, 2018 -
 April 8, 2019).
 Advised: Saurabh Bhandari

Directed Individual/Independent Study, "From Platon to Godel - TroyMathFest 2019
 presentation," Mathematics. (February 1, 2019 - April 7, 2019).
 Advised: Sarthak Mishra

Directed Individual/Independent Study, "TroyMathFest presentation: Fourier proof that e is
 irrational," Math. (January 12, 2019 - April 7, 2019).
 Advised: Bishal Niroula

Supervised Research, "Graph Theory in Chemistry," Chemistry and Physics. (August 22, 2018 -
 March 1, 2019).
 Advised: Du Luu

Directed Individual/Independent Study, "Motion of Curiosity Probe to Mars -TroyMathFest
 presentation," Mathematics. (February 1, 2018 - April 7, 2018).
 Advised: Aashish Kafle

Directed Individual/Independent Study, "Are Gravitational Fields Always Attractive? -
 TroyMathFest presentation," Mathematics. (February 1, 2018 - April 7, 2018).
 Advised: Aayush Nepal

Directed Individual/Independent Study, "Planar Graphs - Kuratowski's Theorem -TroyMathFest presentation," Mathematics. (February 1, 2018 - April 7, 2018).
Advised: Alexander Brassington

Directed Individual/Independent Study, "Chordal Graphs -TroyMathFest presentation," Mathematics. (February 1, 2018 - April 7, 2018).
Advised: Brad Gilley

Directed Individual/Independent Study, "Chromatic polynomial -TroyMathFest poster," Mathematics. (February 1, 2018 - April 7, 2018).
Advised: Drew Lambert

Directed Individual/Independent Study, "Quasi-triangulated graphs -TroyMathFest 2018 presentation," Mathematics. (February 1, 2018 - April 7, 2018).
Advised: Jack Jeffers

Directed Individual/Independent Study, "Unique colorability - TroyMathFest 2018 presentation," Mathematics. (February 1, 2018 - April 7, 2018).
Advised: Madelynn Lytle

Directed Individual/Independent Study, "Upper chromatic number -TroyMathFest 2018 presentation," Mathematics. (February 1, 2018 - April 7, 2018).
Advised: Nilotpall Mukherjee

Directed Individual/Independent Study, "Kempe's proof -TroyMathFest presentation," Mathematics. (February 1, 2018 - April 7, 2018).
Advised: Nishal Subedi

Directed Individual/Independent Study, "Non-planarity of K_5 and $K_{3,3}$ -TroyMathFest poster," Mathematics. (February 1, 2018 - April 7, 2018).
Advised: Rebecca Dover

Directed Individual/Independent Study, "Vizing's theorem - TroyMathFest 2018 presentation," Mathematics. (February 1, 2018 - April 7, 2018).
Advised: Ryann Firestine

Directed Individual/Independent Study, " $a+b=c$ - TroyMathFest 2018 presentation," Mathematics. (February 1, 2018 - April 7, 2018).
Advised: Sarthak Mishra

Directed Individual/Independent Study, "Uncolorability -TroyMathFest presentation," Mathematics. (February 1, 2018 - April 7, 2018).
Advised: Saurabh Bhandari

Directed Individual/Independent Study, "Splitting-Contraction Algorithm -TroyMathFest 2018 presentation," Mathematics. (February 1, 2018 - April 7, 2018).
Advised: Uttam Bhetuwal

Directed Individual/Independent Study, "Interstellar's Wormhole -TroyMathFest presentation," Mathematics. (February 1, 2018 - April 7, 2018).
Advised: Yogesh Niraula

Supervised Research, "Chromatic spectrum of interval mixed hypergraphs," mathematics. (November 10, 2016 - May 27, 2017).
Advised: Sartak Mishra

Supervised Research, "Splitting-contraction algorithm," mathematics. (January 18, 2017 - April 20, 2017).
Advised: Nilotpal Mukherjee

Directed Individual/Independent Study, "Metric Spaces," Troy University, Mathematics. (January 5, 2016 - April 22, 2016).
Advised: Tuong Hoang

Directed Individual/Independent Study, "Student Project." (February 20, 2016 - April 2, 2016).
Advised: Andrew Akers

Directed Individual/Independent Study, "Student Project." (February 20, 2016 - April 2, 2016).
Advised: Caitlin Shelton

Directed Individual/Independent Study, "Student Project," Mathematics. (February 20, 2016 - April 2, 2016).
Advised: Rachel Carter

Directed Individual/Independent Study, "Student Project," Computer Science. (February 20, 2016 - April 2, 2016).
Advised: Sean Alvarez

Directed Individual/Independent Study, "Student Project," Mathematics. (February 20, 2016 - April 2, 2016).
Advised: Yogesh Niraula

Directed Individual/Independent Study, "Student Project," Computer Science. (February 10, 2016 - April 2, 2016).
Advised: Cassandra Squier

Directed Individual/Independent Study, "Student Project," Computer Science. (February 10, 2016 - April 2, 2016).
Advised: Jeremy Bayman

Directed Individual/Independent Study, "Student Project," Computer Science. (February 10, 2016 - April 2, 2016).
Advised: Pryanka Sharma

Directed Individual/Independent Study, "Student Project," Computer Science. (February 10, 2016 - April 2, 2016).
Advised: Sahil Hamal

Directed Individual/Independent Study, "Student Project," Computer Science. (February 10, 2016 - April 2, 2016).
Advised: Sartak Mishra

Directed Individual/Independent Study, "Student Project," Computer Science. (February 10, 2016 - April 2, 2016).
Advised: Taylor Hopper

Directed Individual/Independent Study, "Student Project," Computer Science. (February 10, 2016 - April 2, 2016).
Advised: Wanxuan Lin

Directed Individual/Independent Study, "Statistics Project," Mathematics. (February 2, 2016 -

- April 2, 2016).
Advised: Amanda Jordan
- Directed Individual/Independent Study, "Student Project," Mathematics. (February 2, 2016 - April 2, 2016).
Advised: Arianna Robins
- Directed Individual/Independent Study, "Graph Theory Project," Mathematics. (February 2, 2016 - April 2, 2016).
Advised: Richard Sizelove
- Directed Individual/Independent Study, "Prime Numbers Project," Mathematics. (February 2, 2016 - April 2, 2016).
Advised: Sartak Mishra
- Directed Individual/Independent Study, "Statistics Project," Mathematics. (February 2, 2016 - April 2, 2016).
Advised: Sidney Stanfield
- Directed Individual/Independent Study, "Special problem in Complex Analysis," Troy University, Mathematics. (August 12, 2015 - December 5, 2015).
Advised: Julie Eagle
- Directed Individual/Independent Study, "Pigeonhole Principle," Troy University, Mathematics. (November 23, 2014 - April 30, 2015).
Advised: Dillon Davis
- Directed Individual/Independent Study, "Mathematics in Golf," Troy University, Mathematics. (November 1, 2014 - April 30, 2015).
Advised: Phillip Brennan
- Directed Individual/Independent Study, "Pascal's triangle," Troy University, Mathematics. (October 15, 2014 - April 30, 2015).
Advised: Samantha Kitchens
- Directed Individual/Independent Study, "Rene Decart's Calculus.," Troy University, Mathematics. (January 23, 2014 - March 30, 2014).
Advised: Hannah Bentley
- Directed Individual/Independent Study, "Life and legacy of Leonard Euler.," Troy University, Mathematics. (January 19, 2014 - March 30, 2014).
Advised: Carlie Spencer
- Directed Individual/Independent Study, "Splitting Contraction Algorithm.," Troy University, Mathematics. (January 11, 2014 - March 30, 2014).
Advised: Yhlas Joraev
- Supervised Research, "Chromatic spectrum of mixed interval hypergraphs.," Troy University, Mathematics. (January 2, 2013 - April 30, 2013).
Advised: Yonas Getahun
- Directed Individual/Independent Study, "Computation of distance matrix of a graph.," Troy University, Mathematics. (March 11, 2012 - April 30, 2012).
Advised: Shakil Rafi
- Directed Individual/Independent Study, "Converting incidence lists of hypergraphs," Troy

- University, Mathematics. (January 11, 2012 - April 30, 2012).
Advised: Courtney Raney
- Supervised Research, "Chromatic spectrum of mixed interval hypergraphs.," Troy University, Mathematics. (January 11, 2012 - April 30, 2012).
Advised: Christian Randolph
- Supervised Research, "Chromatic spectrum of cycles.," Troy University, Mathematics. (January 11, 2012 - April 30, 2012).
Advised: Colt Stumpf
- Directed Individual/Independent Study, "Computational Problems in Graph and Hypergraph Theory," Troy University, Mathematics. (April 15, 2011 - December 5, 2011).
Advised: Michael Cottle
- Directed Individual/Independent Study, "3-dimensional graphics based on parametrical equations, C++ coding.," Troy University, Computer Science. (July 5, 2011 - December 1, 2011).
Advised: Colt Stumpf
- Directed Individual/Independent Study, "Scientific computations in Block Designs: chromatic spectrum of BSTS(15)," Troy University, Computer Science. (April 11, 2011 - December 1, 2011).
Advised: Christian Randolph
- Supervised research talk at the research seminar of Auburn University, "Stinson Algorithm and its application in finding colorings of Steiner triple systems," Troy University, Mathematics and Computer Science. (July 1, 2011 - October 20, 2011).
Advised: Christian Randolph
- Directed Individual/Independent Study, "Scientific computations in Block Designs: chromatic spectrum of BSTS(15)," Troy University, Computer Science. (April 1, 2011 - August 1, 2011).
Advised: Dustin Gibson
- Directed Individual/Independent Study, "Finite elements method for solution of PDE: code in C++," Troy University, Mathematics. (July 5, 2011 - July 22, 2011).
Advised: Aaron Clemons
- "Maximal induced colorable subhypergraphs of all uncolorable BSTS (15)s," Troy University, Mathematics. (January 2, 2010 - July 15, 2011).
Advised: Jeremy Mathews
- Directed Individual/Independent Study, "Edge coloring of graphs: theory and computer project.," Troy University, Mathematics. (October 2010 - April 2011).
Advised: Huang Wei
- Directed Individual/Independent Study, "Edge coloring of graphs: theory and computer project.," Troy University, Mathematics. (October 2010 - April 2011).
Advised: Jing Shi
- Supervised Research, "Recognition of hypertrees: computer project," Troy University, Computer Science. (September 2010 - April 2011).
Advised: Christian Randolph
- Directed Individual/Independent Study, "Five Color Theorem.," Troy University, Computer Science. (November 2010 - February 26, 2011).

Advised: Colt Stumpf

Directed Individual/Independent Study, "Implementation of Dijkstra's Algorithm in c++," Troy University, Mathematics, CS major. (October 2010 - December 2010).
Advised: Colt Stumpf

Directed Individual/Independent Study, "Implementation of graph drawing, coloring, recognition of chordality algorithm and C++ code.," Troy University, Computer Science. (September 2010 - December 2010).
Advised: Dustin Gibson

Supervised Research, "Research project "Colorability of BSTS(15): theory and scientific computations".," Troy University, Mathematics. (January 2, 2007 - December 12, 2010).
Advised: Jeremy Mathews

Directed Individual/Independent Study, "Quasi-triangulated graphs," Troy University, Mathematics. (September 2010 - November 2010).
Advised: Xiao Dong Qi

Supervised Research, "All proper colorings of every colorable BSTS (15)," Troy University, Mathematics. (January 2, 2009 - July 15, 2010).
Advised: Jeremy Mathews, Brett Tolbert

PhD Thesis external reviewer, "PhD Thesis ""Special block-colourings of Steiner 2-designs""," McMaster University, Hamilton, Canada, PhD Thesis external reviewer. (January 2, 2010 - May 31, 2010).
Advised: Colin Reid

Supervised Research, "Dirac's Theorem," Troy University, Mathematics. (February 2009 - November 2009).
Advised: Robert Doughan

PhD Thesis external reviewer, Moldova State University, Republic of Moldova, PhD Thesis external reviewer. (January 12, 2008 - May 31, 2008).
Advised: Nadejda Sur

PhD Thesis external reviewer, "PhD Thesis "Color bounded hypergraphs"," University of Pannonia, Hungary, PhD Thesis external reviewer. (January 2, 2008 - May 31, 2008).
Advised: Csilla Bujtas

Directed Individual/Independent Study, "Introduction to Graph Theory concepts," Troy University, Mathematics. (September 20, 2007 - November 30, 2007).
Advised: Tashara Walker

Directed Individual/Independent Study, "Introduction to Graph Theory concepts," Troy University, Mathematics. (August 12, 2007 - November 30, 2007).
Advised: Robert Yawn

Directed Individual/Independent Study, "Introduction to Graph Theory concepts," Troy University, Mathematics. (August 12, 2006 - November 30, 2006).
Advised: Josef Murfin

Directed Individual/Independent Study, "Mixed Hypergraph coloring.," Troy University, Mathematics. (August 12, 2006 - November 30, 2006).
Advised: Ralph Wilson

Directed Individual/Independent Study, "Who was A. Nobel," Troy University, Mathematics.
(September 2005 - March 2006).
Advised: Amanda North

Directed Individual/Independent Study, "Developing the website for students
"www.TroyPostIt.com"," Troy University, Mathematics. (September 2005 - March 2006).
Advised: Charles Thompson

Directed Individual/Independent Study, "Biography of Gauss," Troy University, Mathematics.
(September 2005 - March 2006).
Advised: J. Linton

Directed Individual/Independent Study, "P.Erdos and his legacy," Troy University, Mathematics.
(September 2005 - March 2006).
Advised: Kate Harris

Directed Individual/Independent Study, "Biography of Gauss," Troy University, Mathematics.
(September 2005 - March 2006).
Advised: Pawel Grubecki

Supervised Research, "Research project "Generalization of the chromatic polinomial of a
cycle"," Troy University, Auburn University. (January 11, 2005 - December 15, 2005).
Advised: Julian Allagan

PhD Thesis consulting, "PhD Thesis "Chromatic spectrum of BP3-designs"," University of
Catania, Italy, PhD Thesis consulting. (2003).
Advised: Lucia Gionfriddo

Dissertation Defense Committee Member, Department of Mathematics, University of Illinois
Urbana-Champaign. (2002).
Advised: Michael Pelsmajer

PhD Thesis consulting, "PhD Thesis "BSTS with different upper and lower chromatic numbers","
University of Messina, Italy, PhD Thesis consulting. (1998 - 2002).
Advised: Antoinette Tripody

Supervised Research, "PhD Thesis "Structure of some classes of uniquely colorable mixed
hypergraphs", 2000, in Romanian," Department of Mathematical Cybernetics, Moldova
State University. (1996 - 2000).
Advised: Angela Niculitsa

Supervised Research, "PhD Thesis "Methods of investigation of chromatic properties of
hypergraphs", 2000, in Romanian," Department of Mathematical Cybernetics, Moldova
State University. (1996 - 2000).
Advised: Violeta Prisacaru

PhD Thesis consulting, "PhD Thesis "Connectivity and separation sets in graphs"," University of
Illinois Urbana-Champaign, PhD Thesis consulting. (1999).
Advised: Tao Jiang

Dissertation Defense Committee Member, "PhD Thesis "Extremal Problems in Graphs","
Department of Mathematics, University of Illinois Urbana-Champaign. (1994 - 1998).
Advised: Dhruv Mubayi

PhD Thesis consulting, "PhD Thesis "Extremal problems in graphs"," University of Illinois Urbana-
Champaign, PhD Thesis consulting. (1994 - 1998).

Advised: Dhruv Mubayi

Supervised Research, "PhD Thesis "Elaboration of methods and algorithms for coloring of some special classes of mixed hypergraphs", 1998, in Romanian," Department of Mathematical Cybernetics, Moldova State University. (1994 - 1998).

Advised: Elena Bulgaru

Supervised Research, "Master of Science Theses," Moldova State University. (1984 - 1998).

Advised: 2-5 computer science students yearly

PhD Thesis consulting, "PhD Thesis "Upper chromatic number of Steiner Systems"," University of Catania, Italy, PhD Thesis consulting. (1996).

Advised: Lorenzo Milazzo

Awards and Honors

Wallace D. Malone, Jr. Distinguished Faculty Award, Troy University. (August 10, 2018).

RESEARCH

Published Intellectual Contributions

Book Chapters

Voloshin, V., Tuza, Z., Bujtas, C. (2015). In L.W. Beineke and R. J. Wilson (Ed.), *Chapter 11. Hypergraph Colouring* (pp. 230-254). Cambridge: Cambridge University Press.

<http://www.cambridge.org/us/academic/subjects/mathematics/discrete-mathematics-information-theory-and-coding/topics-chromatic-graph-theory>

Voloshin, V., Tuza, Z. (2008). In E. Gyori et al (Ed.), *Problems and results on colorings of mixed hypergraphs* (17th ed., pp. 235-255). Horizons of Combinatorics. Bolyai Society

Mathematical Studies 17, Springer-Verlag.

Books

Voloshin, V., Gionfriddo, M., Milazzo, L. (2014). *Hypergraphs and Designs*. New York, NY: Nova Science Publishers, Inc..

https://www.novapublishers.com/catalog/product_info.php?products_id=51689

Voloshin, V. (2009). *Introduction to Graph and Hypergraph Theory (textbook)* (pp. 288). New York, NY: Nova Science Publishers, Inc.

www.novapublishers.com/catalog/product_info.php?products_id=8729&osCsid=d784a24d32097bffc878bd9c831a2591?products_id=8731&osCsid=d784a24d32097bffc878bd9c831a2591

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Voloshin, V. (2009). *Introduction to Graph Theory (textbook)* (pp. 144). New York, NY: Nova Science Publishers, Inc.

www.novapublishers.com/catalog/product_info.php?products_id=8731&osCsid=d784a24d32097bffc878bd9c831a2591

Voloshin, V. (2002). *Coloring Mixed Hypergraphs: theory, algorithms and applications* (vol. 17, pp. 181). Providence, RI: American Mathematical Society, Fields Institute Monograph 17.

www.ams.org/bookstore?fn=20&arg1=whatsnew&item=FIM-17

Conference Proceedings

- Voloshin, V. (2012). *1912-2012: One hundred years to chromatic polynomial. Abstracts of invited talks at COMBINATORICS 2012* (pp. p. 26). Perugia: University of Perugia.
- Voloshin, V., Bacso, G., Bujtas, C., Tuza, Z. (2010). *New challenges in the theory of hypergraph coloring* (13th ed., pp. 45-57). Mysore, India: Proc. ICDM 2008, RMS-Lecture Notes Series.
- Voloshin, V., Tuza, Z., Bacso, G., Bujtas, C. (2009). In J. Maxova, Ed. (Ed.), *Hypergraph coloring: new kinds of problems* (vol. 916, pp. 92-94). Midsummer Combinatorial Workshop 2008, KAM-DIMATIA Series.
- Voloshin, V. (2008). *Coloring theory: history, results and open problems* (pp. 173-177). Costermano (VR): Combinatorics 2008.
- Voloshin, V., Bacso, G., Bujtas, C., Tuza, Z. (2008). *New challenges in the theory of hypergraph coloring* (pp. 67-78). Mysore, India: Proc. Int. Conf. ICDM 2008.
- Voloshin, V. (2005). *Coloring Block Designs as Mixed Hypergraphs: survey* (1 (139) ed., vol. 26, pp. 15, abstract 1003-05-129.). Atlanta, GA: Abstracts of papers presented to the American Mathematical Society..
- Voloshin, V. (2003). *Coloring Mixed Hypegraphs: some results and open problems* (Serie II, Tomo XXV ed., vol. 9, pp. 237-244). Villa Pace, Messina,: . Proceedings of the International Symposium on Graphs, Designs and Applications. Rendiconti del Seminario Matematico di Messina..
- Voloshin, V. (2001). In C.S. Calude, M.J. Dinneen, and S. Sburlan (Ed.), *Greedy algorithms for the lower and upper chromatic numbers* (pp. 211-221). London: Combinatorics, Computability and Logic. Proceedings of DMTCS'01, Springer-Verlag..
- Voloshin, V., Jiang, T., Mubayi, D., Tuza, Z., West, D. (1999). In H.J. Broersma, U.Faigle and J.L. Hurink (Ed.), *Chromatic spectrum is broken* (pp. 231-234). Enschede: 6th Twente Workshop on Graphs and Combinatorial Optimization..
- Voloshin, V., Niculitsa, A., Voss, H.-J. (1999). In H.J. Broersma, U.Faigle and J.L. Hurink (Ed.), *Uniquely colorable and circular mixed hypergraphs* (pp. 173-176). Enschede: 6th Twente Workshop on Graphs and Combinatorial Optimization..
- Voloshin, V. (1999). *Upper chromatic number and C-perfect mixed hypergraphs* (pp. 267-269). Budapest: Paul Erdos and his Mathematics. Research Communications of the conference held in the memory of Paul Erdos..
- Voloshin, V. (1998). *Colorings of Mixed Hypergraphs* (Abstract 60. ed., pp. 1). Boca Raton, FL: Twenty-Ninth Southeastern International Conference on Combinatorics, Graph Theory and Computing..
- Voloshin, V., Brandstaedt, A., Chepoi, V., Dragan, F. (1998). *Dually chordal graphs* (11th ed., pp. 437-455). SIAM J. Discrete Math..
- Voloshin, V., Tuza, Z. (1997). In U.Faigle and C.Hoede (Ed.), *Uncolorable Mixed Hypergraphs* (pp. 231-234). Enschede: 5th Twente Workshop on Graphs and Combinatorial Optimization..
- Voloshin, V. (1996). *About colorings, greedy strategy and maximal life time* (pp. 161-164). Cluj-Napoca: Seminarul itinerant "Tiberiu Popovici" de ecuatii functionale, aproximare si convexitate. Cluj-Napoca, 21-25 Mai, (1996).

- Voloshin, V. (1995). In U.Faigle and C.Hoede (Ed.), *New Approach in Coloring Theory* (pp. 231-234). Enschede: 4th Twente Workshop on Graphs and Combinatorial Optimization, 7-9 June, 1995. University of Twente..
- Voloshin, V., Brandstaedt, A., Chepoi, V., Dragan, F. (1994). In Jan van Leuwen (Ed.), *Dually chordal graphs* (pp. 237-251). Utrecht: Graph-Theoretic Concepts in Computer Science, 19th International Workshop WG'93. LNCS 790, Springer..
- Voloshin, V. (1994). *On the upper chromatic number of a hypergraph* (pp. 19-20). Budapest: Conference on Discrete and Computational Geometry, Mathematical Institute of the Hungarian Academy of Sciences, Budapest, May 30- June 3, (1994)..
- Voloshin, V. (1990). *Generalized hypergraph cyclomatic number*. (pp. 27-31 (in Russian)). Kishinev: Problems of mathematisation of the Moldavian SSR national economy, Stiinta..
- Voloshin, V. (1990). *On the universality of triangulated graphs decomposition relatively to the colorings*. (pp. 95-98 (in Russian)). Yoshkar-Ola: Mathematical and programming aids in computer-aided design of the network informational systems..
- Voloshin, V. (1990). *Some properties of a hypertrees and their applications* (pp. 19-21 (in Russian)). Kiev: Methods and software of optimization, modeling and creating of computational systems..
- Voloshin, V., Prisacaru, C., Prisacaru, A., Nishchyi, M., Stadler, L. (1989). *Automated job place of the doctor-organizer for the new economical conditions of the work*. (pp. 87-88). Moscow: All-Union Conference " Applications of the Personal Computers in non-industrial sphere"..
- Voloshin, V. (1982). *Algorithms on hypertrees and triangulated hypergraphs* (pp. 27-29). Novosibirsk: Methods and Programs of resolving of optimization problems on graphs and networks, part 2. Theory, Algorithms. Theses of reports of 2nd All-Union Conference 24-26 August 1982, Ulan-Udae..

Journal Articles

- Voloshin, V., Kofman, A. (2022). The Abundance of Homologous MicroRNA-Binding Sites in the Human c-MET mRNA 3'UTR. *Biomed. J. Sci. & Tech. Res.*, 42(3)-2022. BJSTR. MS.ID.006740..

Other

- Voloshin, V. (2022). *According to the American Mathematical Society, as of 07/10/2024, there are 604 citations by 340 authors*. mathscinet-ams-org.libproxy.troy.edu/mathscinet/
- Voloshin, V., Tyshkevich, R., Liskovets, V., Alekseev, V., Borodin, O., Faradzhev, I., Klin, M., Melnikov, L., Melnikov, O., Valery Shevchenko, V. (2013). "Alexander Zykov: Which polynomials are chromatic?" in *TOPICS IN GRAPH THEORY. Tribute to A.A. Zykov on the occasion of his 90th birthday*.. Volume, Tribute to A.A. Zykov on the occasion of his 90th birthday.
- Voloshin, V. (2009). *Scientific activity of Lucia Gionfriddo* (pp. 10-14). Catania, Italy, Univeristy of Catania, Department of Mathematics and Computer Science: One Day Combinatorial Conference in Memory of Lucia Gionfriddo.
- Voloshin, V., Gionfriddo, M., Milazzo, L. (2001). *On the upper chromatic index of a multigraph* (pp. 12). Catania: Preprint of Catania University.

- Voloshin, V., Voss, H.-J. (2000). *Circular Mixed hypergraphs I : colorability and unique colorability*. (MATH-AL-3-2000 ed., pp. 14). Dresden: Preprint Inst. of Algebra MATH-AL-3-2000, Technische Universität Dresden.
- Voloshin, V., Niculitsa, A. (1999). *About uniquely colorable mixed hypertrees*. Dresden: Preprint MATH-AL-7-1999, Technische Universität Dresden.
- Voloshin, V. (1996). *Three questions to biologists* (pp. p.39.). Balatonlelle: International Colloquium on Combinatorics and Graph Theory. July 15-20, (1996). Abstracts..
- Voloshin, V. (1995). *The bases of New Coloring Theory* (pp. p. 86.). Marseille, Luminy: 5eme Colloque International Graphes et Combinatoire..
- Voloshin, V., Bulgaru, E. (1994). *Mixed Interval Hypergraphs* (pp. 8). Duisburg: Technical Report Gerhard-Mercator-Universität - Gesamthochschule Duisburg SM-DU-259,.
- Voloshin, V. (1994). *On the upper chromatic number of a hypergraph and related problems*. (pp. p.91.). Rome: An International Conference on Incidence Geometries and Combinatorial Structures COMBINATORICS'94, Roma, Montesilvano (PE), 10-16 September, (1994).
- Voloshin, V., Dragan, F., Prisacaru, C. (1992). *Algorithms and Programs for Discrete Structures Visualization*. (vol. 1, pp. p.38 (in Russian)). Kishinev: Scientific research conference of the Moldova State University. Theses of Reports, Kishinev, (1992)..
- Voloshin, V., Dragan, F. (1992). *Hypertrees and associated graphs*. (pp. 18p.). Kishinev: Technical Report DMC-MSU-0512, Moldova State University..
- Voloshin, V. (1992). *On the upper chromatic number of a hypergraph* (vol. 1, pp. p.42 (in Russian)). Kishinev: Scientific research conference of the Moldova State University. Theses of Reports, Kishinev, (1992)..
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Presentations Given

- Newman, N. A. (Presenter & Author), Voloshin, V. (Author Only), Voss, H.-J. (Author Only), 55th Southeastern International Conference on Combinatorics, Graph Theory & Computing, "About Perfection of Circular Mixed Hypergraphs," Florida Atlantic University, Boca Raton, FL, United States of America. (March 7, 2024).
- Voloshin, V., AACTM 2023 Meeting, "From the history of mixed hypergraph coloring," Troy, AL. (March 4, 2023).
- Newman, N. A. (Presenter & Author), Voloshin, V. (Author Only), Tuza, Z. (Author Only), Dósa, G. (Author Only), 34th Midwest Conference on Combinatorics and Combinatorial Computing (Oct 21-23), "Colorings of (p, q) -Uniform Complete Circular Mixed Hypergraphs," Illinois State University, Normal, IL, United States of America. (October 21, 2022).
- Voloshin, V., HyGraDe 2022, 5th Catania Combinatorial Conference., "From the history of mixed hypergraph coloring," University of Catania, Troy University, Catania, Sicilia, Italy. (July 7, 2022).
- Voloshin, V., TroyMathfest 2022, Troy University, NSF, Troy, AL. (April 9, 2022).
- Newman, N. A. (Presenter & Author), Voloshin, V. (Author Only), Tuza, Z. (Author Only), Dósa, G. (Author Only), 53rd Southeastern International Conference on Combinatorics, Graph Theory & Computing, "Colorings of (p, q) -Uniform Complete Circular Mixed Hypergraphs," Florida Atlantic University, Boca Raton, FL, United States of America. (March 7, 2022).
- Voloshin, V., Auburn University research seminar, invited Zoom talk, "Recent results in Mixed Hypergraph Coloring: a survey," Auburn University, Auburn, AL. (October 21, 2021).
- Newman, N. A. (Presenter & Author), Voloshin, V. (Author Only), 52nd Southeastern International Conference on Combinatorics, Graph Theory & Computing, "Colorings of (r, r) -Uniform Complete Circular Mixed Hypergraphs," Troy University Department of Mathematics and Statistics, Boca Raton, FL, United States of America. (March 7, 2021).
- Voloshin, V., Auburn University research seminar, invited Zoom talk, "From the history of mixed hypergraph coloring," Auburn University, Auburn, AL. (October 29, 2020).
- Newman, N. (Presenter Only), Voloshin, V. (Author Only), Troy University Mathematics Seminar, "An Introduction to Circular Hypergraph Colorings," Troy University, Troy, AL. (April 16, 2020).
- Voloshin, V., PLAS Seminar, "Why $K_{3,3}$ is not planar graph. PLAS.," PLAS, Troy, AL. (February 18, 2020).
- Voloshin, V., Auburn University research seminar, "Chromatic polynomials of graphs and hypergraphs: a survey, and some open problems.," Auburn University, Auburn, AL. (November 7, 2019).
- Voloshin, V., 1146th AMS Meeting, "Colorability of mixed hypergraphs: a survey," Auburn, AL. (March 17, 2019).
- Newman, N. A. (Presenter & Author), Roblee, K. J. (Author Only), Voloshin, V. (Author Only), 50th Southeastern International Conference on Combinatorics, Graph Theory & Computing, "About Colorings of $(3, 3)$ -Uniform Complete Circular Mixed Hypergraphs," Troy University, Boca Raton, FL, United States of America. (March 7, 2019).
- Voloshin, V., Departmental seminar, "Graph Spectra," Troy University Mathematics Department,

- Troy, AL. (March 5, 2019).
- Voloshin, V., Auburn University research seminar, "Some open problems in hypergraph coloring," Auburn University, Auburn, AL. (October 18, 2018).
- Voloshin, V., Troy University mathematics seminar, "From the history of mixed hypergraph coloring," Troy, AL. (August 22, 2018).
- Voloshin, V., Auburn University research seminar, "Mixed Hypergraph Coloring results obtained in Catania (Italy).," Auburn University, Auburn, AL. (February 22, 2018).
- Voloshin, V., Troy University mathematics seminar, "About my participation in HYGRADE, international conference in Italy.," Troy, AL. (September 29, 2017).
- Voloshin, V., HyGraDe 2017, "Mario Gionfriddo and his contribution to Mixed hypergraph Coloring," National Science Foundation of Italy, San Alessio Seculo, Sicily, Italy. (June 22, 2017).
- Voloshin, V. (Author Only), Troy Math Fest, Undergraduate Mathematics Conference of Troy University, "On the most famous error in Graph Theory," Troy University, Troy, Alabama, United States of America. (April 11, 2017).
- Voloshin, V. (Author Only), Troy Math Fest, Undergraduate Mathematics Conference of Troy University, "Supervised 28 student talks.," Troy University, Troy, Alabama, United States of America. (April 11, 2017).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics and Statistics, Auburn University, "Mixed Hypergraph Coloring update," Auburn University, Auburn, AL, United States of America. (October 20, 2016).
- Voloshin, V. (Author Only), Troy Math Fest, Undergraduate Mathematics Conference of Troy University, "Supervised 17 students talks.," Troy University, Troy, Alabama, United States of America. (April 2, 2016).
- Voloshin, V., Spring Southeastern AMS Sectional Meeting, University of Georgia, Athens, GA, "Coloring of mixed hypergraphs: survey of recent results and open problems," Athens, GA, United States of America. (March 6, 2016).
- Voloshin, V., Auburn Conference on Designs, Graphs, and Codes dedicated to 60th birthday of Chris Rodger, Auburn, AL, United States of America. (January 29, 2016).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics and Statistics, Auburn University, "Some results and open problems in Mixed Hypergraph Coloring," Auburn University, Auburn, AL, United States of America. (October 8, 2015).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics, Troy University, "Research travels during sabbatical leave in the spring 2015," Troy, AL, United States of America. (September 16, 2015).
- Voloshin, V. (Presenter & Author), Research seminar of the Institute of Mathematics and Informatics of Moldavian Academy of Sciences, "Mixed Hypergraph Coloring: from origin in Moldova to the whole world," Institute of Mathematics and Informatics of Moldavian Academy of Sciences, Chisinau, Moldova. (May 20, 2015).
- Voloshin, V. (Presenter & Author), Invited lecture for students in Moscow Witte University, "Discrete Mathematics: why do we need it?," Moscow Witte University, Moscow, Moscow,

- Russian Federation. (May 7, 2015).
- Voloshin, V. (Presenter & Author), Research seminar in Linyi University, "Some results and open problems in Mixed Hypergraph Coloring," Linyi University, Linyi, Shandong, China. (April 10, 2015).
- Voloshin, V. (Presenter & Author), Research seminar in Linyi University, "Some results and open problems in Mixed Hypergraph Coloring," Linyi University, Linyi, Shandong, China. (April 9, 2015).
- Voloshin, V. (Presenter & Author), Research seminar in Linyi University, "Some results and open problems in Mixed Hypergraph Coloring," Linyi University, Linyi, Shandong, China. (April 8, 2015).
- Voloshin, V. (Presenter & Author), Invited talk for students in Linyi University, "Mathematics: why do we love it?," Linyi University, Linyi, Shandong, China. (April 7, 2015).
- Voloshin, V. (Presenter & Author), Research seminar in Beijing Normal University, "Coloring theory: history, results and open problems," Beijing Normal University, Beijing, China. (April 2, 2015).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematical Sciences, University of Delaware, "1912-2015: One hundred+ years to chromatic polynomial," University of Delaware, Newark, DE, United States of America. (February 23, 2015).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics and Statistics, Auburn University, "Hypertrees and cycles in hypergraphs," Auburn University, Auburn, AL, United States of America. (February 10, 2015).
- Voloshin, V. (Presenter & Author), Colloquium at the Department of Mathematics, University of West Georgia, "Some results and open problems in hypergraph coloring," University of West Georgia, Carrollton, GA, United States of America. (January 16, 2015).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics and Statistics, Auburn University, "Some open problems in hypergraph coloring.," Auburn University, Auburn, AL, United States of America. (October 30, 2014).
- Voloshin, V. (Presenter & Author), Troy Math Fest, Undergraduate Mathematics Conference of Troy University, "Supervised 3 students talks.," Troy University, Montgomery, Alabama, United States of America. (March 29, 2014).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics and Statistics, Auburn University, "Coloring mixed hypergraphs: some new results and open problems.," Auburn University, Auburn, AL, United States of America. (February 20, 2014).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics and Statistics, Auburn University, "Hypergraph Coloring: a survey.," Auburn University, Auburn, AL, United States of America. (October 29, 2013).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics and Geomatics, Troy University, "1912-2012: One hundred years to Chromatic Polynomial," Troy, AL, United States of America. (January 16, 2013).
- Voloshin, V. (Presenter & Author), Research Colloquium of the Department of Mathematics and Philosophy, Columbus State University, "Coloring Mixed Hypergraphs: from Combinatorics

- to Philosophy.," Columbus State University, Columbus, GA, United States of America. (October 17, 2012).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics and Geomatics, Troy University, "Report about my participation at International Conference "Combinatorics 2012", Perugia, Italy, 8-15 September 2012," Troy, AL, United States of America. (September 26, 2012).
- Voloshin, V. (Presenter & Author), Invited speaker at International Conference "COMBINATORICS 2012", "1912-2012: One hundred years to chromatic polynomial.," National Science Foundation of Italy and Ministry of Education of Italy and Troy University, Perugia, Italy. (September 14, 2012).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics and Statistics, Auburn University, "One hundred years to Chromatic Polynomial," Auburn University, Auburn, AL, United States of America. (August 30, 2012).
- Voloshin, V. (Presenter & Author), Math Club and research seminar of the Department of Mathematics, "Discovery of the math club charter and history behind it," Troy University, Troy, AL, United States of America. (January 18, 2012).
- Voloshin, V. (Presenter & Author), Randolph, C. (Presenter & Author), Research seminar of the Department of Mathematics and Statistics, Auburn University, "Stinson hill-climbing algorithm and its application in coloring of $BST(25)$," Auburn University, Auburn, AL, United States of America. (October 20, 2011).
- Voloshin, V. (Presenter & Author), Research seminar, "Coloring theory: history, results and open problems.," Department of Mathematics and Statistics, University of South Alabama, Mobile, AL, United States of America. (October 18, 2011).
- Voloshin, V. (Presenter & Author), TroyMathFest, Troy University undergraduate conference, Dothan campus, "Coloring Mixed Hypergraphs: uncolorability," NSF and Troy University, Dothan, AL, United States of America. (March 26, 2011).
- Voloshin, V. (Presenter & Author), 42nd Southeastern International Conference on Combinatorics, Graph Theory, and Computing, "Perfect Mixed Hypergraphs: a survey," Troy University, Boca Raton, FL, United States of America. (March 9, 2011).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics, Physics, Computer Science and Geomatics, Troy University, "Mixed Hypergraph Colorings: research projects for students," Troy University, Troy, AL, United States of America. (February 2, 2011).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics and Statistics, Auburn University, "Coloring Mixed Hypergraphs: some results and open problems," Auburn University, Auburn, AL, United States of America. (January 15, 2011).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics, Physics, Computer Science and Geomatics, Troy University, "Introduction to Hypergraphs," Troy University, Troy, AL, United States of America. (September 1, 2010).
- Voloshin, V. (Presenter & Author), Troy Mathfest, undergraduate conference of Troy University, Montgomery campus, "Lucia Gionfriddo and her contribution to mixed hypergraph coloring," Troy University, Montgomery, AL, United States of America. (February 6, 2010).
- Voloshin, V. (Presenter & Author), International Conference in memory of Lucia Gionfriddo (main

- speaker), "Lucia Gionfriddo and her contribution to mixed hypergraph coloring," University of Catania (Italy), National Science Foundation of Italy, Catania, Italy. (December 12, 2009).
- Voloshin, V. (Presenter & Author), Colloquium of the Department of Mathematics & Statistics, and Department of Computer Science, Georgia State University, "Graph Coloring: history, generalizations, algorithms and open problems," Georgia State University, Atlanta, GA, United States of America. (November 6, 2009).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Biological & Environmental Sciences, Troy University, "Bioinformatics as a new discipline for unraveling Genetics," Troy University, Troy, AL, United States of America. (October 29, 2009).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics and Statistics, Auburn University, "Presentation of two new textbooks: "Introduction to Graph Theory" and "Introduction to Graph and Hypergraph Theory". Contents, main ideas, features and methodology," Auburn University, Auburn, AL, United States of America. (September 22, 2009).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics, Physics, Computer Science and Geomatics, Troy University, "Official presentation of two new textbooks: "Introduction to Graph Theory" and "Introduction to Graph and Hypergraph Theory"," Troy University, Troy, AL, United States of America. (August 26, 2009).
- Voloshin, V. (Presenter & Author), Invited Lewis-Parker lecture at the annual meeting of AACTM, University of Jacksonville, "Graph Coloring: history, results and open problems," University of Jacksonville, Jacksonville, AL. (February 28, 2009).
- Voloshin, V. (Presenter & Author), Invited colloquium at the Department of Computer Science, Kent State University, Kent, OH, "Graph Coloring: history, generalizations, algorithms and open problems," Department of Computer Science, Kent State University, Kent, OH, Kent, OH. (February 20, 2009).
- Voloshin, V. (Presenter & Author), Invited talk at the research seminar of the Department of Mathematics and Statistics, Auburn University, "Coloring Theory: history, results and open problems," Auburn University, Auburn, AL. (October 7, 2008).
- Voloshin, V. (Presenter & Author), Combinatorics 2008, the International conference on pure and applied combinatorics and its connections with Geometry, Graph Theory and Algebra (main speaker), "Coloring Theory: history, results and open problems," Troy University and National Science Foundation of Italy, Costermano, Verona, Italy. (June 26, 2008).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics and Statistics, Auburn University, "Some recent results and open problems in mixed hypergraph coloring," Auburn University, Auburn, AL. (February 26, 2008).
- Voloshin, V. (Presenter & Author), Joint AMS-MAA Meetings, San Diego, CA. Invited talk at the SIAM Mini-symposium on Graph Coloring and Partitioning, "Recent results and open problems in mixed hypergraph coloring," Troy University, San Diego, CA, United States of America. (January 8, 2008).
- Voloshin, V. (Presenter & Author), 20th Cumberland Conference on Combinatorics, Graph Theory, and Computing, "Open problems in Hypergraph Coloring," Troy University, Emory University, Atlanta, GA. (May 18, 2007).
- Voloshin, V. (Presenter & Author), Thirty-Eighth Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Florida Atlantic University, Boca Raton,

- Florida, "Problems and results in colorings of mixed hypergraphs," Troy University, Boca Raton, FL, United States of America. (March 7, 2007).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics, Physics, Computer Science and Geomatics, Troy University, "Open problems in mixed hypergraph coloring," Troy University, Troy, AL. (February 7, 2007).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics, Physics, Computer Science and Geomatics, Troy University, "Why I am writing another book on Graph Theory," Troy University, Troy, AL. (September 15, 2006).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics and Statistics, Auburn University, "On quasi-triangulated graphs," Auburn University, Auburn, AL, United States of America. (April 18, 2006).
- Voloshin, V. (Presenter & Author), Alabama Academy of Sciences, session at Troy University, "The history of the most famous error in Graph Theory," Troy University, Troy, AL. (March 17, 2006).
- Voloshin, V. (Presenter & Author), Troy Mathfest, undergraduate conference of Troy University, Montgomery campus, "Splitting-contraction as a generalization of connection-contraction," Troy University, Troy, AL. (February 4, 2006).
- Voloshin, V. (Presenter & Author), Twelfth International Conference on Statistics, Combinatorics, Mathematics and Applications, Auburn University, "Modeling with Mixed Hypergraph Colorings: a survey," Troy University, Auburn, AL. (December 2, 2005).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics, Physics, Computer Science and Geomatics, Troy University, Troy University, Troy, AL, United States of America. (September 2, 2005).
- Voloshin, V. (Presenter & Author), 18th Cumberland Conference on Combinatorics, Graph Theory, and Computing, "On Quasi-Triangulated Graphs," Troy University, Huntsville, AL, United States of America. (April 12, 2005).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics, Physics, Computer Science and Geomatics, Troy University, "Introduction to Coloring Theory," Troy University, Troy, AL, United States of America. (April 12, 2005).
- Voloshin, V. (Presenter & Author), 82nd Annual Meeting of the Alabama Academy of Sciences. Birmingham-Southern College, Birmingham, "From the history of Graph Coloring," Troy University, Birmingham, AL, United States of America. (March 31, 2005).
- Voloshin, V. (Presenter & Author), Thirty-Sixth Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Florida Atlantic University, Boca Raton, Florida, "Planarity and Colorability, a survey," Troy University, Boca Raton, FL, United States of America. (March 9, 2005).
- Voloshin, V. (Presenter & Author), Troy Mathfest, undergraduate conference of Troy University, Montgomery campus, "Why it is better to be smart than greedy," Troy University, Troy, AL, United States of America. (March 4, 2005).
- Voloshin, V. (Presenter & Author), 55th annual meeting of the Alabama Association of College Teachers of Mathematics, Troy University, Dothan, "From the history of chromatic polynomials," Troy University, Dothan, AL, United States of America. (February 12, 2005).

- Voloshin, V. (Presenter & Author), Invited talk at the AMS Special Session on Design Theory and Graph Theory , American Mathematical Society Meeting in Atlanta, GA, "Coloring Block Designs: a survey," Troy University, Atlanta, GA, United States of America. (January 5, 2005).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics, Physics, Computer Science and Geomatics, Troy University, "About my participation at the International Conference Combinatorics 2004 which took place September 12-18, 2004 in Italy," Troy University, Troy, AL, United States of America. (September 27, 2004).
- Voloshin, V. (Presenter & Author), Invited speaker and scientific committee member, International Conference Combinatorics 04, Catania - Capomulini, Italy, "Recent results and open problems in mixed hypergraph coloring," Troy University and National Science Foundation of Italy, Capomulini, Catania, Italy. (September 12, 2004).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics, Physics, Computer Science and Geomatics, Troy University, "Uncolorable Mixed Hypergraphs: Why the Concept of Natural Number is Contradictory," Troy University, Troy, AL, United States of America. (August 31, 2004).
- Voloshin, V. (Presenter & Author), 17th Cumberland Conference on Combinatorics, Graph Theory, and Computing , Middle Tennessee State University, "Coloring Mixed Hypergraphs: results and open problems," Troy University, Murfreesboro, Tennessee, United States of America. (May 20, 2004).
- Voloshin, V. (Presenter & Author), Thirty-fifth Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Florida Atlantic University, Boca Raton, "Coloring Mixed Hypergraphs: A Survey," Troy University, Boca Raton, FL, United States of America. (March 10, 2004).
- Voloshin, V. (Presenter & Author), Troy Mathfest, undergraduate conference of Troy University, Montgomery campus, "List colorings without ... lists," Troy University, Troy, AL, United States of America. (March 4, 2004).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics, Physics, Computer Science and Geomatics, Troy University, "Chordal graphs and chromatic polynomials," Troy University, Troy, AL, United States of America. (February 10, 2004).
- Voloshin, V. (Presenter & Author), Invited talk at the research seminar of the Department of Discrete and Statistical Sciences, Auburn University, "Coloring Block designs: a survey," Auburn University, Auburn, AL, United States of America. (November 13, 2003).
- Voloshin, V. (Presenter & Author), Invited speaker, ISGDA2003, International Symposium on Graphs, Designs and Applications, Messina, Italy, "Mixed Hypergraph Coloring: recent results and open problems and conjectures," Troy University and National Science Foundation of Italy, Messina, Sicily, Italy. (September 30, 2003).
- Voloshin, V. (Presenter & Author), Research seminar, Department of Mathematics and Physics, Troy State University: Introduction to Mixed Hypergraph Coloring, "Introduction to Mixed Hypergraph Coloring," Troy University, Troy, AL, United States of America. (August 26, 2003).
- Voloshin, V. (Presenter & Author), Research seminar of the Department of Mathematics, Troy University (job interview), "Coloring Mixed Hypergraphs: introduction," Troy State University, Troy, AL, United States of America. (February 24, 2003).

- Voloshin, V., Research seminar of the Department of Mathematics, University of Delaware, "Coloring Mixed Hypergraphs: basic ideas," University of Delaware, Newark, DE, United States of America. (September 13, 2002).
- Voloshin, V., Research seminar of the Department of Mathematics of University of Illinois at Urbana-Champaign, "Coloring Mixed hypergraphs: introduction," University of Illinois Urbana-Champaign, Urbana, IL, United States of America. (March 18, 2002).
- Voloshin, V., Research seminar of the Department of Mathematics, University of Catania, "Coloring Mixed Hypergraphs derived from Block Designs," University of Catania and CNR (National Science Foundation of Italy), Catania, Sicily, Italy. (October 12, 2001).
- Voloshin, V., 23rd session of Odessa research seminar on Discrete Mathematics (organized by A.Zykov), Odessa, Ukraine, "Mixed Hypergraph coloring and list colorings," Odessa, Odessa, Ukraine. (September 11, 2001).
- Voloshin, V., Invited talk at Third Discrete Mathematics and Theoretical Computer Science conference (DMTCS'01), Constanta, Romania, "Greedy algorithm for the upper chromatic number of a hypergraph," Organizing committee, Constanta, Romania. (June 2, 2001).
- Voloshin, V., Research seminar of Department of Physics and Computing, Wilfrid Laurier University, Waterloo, Ontario, Canada, "Coloring Mixed Hypergraphs: introduction," Wilfrid Laurier University and NSERC (National Scientific Council of Canada), Waterloo, Ontario, Canada. (May 31, 2001).
- Voloshin, V., Research seminar of the Department of Mathematics, University of Catania (Italy), "Basic definitions of Mixed Hypergraph Coloring," University of Catania and CNR (National Science Foundation of Italy), Catania, Sicily, Italy. (October 30, 2000).
- Voloshin, V., Workshop on Block Designs, Fields Institute, "Coloring of Block Designs," Fields Institute, Toronto, Ontario, Canada. (March 1, 2000).
- Voloshin, V., Invited Colloquium at Department of Mathematics, McMaster University (Hamilton), "About the upper chromatic number of a hypergraph," McMaster University, Hamilton, Ontario, Canada. (February 15, 2000).
- Voloshin, V., Invited (two) talks at Fields Institute, University of Toronto (The Special Year in Graph Theory and Combinatorial Optimization), "Introduction to mixed hypergraph coloring: basic concepts and results," University of Toronto, Toronto, Ontario, Canada. (January 23, 2000).
- Voloshin, V., Research seminar of Dipartimento di Matematica, Politecnico di Milano as Cariplo Fellow, "Perfect Mixed Hypergraphs," Cariplo Fellowship, Milan, Milan, Italy. (November 10, 1999).
- Voloshin, V., Invited talk at International Messina Workshop on Graphs and Combinatorics, "Colorability problem in mixed hypergraphs," University of Messina and National Science Foundation of Italy, Messina, Sicily, Canada. (November 8, 1999).
- Voloshin, V., Conference "Paul Erdős and his Mathematics", held in the memory of Paul Erdős, Budapest, Hungary (supported by the Organizing Committee), "Perfection of Mixed Hypertrees," Organizing committee, Budapest, Hungary. (June 6, 1999).
- Voloshin, V., invited talk, Discrete Mathematics Seminar in TU Zielona Gora, Poland, "Open problems in mixed hypergraph coloring," TU Zielona Gora, Poland, Zielona Gora, Poland. (March 25, 1999).

- Voloshin, V., Dresden Workshop on Graph Theory, "Uniquely colorable mixed hypergraphs," TU Dresden, Dresden, Germany. (February 18, 1999).
- Voloshin, V., 4th Catania Workshop on Graphs and Combinatorics, invited speaker, "Uncolorable Mixed Hypergraphs," University of Catania and CNR (National Science Foundation of Italy), Catania, Sicily, Italy. (October 12, 1998).
- Voloshin, V., Invited lecturer, DIMACS Research and Educational Institute, Rutgers, The State University of New Jersey, "Coloring Mixed Hypergraphs: results and open problems," DIMACS, Rutgers, New Jersey, United States of America. (August 8, 1998).
- Voloshin, V., 9th SIAM Conference on Discrete Mathematics, University of Toronto, Canada, "Open problems in mixed hypergraph coloring," SIAM and National Research Council of USA, Toronto, Ontario, Canada. (June 12, 1998).
- Voloshin, V., 29th Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Florida Atlantic University, Boca Raton, Florida, "Basic concepts in mixed hypergraph coloring," Long-Term COBASE research grant on Colorings of Mixed Hypergraphs, Boca Raton, FL, United States of America. (March 11, 1998).
- Voloshin, V., Research seminar of the Department of Mathematics, University of Catania (Italy), "Mixed Hypergraphs and Block Designs: open problems," University of Catania and CNR (National Science Foundation of Italy), Catania, Sicily, Italy. (October 20, 1997).
- Voloshin, V., Invited speaker, Malta International Workshop on Graphs and Combinatorics, "Algorithms in mixed hypergraph coloring and Hypergraph Drawing and Optimization System," University of Catania and CNR (National Science Foundation of Italy), La Valetta, Malta. (September 25, 1997).
- Voloshin, V., Invited fellow presentation, International Conference Graph Drawing'97, Rome, Italy, "Hypergraph Drawing Algorithm and Software," Organizing committee, Rome, Italy. (September 19, 1997).
- Voloshin, V., Research seminar at Institut für Theoretische Mathematik, TU Bergakademie Freiberg, "New ideas in graph coloring," TU Dresden, DAAD, Freiberg, Germany. (July 10, 1997).
- Voloshin, V., Research seminars in the Institut für Algebra, TU-Dresden, "Circular Mixed Hypergraphs," TU Dresden, DAAD, Dresden, Germany. (May 27, 1997).
- Voloshin, V., Tuza, Z., 5th Twente Workshop on Graph Theory and Combinatorial Optimization, Twente University, The Netherlands, "Uncolorable Mixed Hypergraphs," Organizing committee, Enschede, Netherlands. (May 19, 1997).
- Voloshin, V., Research seminar of the Department of Mathematics University of L'Aquila, Italy, "Introduction to Mixed Hypergraph Coloring, 3 talks," University of L'Aquila, L'Aquila, Italy. (November 1996).
- Voloshin, V., Research seminar of the Department of Mathematics, University of Catania (Italy), "Uncolorable Mixed Hypergraphs," University of Catania and CNR (National Science Foundation of Italy), Catania, Sicily, Italy. (November 2, 1996).
- Voloshin, V., Research seminar of the Department of Mathematics and Statistics, Auburn University, "About new problems in Coloring Theory," COBASE grant, Auburn, AL, United States of America. (April 12, 1996).

- Voloshin, V., Research seminar of the Department of Mathematics, Polytechnic Institute of Milan (Italy), "Coloring Mixed Hypergraphs: results and open problems," Polytechnic Institute of Milan and CNR (Natioanl Science Foundation of Italy), Milan, Italy. (November 18, 1995).
- Voloshin, V., Research seminar of the Department of Mathematics, University of Rome (Italy), "Coloring Mixed Hypergraphs: results and open problems," University of Rome and CNR (Natioanl Science Foundation of Italy), Rome, Italy. (November 16, 1995).
- Voloshin, V., Research seminar of the Department of Mathematics, University of Neaples (Italy), "Coloring Mixed Hypergraphs: results and open problems," University of Neaples and CNR (Natioanl Science Foundation of Italy), Neaples, Italy. (November 14, 1995).
- Voloshin, V., Research seminar of the Department of Mathematics, University of Messina (Italy), "Coloring Mixed Hypergraphs: results and open problems," University of Messina and CNR (Natioanl Science Foundation of Italy), Messina, Sicily, Italy. (November 12, 1995).
- Voloshin, V., Research seminar of the Department of Mathematics, University of Catania (Italy), "Coloring Mixed Hypergraphs: results and open problems," University of Catania and CNR (Natioanl Science Foundation of Italy), Catania, Sicily, Italy. (November 9, 1995).
- Voloshin, V., 5th International Conference on Graphs and Combinatorics Marseille-Luminy, France, "Upper chromatic number of a hypergraph," Organizing committee, Marseille, France. (September 5, 1995).
- Voloshin, V., International Workshop Graph Concepts in Theoretical Computer Science, Aachen, Germany, "Algorithms to test uncolorability," Organizing committee, Aachen, Germany. (June 20, 1995).
- Voloshin, V., 4th Twente Workshop on Graphs and Combinatorial Optimization, University of Twente, Enschede, The Netherlands, "Co-hypergraphs and greedy algorithms," Organizing committee, Enschede, Netherlands. (June 8, 1995).
- Voloshin, V., Research seminar of the Department of Mathematics, Georgia State University, "Mixed Hypergraph Coloring: an introduction," COBASE grant, Atlanta, GA, United States of America. (March 27, 1995).
- Voloshin, V., Research seminar of the Department of Mathematics University of Duisburg, Germany, "Colorability of Mixed Hypertrees," Volkswagen-Stiftung Project No.I/69041, Duisburg, Germany. (March 23, 1995).
- Voloshin, V., International Conference "Carolus Magnus Colloquium" at Aachen, Germany, "Planar Mixed Hypergraphs," Organizing committee, Aachen, Germany. (March 20, 1995).
- Voloshin, V., Research seminar of the Department of Mathematics, University of Catania (Italy), "Greedy algorithms for the upper chromatic number of a hypertree," University of Catania and CNR (Natioanl Science Foundation of Italy), Catania, Sicily, Italy. (October 3, 1994).
- Voloshin, V., Invited speaker, Catania Workshop on Combinatorics., "Cycloids and their colorings," University of Catania and CNR (Natioanl Science Foundation of Italy), Catania, Sicily, Italy. (September 22, 1994).
- Voloshin, V., Invited lecturer, International Conference COMBINATORICS'94 (Roma-Montesilvano (PE), Italy), "On the upper chromatic number of a hypergraph," Soros Foundation, Rome, Italy. (September 12, 1994).

Voloshin, V., Research seminar of the Department of Mathematics University of Duisburg, Germany, "Perfection of Mixed Hypertrees," Volkswagen-Stiftung Project No.I/69041, Duisburg, Germany. (March 12, 1994).

Voloshin, V., Research seminar of the Department of Mathematics, University of Catania (Italy), "Introduction to mixed hypergraph coloring: colorability and algorithms," University of Catania and CNR (National Science Foundation of Italy), Catania, Sicily, Italy. (October 25, 1993).

Voloshin, V., International Conference on Discrete Mathematics, University of Potsdam, Germany, "New approach in hypergraph coloring," Organizing committee, Potsdam, Germany. (September 27, 1993).

Voloshin, V., Multiple talks at the research seminar of the Department of Mathematical Cybernetics in Moldova State University during 1980-1992, "Graph and Hypergraph coloring and related problems," Kishinev, Moldova. (1992).

Voloshin, V., Multiple talks at the research seminars in Moscow State University, Kiev Institute of Cybernetics, Byelorussian State University, Odessa Polytechnic Institute, and other universities in USSR and Romania in 1980 - 1992, "Graph and Hypergraph Theory," Moscow, Kiev, Minsk, Odessa, Batumi, Tiraspol, Vadului-Voda, Cluj Napoca etc. (1992).

Contracts, Grants and Sponsored Research

Grant

Voloshin, V., "Chancellor International Initiative," Sponsored by Troy University, Troy University, \$1,800.00.

Voloshin, V., "NSA grant proposal "Some problems in mixed hypergraph coloring"," Sponsored by NSA, Federal, \$20,000.00.

Voloshin, V., "NSF grant proposal "Mixed hypergraph coloring"," Sponsored by NSF, Federal, \$20,000.00.

Voloshin, V., "NSF grant proposal "Mixed hypergraph coloring"," Sponsored by NSF, Federal, \$20,000.00.

Voloshin, V., "NSF REU grant proposal "Mixed hypergraph coloring"," Sponsored by NSF REU, Federal, \$40,000.00.

Voloshin, V., "NSF RUI grant proposal "Mixed hypergraph coloring"," Sponsored by NSF RUI, Federal, \$40,000.00.

Voloshin, V. (Principal), "Open Problems in Mixed Hypergraph Coloring," Sponsored by Fulbright Foundation, Federal.

Voloshin, V. (Principal), "Invited speaker at HyGraDe 2017," Sponsored by National Science Foundation of Italy, Other, \$2,000.00. (June 19, 2017 - June 25, 2017).

Voloshin, V., "Paper presentation grant for participation at HyGraDe 2017, International Conference in Italy," Sponsored by FDC and Department of Mathematics, Troy University, Troy University, \$2,000.00. (June 19, 2017 - June 25, 2017).

Voloshin, V., "Research in Coloring of Mixed Hypergraphs," Sponsored by Troy University Confucius Institute, Troy University, \$2,000.00. (March 31, 2015 - April 15, 2015).

- Voloshin, V., "Continuing international collaboration with Italy, Hungary, China.," Sponsored by FDC of Troy University, Troy University, \$2,250.00. (May 1, 2014 - August 15, 2014).
- Voloshin, V., "Summer research grant Hypergraphs and Designs," Sponsored by FDC of Troy University, Troy University, \$3,100.00. (May 1, 2013 - August 12, 2013).
- Voloshin, V. (Principal), "Invited speaker at Combinatorics 2012," Sponsored by National Science Foundation of Italy, Other, \$2,000.00. (September 8, 2012 - September 15, 2012).
- Voloshin, V., "Travel to Combinatorics 2012," Sponsored by FDC of Troy University, Troy University, \$1,800.00. (September 8, 2012 - September 15, 2012).
- Voloshin, V., "Summer research grant Colorability problem in Mixed Hypergraph Coloring," Sponsored by FDC of Troy University, Troy University, \$4,000.00. (June 1, 2011 - July 31, 2011).
- Voloshin, V., "Paper presentation grant "Perfect Mixed Hypergraphs" for participation at 42nd South-Eastern International Conference in Graph Theory, Florida Atlantic University, Boca Raton, Florida," Sponsored by FDC of Troy University, Troy University, \$750.00. (March 6, 2011 - March 11, 2011).
- Voloshin, V., "Research grant (time release) for submitting a NSF RUI Grant Proposal," Sponsored by FDC of Troy University, Troy University, \$3,000.00. (January 5, 2010 - May 31, 2010).
- Voloshin, V., "Research grant (time release) for research in Graphs, Hypergraphs and Block Designs," Sponsored by FDC of Troy University, Troy University, \$3,000.00. (August 1, 2009 - December 31, 2009).
- Voloshin, V., "Summer research grant of Troy University "Some problems in mixed hypergraph coloring"," Sponsored by FDC of Troy University, Troy University, \$4,500.00. (June 1, 2008 - July 31, 2008).
- Voloshin, V., "Summer research grant of Troy University "Introduction to Graph and Hypergraph Theory"," Sponsored by FDC of Troy University, Troy University, \$4,500.00. (June 1, 2007 - July 31, 2007).
- Voloshin, V., "Research Grant (course release) of Troy University "Introduction to Graph and Hypergraph Theory"," Sponsored by FDC of Troy University, Troy University, \$3,000.00. (January 2, 2007 - May 31, 2007).
- Voloshin, V., "Paper presentation grant for participation at 20th Cumberland Conference on Combinatorics, Graph Theory, and Computing with talk "Open problems in Hypergraph Coloring", Emory University, Atlanta, GA," Sponsored by Department of Mathematics of Troy University, Troy University, \$300.00. (May 17, 2007 - May 19, 2007).
- Voloshin, V., "Paper presentation grant for participation at Thirty-Eighth Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Florida Atlantic University, Boca Raton, Florida. Title of the talk: "Problems and results in colorings of mixed hypergraphs.", " \$750.00. (March 5, 2007 - March 9, 2007).
- Voloshin, V., "Summer research grant of Troy University "Circular Mixed Hypergraphs", " Sponsored by FDC of Troy University, Troy University, \$4,500.00. (June 1, 2005 - July 31, 2005).
- Voloshin, V., "Paper presentation grant for participation at Thirty-Sixth Southeastern International

- Conference on Combinatorics, Graph Theory, and Computing, Florida Atlantic University, Boca Raton, Florida. Title of the talk: "Planar Mixed Hypergraphs: a survey", \$750.00. (March 6, 2005 - March 10, 2005).
- Voloshin, V., "Summer research grant of Troy University "Some problems in Mixed Hypergraph Coloring", Sponsored by FDC of Troy University, Troy University, \$4,500.00. (June 1, 2004 - July 31, 2004).
- Voloshin, V., "Paper presentation grant for participation at 17th Cumberland Conference on Combinatorics, Graph Theory, and Computing with talk "Coloring Mixed Hypergraphs: results and open problems", Sponsored by Department of Mathematics of Troy University, Troy University, \$300.00. (May 20, 2004 - May 22, 2004).
- Voloshin, V., "Paper presentation grant for participation at Thirty-fifth Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Florida Atlantic University, Boca Raton. Talk: "Coloring Mixed Hypergraphs: A Survey", Sponsored by FDC of Troy University, Troy University, \$750.00. (March 6, 2004 - March 10, 2004).
- Voloshin, V., "Visiting Professor, University of Catania, Italy," Sponsored by National Science Foundation of Italy, CNR, Other, \$3,000.00. (October 1, 2001 - October 31, 2001).
- Voloshin, V., "Visiting Scientist, Department of Physics and Computing, Wilfrid Laurier University, Waterloo, Ontario, Canada," Sponsored by Natural Sciences and Engineering Research Council of Canada, Other, \$2,500.00. (May 15, 2001 - June 20, 2001).
- Voloshin, V., "Visiting Professor, University of Catania, Italy," Sponsored by National Science Foundation of Italy, CNR, Other, \$4,000.00. (October 1, 2000 - November 30, 2000).
- Voloshin, V., "Visiting Scientist, the Department of Mathematics, McMaster University (Hamilton)," Sponsored by McMaster University, Hamilton, Ontario, Canada, Other, \$2,000.00. (February 2, 2000 - March 31, 2000).
- Voloshin, V., "Visiting Member, Fields Institute, University of Toronto (The Special Year in Graph Theory and Combinatorial Optimization)," Sponsored by University of Toronto, Other, \$2,000.00. (January 1, 2000 - February 1, 2000).
- Voloshin, V., "Cariplo Fellowship, Polytechnic Institute of Milan, Italy," Sponsored by Cariplo Foundation, Other, \$6,000.00. (October 1, 1999 - December 31, 1999).
- Voloshin, V., "DFG Grant on Colorings of Circular Mixed Hypergraphs, Technical University of Dresden, Germany," Sponsored by DFG, German National Science Foundation, Other, \$6,000.00. (January 25, 1999 - April 6, 1999).
- Voloshin, V., "Visiting Professor, University of Catania, Italy," Sponsored by National Science Foundation of Italy, CNR, Other, \$4,000.00. (October 1, 1998 - November 30, 1998).
- Voloshin, V., "Long-Term COBASE research grant on Colorings of Mixed Hypergraphs, NSF and University of Illinois at Urbana-Champaign," Sponsored by NSF, Federal, \$20,000.00. (March 1, 1998 - August 31, 1998).
- Voloshin, V., "Visiting Professor, University of Catania, Italy," Sponsored by National Science Foundation of Italy, CNR, Other, \$4,000.00. (October 1, 1997 - November 30, 1997).
- Voloshin, V., "Grant of DAAD, German Academic Exchange Program, Technical University of Dresden, Germany," Sponsored by DAAD, German Academic Exchange Program, Other, \$5,000.00. (May 25, 1997 - July 25, 1997).

Voloshin, V., "Visiting Professor, University of Catania, Italy," Sponsored by National Science Foundation of Italy, CNR, Other, \$4,000.00. (October 1, 1996 - November 30, 1996).

Voloshin, V., "Short term COBASE research grant of NSF and Georgia State University, Atlanta, Georgia," Sponsored by NSF, Federal, \$2,000.00. (March 1, 1996 - April 15, 1996).

Voloshin, V., "Visiting Professor, University of Catania, Italy," Sponsored by National Science Foundation of Italy, CNR, Other, \$4,000.00. (September 20, 1995 - November 20, 1995).

Voloshin, V., "Research Grant "Volkswagen-Stiftung Project No.I/69041", University of Duisburg, Germany," Sponsored by Volkswagen-Stiftung (Volkswagen Research Foundation), Other, \$1,500.00. (March 1, 1995 - March 31, 1995).

Voloshin, V., "Visiting Professor, University of Catania, Italy," Sponsored by National Science Foundation of Italy, CNR, Other, \$4,000.00. (September 23, 1994 - November 13, 1994).

Voloshin, V., "Research grant of Soros Foundation of Moldova and National Science Foundation of Italy for participation as the main speaker at International Conference COMBINATORICS'94 (Roma-Montesilvano (PE), Italy)," Sponsored by Soros Foundation of Moldova and National Science Foundation of Italy, CNR, Other, \$1,500.00. (September 10, 1994 - September 16, 1994).

Voloshin, V., "Research Grant "Volkswagen-Stiftung Project No.I/69041", University of Duisburg, Germany," Sponsored by Volkswagen-Stiftung (Volkswagen Research Foundation), Other, \$1,500.00. (March 1, 1994 - March 31, 1994).

Voloshin, V., "Visiting Professor, University of Catania, Italy," Sponsored by National Science Foundation of Italy, CNR, Other, \$3,500.00. (September 30, 1993 - November 25, 1993).

Sponsored Research

Voloshin, V., "Participation at Atlanta Lecture Series in Combinatorics and Graph Theory II organized jointly by Emory University, Georgia Institute of Technology and Georgia State University, with support from the National Security Agency and the National Science Foundation, and Georgia Tech's program in Algorithms, Combinatorics, and Optimization [ACO]," Sponsored by Department of Mathematics of Troy University, Troy University, \$332.45. (November 2, 2013 - November 3, 2013).

Voloshin, V., "Participation at Atlanta Lecture Series in Combinatorics and Graph Theory II organized jointly by Emory University, Georgia Institute of Technology and Georgia State University, with support from the National Security Agency and the National Science Foundation, and Georgia Tech's program in Algorithms, Combinatorics, and Optimization [ACO]," Sponsored by Department of Mathematics of Troy University, Troy University, \$215.00. (February 26, 2011).

Voloshin, V., "Participation as invited speaker at the International Conference in memory of Lucia Gionfriddo and conducting joint research," Sponsored by University of Catania and National Science Foundation of Italy, Other, \$2,500.00. (December 9, 2009 - December 19, 2009).

Voloshin, V., "As main speaker, participation at Combinatorics 2008, the International conference on pure and applied combinatorics and its connections with Geometry, Graph Theory and Algebra and conducting joint research," Sponsored by National Science Foundation of Italy and Troy University, Other, \$2,500.00. (June 22, 2008 - June 29, 2008).

Voloshin, V., "Research trip to Catania (Italy) for scientific collaboration in mixed hypergraph

- coloring," Sponsored by National Science Foundation of Italy and University of Catania, Italy, Other, \$2,500.00. (October 8, 2007 - October 14, 2007).
- Voloshin, V., "Research trip to Veszprem (Hungary) for scientific collaboration supported by Troy University and Department of Computer Science of the University of Pannonia (Hungary)," Sponsored by Troy University and University of Pannonia, Hungary, Other, \$1,500.00. (July 23, 2007 - July 30, 2007).
- Voloshin, V., "Participation as invited speaker at ISGDA2003, International Symposium on Graphs, Designs and Applications, Messina, Italy," Sponsored by National Science Foundation of Italy and University of Messina, Italy, Other, \$1,000.00. (September 30, 2003 - October 4, 2003).
- Voloshin, V., "Visiting Professor at the Department of Mathematical Sciences, University of Delaware," Sponsored by University of Delaware, Other, \$45,000.00. (August 1, 2002 - May 31, 2003).
- Voloshin, V., "Visiting Professor, Department of Mathematics, University of Illinois at Urbana-Champaign," Sponsored by University of Illinois at Urbana-Champaign, Other, \$20,000.00. (January 4, 2002 - May 21, 2002).

Awards and Honors

- Distinguished Scholar Award by the Honor Society of Phi Kappa Phi Troy University Chapter 129, Phi Kappa Phi Troy University Chapter 129. (April 18, 2005).

Research in Progress

- "Mixed Hypergraph Coloring and its applications" (On-Going).
Uncolorability, unique colorability, upper and lower chromatic numbers, perfection and one-realization.

SERVICE

University Service

- Committee Member, Academic Discipline Committee. (August 1, 2018 - Present).
- Committee Member, Assessment Committee. (August 1, 2018 - Present).
- Committee Member, Curriculum Committee. (August 1, 2018 - Present).
- Program Coordinator, MTH 1110 Finite Mathematics Coordinator. (August 1, 2018 - Present).
- Committee Member, Public Relations Committee. (August 1, 2018 - Present).
- Committee Member, Graduate Program Development task force. (August 9, 2017 - Present).
- Committee Member, Technology/Instructional Design Committee. (February 1, 2013 - Present).
- Committee Chair, Curriculum amending committee (target: undergraduate applied math concentration and MS in math). (August 16, 2011 - Present).
- Committee Member, Curriculum – non General Studies. (August 2005 - Present).

Committee Member, Development Committee. (August 2004 - Present).

Committee Member, MS Thesis defense committee, Holly Dent Clifton <hclifton@troy.edu>. (May 1, 2022 - June 20, 2022).

Committee Member, Search Committee. (January 1, 2022 - May 31, 2022).

Committee Member, Undergraduate Academic Council. (August 12, 2019 - August 11, 2020).

Attendee, Graduation. (July 26, 2019).

Attendee, Graduation. (May 10, 2019 - June 7, 2019).

Attendee, Graduation. (December 14, 2018 - January 18, 2019).

Committee Chair, Curriculum Committee. (February 1, 2013 - August 1, 2018).

Committee Member, Math Academic Committee. (August 9, 2012 - May 2018).

Committee Member, Assessment and Technology. (August 2004 - May 2018).

Committee Member, Search Committee. (January 7, 2018 - March 7, 2018).

Faculty Mentor, Mentoring of Chinese visiting scholar. (November 1, 2017 - February 23, 2018).

Committee Member, Search Committee. (January 1, 2017 - May 31, 2017).

Committee Chair, AdHoc Committee on technology in MSCX. (February 1, 2016 - May 31, 2017).

Committee Member, Search Committee. (March 1, 2014 - May 31, 2014).

Committee Member, College Review Committee. (July 28, 2011 - May 31, 2013).

Committee Member, Arts and Sciences Research and Creative Works Showcase. (March 15, 2013 - April 15, 2013).

Committee Member, Ad hoc committee on transition of placement test online using MyMathTest. (April 19, 2011 - May 30, 2012).

Committee Member, Science and Technology Opportunities for Troy University. (July 2010).

Committee Member, Search Committee. (January 1, 2010 - May 31, 2010).

Faculty Mentor, Chancellor's Fellowship and Trojan Pride Scholarship committee. (2009).

Committee Member, Search Committee. (January 1, 2004 - May 31, 2004).

Professional Service

Editorial Review Board Member, Theory and Applications of Graphs (USA). (September 24, 2014 - Present).

Editorial Review Board Member, International Journal "Le Matematiche" (Italy). (March 20, 2009 - Present).

Editorial Review Board Member, Computer Science Journal of Moldova. (January 1, 2005 -

Present).

Reviewer, Journal Article, Discrete Mathematics. (May 2, 2024 - July 10, 2024).

Reviewer, Journal Article, Discrete Applied Mathematics. (April 25, 2023 - November 26, 2023).

Reviewer, Journal Article, MDPI Mathematics. (July 10, 2023 - July 20, 2023).

Reviewer, Journal Article, Computer Science Journal of Moldova. (June 29, 2023).

Board of Advisors of a Company, Alexander von Humboldt Foundation, Berlin. (April 23, 2023 - May 15, 2023).

Reviewer, Journal Article, Computer Science Journal of Moldova. (January 23, 2022 - February 26, 2022).

Reviewer, Journal Article, Journal of Combinatorial Designs. (January 13, 2022 - February 22, 2022).

Reviewer, Journal Article, Computer Science Journal of Moldova. (November 23, 2021 - November 26, 2021).

Reviewer, Journal Article, Journal of Combinatorial Designs. (September 13, 2021 - November 22, 2021).

Reviewer, Journal Article, Computer Science Journal of Moldova. (September 16, 2021 - October 26, 2021).

Reviewer, Book, Cambridge University Press. (October 9, 2021 - October 10, 2021).

Reviewer, Journal Article, Computer Science Journal of Moldova. (July 1, 2021 - July 26, 2021).

Member, College Level Examination Program (CLEP) Calculus Examination Committee, New York. (July 1, 2019 - June 30, 2021).

Reviewer, Journal Article, European Journal of Combinatorics. (March 1, 2021 - March 7, 2021).

Reviewer, Journal Article, Computer Science Journal of Moldova. (January 28, 2021 - February 8, 2021).

Reviewer, Journal Article, Computer Science Journal of Moldova. (December 21, 2020 - December 24, 2020).

Reviewer, Journal Article, Journal of Algebraic Combinatorics. (December 11, 2020).

Reviewer, Journal Article, Computer Science Journal of Moldova. (December 1, 2020 - December 10, 2020).

Committee Member, CLEP, Troy, AL. (October 23, 2020 - October 25, 2020).

Reviewer, Journal Article, Computer Science Journal of Moldova. (September 1, 2020 - October 1, 2020).

Reviewer, Journal Article, Alabama Journal of Mathematics, Mobile, AL. (June 9, 2020 - August 1, 2020).

Reviewer, Journal Article, Computer Science Journal of Moldova. (June 1, 2020 - August 1, 2020).

Reviewer, Journal Article, European Journal of Combinatorics. (July 16, 2020 - July 17, 2020).

Reviewer, Journal Article, Journal of Combinatorial Designs. (June 1, 2020 - July 1, 2020).

Reviewer, Journal Article, Computer Science Journal of Moldova. (April 2, 2020 - April 10, 2020).

Reviewer, Journal Article, Computer Science Journal of Moldova. (March 9, 2020 - March 28, 2020).

Reviewer, Journal Article, Computer Science Journal of Moldova. (January 27, 2020 - March 28, 2020).

Reviewer, Journal Article, Australasian Journal of Combinatorics. (February 17, 2020 - March 20, 2020).

Reviewer, Journal Article, Journal of Combinatorial Designs. (August 12, 2019 - December 28, 2019).

Reviewer, Journal Article, Bulletin of the Institute of Combinatorics and its Applications (BICA). (August 11, 2019 - November 28, 2019).

External Examiner for PhD Thesis "Chromatic polynomials of hypergraphs and mixed hypergraphs", National Institute of Education, Singapore, Singapore. (August 28, 2019 - November 4, 2019).

Reviewer, Journal Article, Computer Science Journal of Moldova. (August 10, 2019 - October 28, 2019).

Reviewer, Journal Article, Contributions to Discrete Mathematics. (August 20, 2019 - August 21, 2019).

Reviewer, Journal Article, Discussiones Mathematicae Graph Theory #4043. (March 26, 2019 - May 26, 2019).

Reviewer, Textbook, Taylor and Francis Group, LLC. (February 6, 2019 - March 1, 2019).

Reviewer, Journal Article, Le Matematiche. (December 26, 2018 - December 27, 2018).

Reviewer, Journal Article, Electronic Journal of Combinatorics. (October 20, 2018 - December 25, 2018).

Reviewer, Journal Article, Le Matematiche. (October 1, 2018 - November 23, 2018).

Reviewer, Journal Article, Journal of Graph Theory. (August 10, 2018 - August 13, 2018).

Reviewer, Journal Article, Computer Science Journal of Moldova. (April 12, 2018 - July 28, 2018).

Reviewer, Journal Article, Computer Science Journal of Moldova. (March 15, 2018 - July 25, 2018).

Reviewer, Journal Article, Discrete Mathematics. (February 2, 2018 - March 18, 2018).

Reviewer, Journal Article, Computer Science Journal of Moldova. (May 20, 2017 - July 28, 2017).

Reviewer, Journal Article, Computer Science Journal of Moldova. (June 20, 2017 - June 28, 2017).

Reviewer, Journal Article, Computer Science Journal of Moldova. (June 20, 2016 - June 28, 2016).

Reviewer, PhD Thesis, University of Malta, La Valetta. (June 1, 2016 - June 20, 2016).

Reviewer, Journal Article, Computer Science Journal of Moldova. (May 31, 2016 - June 20, 2016).

Reviewer, Journal Article, Discrete Analysis, Novosibirsk. (March 18, 2016 - June 18, 2016).

Reviewer, Journal Article, Discrete Mathematics. (February 2, 2016 - June 2, 2016).

Reviewer, Journal Article, Discrete Mathematics. (February 23, 2016 - May 23, 2016).

Reviewer, Journal Article, Australasian Journal of Combinatorics. (April 17, 2016 - April 20, 2016).

Reviewer, Grant Proposal, NSERC, NSF of Canada. (November 12, 2015 - February 1, 2016).

Reviewer, Journal Article, Opuscula Mathematica. (November 14, 2015 - December 10, 2015).

Reviewer, Journal Article, Alabama Journal of Mathematics. (December 1, 2015).

Reviewer, Journal Article, Journal of Combinatorial Optimization. (August 18, 2015 - August 28, 2015).

Reviewer, Journal Article, FILOMAT. (July 23, 2015 - July 30, 2015).

Committee Member, Specialized Council of Republic of Moldova in Mathematical Cybernetics, Chisinau. (July 2, 2015).

Committee Member, Moscow Witte University, International Scientific Conference, Moscow. (May 21, 2015).

Reviewer, Journal Article, Discussiones Mathematicae Graph Theory #1588. (May 3, 2015 - May 10, 2015).

Reviewer, Journal Article, Graphs and Combinatorics. (November 23, 2014 - March 19, 2015).

Reviewer, Grant Proposal, NSA Grant Proposal Management. (January 13, 2015 - March 15, 2015).

Reviewer, Journal Article, Journal of Combinatorics. (January 6, 2015 - March 6, 2015).

Reviewer, Journal Article, Graphs and Combinatorics (Japan). (January 5, 2015 - March 5, 2015).

Reviewer, Journal Article, Discrete Mathematics. (October 27, 2014 - December 27, 2014).

Reviewer, Journal Article, Discrete Applied Mathematics. (August 25, 2014 - November 26, 2014).

Reviewer, Journal Article, Alabama Journal of Mathematics. (August 13, 2014 - November 13,

2014).

Reviewer, Journal Article, Graphs and Combinatorics (Japan). (August 8, 2014 - November 6, 2014).

External reviewer for promotion and tenure, Georgia Southern University, Statesboro, GA. (July 9, 2014 - August 30, 2014).

Reviewer, Journal Article, Discrete Applied Mathematics (USA). (May 5, 2014 - August 5, 2014).

Reviewer, Journal Article, Computer Science Journal of Moldova. (May 7, 2014 - June 20, 2014).

Reviewer, Journal Article, Australasian Journal of Combinatorics (Australia). (May 18, 2014 - June 18, 2014).

Reviewer, Journal Article, Discussiones Mathematicae Graph Theory. (February 18, 2014 - April 18, 2014).

Reviewer, Journal Article, Discrete Applied Mathematics (USA). (February 17, 2014 - April 17, 2014).

Reviewer, Grant Proposal, NSA. (January 28, 2014 - April 1, 2014).

Reviewer, Journal Article, Discrete Mathematics (USA). (November 26, 2013 - March 26, 2014).

Reviewer, Journal Article, Discussiones Mathematicae Graph Theory. (November 4, 2013 - February 1, 2014).

Reviewer, Journal Article, Australasian Journal of Combinatorics (Australia). (October 7, 2013 - January 7, 2014).

Reviewer, Journal Article, Discrete Mathematics (USA). (August 26, 2013 - November 26, 2013).

Reviewer, Journal Article, Discrete Mathematics (USA). (August 3, 2013 - November 3, 2013).

Reviewer, Journal Article, Bulletin of the Mexican Mathematical Society. (May 15, 2013 - September 15, 2013).

Reviewer, Journal Article, BULETINUL ACADEMIEI DE STIINTE A REPUBLICII MOLDOVA. MATEMATICA. (May 1, 2013 - July 28, 2013).

Reviewer, Journal Article, Australasian Journal of Combinatorics (Australia). (April 26, 2013 - July 26, 2013).

Reviewer, Journal Article, Computer Science Journal of Moldova. (March 9, 2013 - May 31, 2013).

Reviewer, Journal Article, Discussiones Mathematicae Graph Theory. (January 14, 2013 - May 31, 2013).

Reviewer, Journal Article, European Journal of Combinatorics. (December 12, 2012 - May 31, 2013).

Reviewer, Journal Article, Computer Science Journal of Moldova. (March 1, 2013 - May 1, 2013).

Reviewer, Journal Article, Graphs and Combinatorics (Japan). (November 1, 2012 - March 31,

2013).

Reviewer, Journal Article, Applicable Analysis and Discrete Mathematics, Belgrad. (February 16, 2013 - March 11, 2013).

Reviewer, Journal Article, Graphs and Combinatorics (Japan). (October 19, 2012 - December 19, 2012).

Reviewer, Journal Article, Australasian Journal of Combinatorics (Australia). (October 9, 2012 - December 9, 2012).

Reviewer, Journal Article, Graphs and Combinatorics (Japan). (July 11, 2012 - October 9, 2012).

Reviewer, Journal Article, Graphs and Combinatorics (Japan). (April 20, 2012 - July 19, 2012).

Reviewer, Journal Article, International Journal of Machine Learning and Cybernetics (Springer). (April 2, 2012 - April 30, 2012).

Reviewer, Journal Article, Discrete Mathematics (USA). (November 23, 2011 - March 23, 2012).

Reviewer, Journal Article, International Journal of Machine Learning and Cybernetics (Springer). (January 6, 2012 - February 16, 2012).

Reviewer, Journal Article, BULETINUL ACADEMIEI DE STIINTE A REPUBLICII MOLDOVA. MATEMATICA. (December 28, 2011 - January 28, 2012).

Reviewer, Journal Article, Electronic Journal of Combinatorics (E-JC). (November 14, 2011 - January 15, 2012).

Reviewer, Journal Article, Annals of Mathematics and Artificial Intelligence (Israel). (September 2, 2011 - September 5, 2011).

Reviewer, Journal Article, Discrete Mathematics (USA). (January 1, 2011 - July 29, 2011).

Reviewer, Journal Article, Annals of Mathematics and Artificial Intelligence (Israel). (April 18, 2011 - June 18, 2011).

Reviewer, Journal Article, Quaderni di Matematica della Seconda Università di Napoli (Italy). (September 1, 2010 - March 22, 2011).

Reviewer, Journal Article, Computer Science Journal of Moldova. (January 1, 2011 - March 1, 2011).

Reviewer, Journal Article, Computer Science Journal of Moldova. (January 1, 2010 - February 23, 2010).

Reviewer, Journal Article, Computer Science Journal of Moldova. (May 20, 2009 - July 20, 2009).

Reviewer, Journal Article, Applicable Analysis and Discrete Mathematics (Serbia). (January 1, 2009 - May 1, 2009).

Reviewer, Journal Article, Journal of Graph Theory (USA). (October 1, 2008 - April 30, 2009).

Reviewer, Journal Article, Discrete Mathematics (USA). (January 1, 2009 - March 9, 2009).

Reviewer, Journal Article, Discussiones Mathematicae - Graph Theory (Poland), (August 15,

2008 - December 30, 2008).

Reviewer, Journal Article, Computer Science Journal of Moldova. (February 15, 2008 - July 15, 2008).

Reviewer, Grant Proposal, National Security Agency, Washington DC. (March 1, 2008 - May 15, 2008).

Reviewer, Journal Article, Discrete Mathematics (USA). (October 1, 2007 - February 1, 2008).

Reviewer, Journal Article, Journal of Combinatorial Design (USA). (February 1, 2007 - June 30, 2007).

Reviewer, Journal Article, Efficient Algorithms in Discrete Applied Mathematics (Germany). (November 10, 2006 - April 30, 2007).

Reviewer, Journal Article, Applicable Analysis and Discrete Mathematics (Serbia). (May 1, 2006 - December 1, 2006).

Reviewer, Journal Article, Computer Science Journal of Moldova. (April 1, 2006 - July 1, 2006).

Reviewer, Journal Article, Ars Combinatoria (Canada). (October 1, 2005 - March 30, 2006).

Reviewer, Journal Article, Graphs and Combinatorics (Japan), (September 1, 2005 - December 31, 2005).

Reviewer, Journal Article, European Journal of Combinatorics (Germany). (February 1, 2005 - July 31, 2005).

Reviewer, Journal Article, Computer Science Journal of Moldova. (January 1, 2005 - March 12, 2005).

Reviewer, Journal Article, Utilitas Mathematica (Canada). (April 1, 2004 - July 12, 2004).

Reviewer, Journal Article, Central European Journal of Operational Research (Austria). (January 1, 2004 - April 15, 2004).

Reviewer, Journal Article, Australasian Journal of Combinatorics (Australia), (October 15, 2003 - January 31, 2004).

Reviewer, Journal Article, Discrete Applied Mathematics (USA). (April 1, 2001 - August 30, 2001).

Reviewer, Journal Article, Discrete Mathematics (USA). (October 1, 1999 - February 1, 2000).

Public Service

Committee Member, Troy Exchange Club, Troy, Alabama. (July 1, 2009 - March 31, 2015).

Member, Troy Exchange Club, Troy, Alabama. (November 1, 2007 - March 31, 2015).

Board Member, Troy Exchange Club, Troy, Alabama. (July 1, 2009 - June 30, 2013).

Guest Speaker, Kiwanis Club of Troy, Troy, Alabama. (October 11, 2011).

Officer, President/Elect/Past, Troy Exchange Club, Troy, AL. (July 1, 2010 - June 30, 2011).

Officer, President/Elect/Past, Troy Exchange Club, Troy, AL. (July 1, 2009 - June 30, 2010).

Awards and Honors

Service, Community

Outstanding Service Award as Troy Exchange Club President 2010-2011., National Exchange Club. (July 21, 2011).