

CURRICULUM VITAE

November, 2023

PERSONAL:

Name: Ilia Ponomarenko

Birth Date: October 17, 1957

Birth Place: St. Petersburg (Leningrad), Russia (USSR)

Citizenship: Russia

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Language: Russian (mother tongue), English (read, write, spoken)

EDUCATION:

September 1964 – June 1972 Secondary School, St. Petersburg (Leningrad)

September 1972 – June 1974 Mathematics and physics oriented High School 239, St. Petersburg

September 1974 – June 1979 undergraduate student, Mathematics and Mechanics Department of the St. Petersburg State University. Primary course: mathematics, computer science. Specialization: operations research. Master degree thesis: On some problems in graph theory (June 1979). Advisor: L.M.Bregman, Dr. Sc.

December 1986 PhD. Thesis: Polynomial-time Isomorphism Testing for Some Classes of Graphs, Leningrad State University, USSR Advisor: Professor D.Y.Grigoryev, Dr.Sc.

June 2006 Habilitation (Doctor of Physical and Mathematical Sciences): The automorphism group of association schemes, St. Petersburg State University, Russia

APPOINTMENTS:

June 2022 – ...: V.A.Steklov Institute of Mathematics at St. Petersburg, Russian Academy of Sciences, Laboratory of Mathematical Logic and Discrete Mathematics, Leading Research Fellow

November 1990 – June 2022: V.A.Steklov Institute of Mathematics at St. Petersburg, Russian Academy of Sciences, Laboratory of Representation Theory and Computational Methods, Leading Research Fellow

Sept. 1981 – October 1990: junior and senior researcher in "Systema", scientific and production concern, St. Petersburg, Russia

Sept. 1979 – September 1981: lieutenant of Soviet Army (military service)

PRINCIPAL FIELDS OF INTEREST:

Algebraic combinatorics (coherent configurations, permutation groups). Theory of computational complexity (algebra, combinatorics).

OTHERS:

since 2002: reviewer of Mathematical Reviews

since 1992: member of St. Petersburg Mathematical Society

1981–1992: participant of St. Petersburg Seminar on Computation Complexity Theory, St. Petersburg Department of Steklov Mathematical Institute

1984–1987: reviewer of Soviet Review Journal, Mathematics

TEACHING:

course: A prolific construction of strongly regular graphs, October–November, 2023, Central China Normal University, Wuhan, China,

course: An introduction to coherent configurations, April–June, 2023, Hainan University (HNU), Haikou, China,

course: The Weisfeiler-Leman dimension, October–November, 2020, On-line course for Central China Normal University, Wuhan, China,

course: the Weisfeiler-Leman method, April–June, 2019, Central China Normal University, Wuhan, China,

special seminar: Algebraic methods in combinatorics, January–May, 2018, St. Petersburg State University, St. Petersburg, Russia,

course: Coherent configurations, August–October, 2017, Central China Normal University, Wuhan, China,

course: Schur rings and algebraic combinatorics, October–December, 2015, Central China Normal University, Wuhan, China,

course: Association schemes, Schur rings and the isomorphism problem for circulant graphs, July–August, 2014, The International Workshop “Algorithmic problems in group theory and related areas”, Novosibirsk, Russia,

minicourse: Coherent configurations, January–February, 2012, Winter school “Modern problems in Mathematics”, Ekaterinburg, Russia

course: The Graph Isomorphism Problem, October–December, 2010, Computer Science Club at Steklov Mathematical Institute at St Petersburg, St. Petersburg, Russia,

- minicourse:** Permutation Groups, Coherent Configurations and linear representations, September, 2008, Pusan National University, Pusan, South Korea,
- course:** Strongly regular graphs, October-December, 2006, Institute for Advanced Studies in Basic Science, Zanjan, Iran,
- course:** Schur rings and Algebraic Combinatorics, October–December, 2005, Institute for Advanced Studies in Basic Science, Zanjan, Iran,
- course:** Coherent Configurations and Permutation Groups, October–December, 2004, Institute for Advanced Studies in Basic Science, Zanjan, Iran,
- course:** Algebraic combinatorics, March–May, 1999, St. Petersburg State University, St. Petersburg, Russia.

INVITED AS A PARTICIPANT:

International Conference on Groups, Semigroups, Algebraic Combinations and Related Topics, Hainan University (HNU), Haikou, China, November 3–8, 2023 (invited talk).

International Conference “Algebra and dynamical systems” dedicated to the 70th anniversary of A. A. Makhnev., Nalchik, Russia, July 9 - July 15, 2023 (invited talk).

The 8th Workshop on “Algebraic Graph Theory and its Applications”, Novosibirsk, Russia, March 1–4, 2023 (invited talk by Zoom).

International Algebraic Conference ”Algebra and dynamical systems” dedicated to the 110th anniversary of the birth of S.N. Chernikov, Nalchik, Russia, June 28 - July 3, 2022 (invited talk).

7th Iranian Algebra Seminar, IAS27, Bushehr, Iran, March 9-10, 2022 (invited talk by Zoom).

The 5th Workshop on “Algebraic Graph Theory and its Applications”, Novosibirsk, Russia, November 1–5, 2021 (invited talk by Zoom).

“The Tenth Shanghai Conference on Combinatorics (10SHCC)”, Shanghai, China, May 24–28, 2021 (invited talk by Zoom).

“Modern problems of mathematics and its applications”, International (52nd All-Russian) youth school-conference, Yekaterinburg-Online, Russia, February 8–12, 2021 (invited talk by Zoom).

The 3rd Workshop on “Algebraic Graph Theory and its Applications”, Novosibirsk-Online, Russia, November 2–8, 2020 (invited talk by Zoom).

Ural Workshop on Group Theory and Combinatorics, Yekaterinburg-Online, Russia, August 24–30, 2020 (invited talk by Zoom).

The First Workshop at the Mathematical Center in Akademgorodok, Novosibirsk, Russia, July 13–17, 2020 (talk by Zoom).

93rd KPPY Combinatorics Workshop, Busan, Korea, 7 September, 2019 (invited talk).

Mal'tsev Meeting, Novosibirsk, Russia , August 19–23, 2019 (talk).

9th Slovenian International Conference on Graph Theory, Bled, Slovenia, June 23–29, 2019 (talk).

International Workshop: Recent Contributions to Algebraic Graph Theory, KFUPM, Dhahran, Saudi Arabia, 18-19 December, 2018 (invited talk).

The 90th KPPY Combinatorics Seminar, Tegu, Korea, 3 November 3, 2018, 2017 (invited talk).

Conference in Algebraic Graph Theory, Symmetry vs Regularity, The first 50 years since Weisfeiler-Leman stabilization, Pilsen, Czech Republic, 1–7 July, 2018 (invited talk).

International Workshop on Groups, Representations and Related Topics (IWGRR), Yongchuan, Chongqing, China, 17–20 May, 2018 (invited talk).

PNU MATH FORUM 2017, Busan, Korea, 7–9 December, 2017 (invited talk).

The 7th PhD Summer School in Discrete Mathematics, Rogla, Slovenia, 23-29 July, 2017 (invited talk).

Workshop on Group Theory and Algebraic Combinatorics, Novosibirsk, Russia, 16-21 July, 2017 (invited talk).

The International Workshop on Finite Groups, Table Algebras and their Generalizations, Wuhan, China, May 20-25, 2017 (invited talk).

Fourth Russian Finnish Symposium on Discrete Mathematics, Turku, Finland, May 16-19, 2017 (talk).

Workshop on algebraic graph theory, Pilsen, Czech republic, October 3-7, 2016 (invited talk).

International Conference and PhD-Master Summer School on Graphs and Groups, Spectra and Symmetries, Akademgorodok, Novosibirsk, Russia, August 15-28, 2016 (invited talk).

Dagstuhl Seminar on The Graph Isomorphism Problem, Schloss Dagstuhl, Germany, December 13–18, 2015 (talk),

Asymptotic group theory, PETER PAL PALFY IS 60, Renyi Institute, Budapest, Hungary, August 17-21, 2015 (talk).

8th Slovenian International Conference on Graph Theory, Kranjska Gora, Slovenia, June 21-27, 2015 (talk),

Algorithmic Graph Theory on the Adriatic Coast, Koper, Slovenia, June 16-19, 2015 (talk),

Dagstuhl Seminar on Complexity of Symbolic and Numerical Problem, Schloss Dagstuhl, Germany, June 07-12, 2015 (talk),

Third Russian Finnish Symposium on Discrete Mathematics, Petrozavodsk, Russia, September 15-18, 2014 (talk),

The International Conference "Modern Trends in Algebraic Graph Theory", Villanova, USA, June 2-5, 2014 (talk),

The International Conference on Group Theory in Honor of the 70th Birthday of Professor Victor D. Mazurov, Novosibirsk, Russia, July 16-20, 2013 (plenary talk),

The international conference "Algebra and combinatorics", dedicated to the 60th birthday of A. A. Makhnev, Ekaterinburg, Russia, June 3-7, 2013 (plenary talk),

Second Russian Finnish Symposium on Discrete Mathematics, Turku, Finland, September, 25-28, 2012 (talk),

First Russian Finnish Symposium on Discrete Mathematics, St.Petersburg, Russia, September, 21-24, 2011 (invited talk),

The international conference on algebra and geometry, Ekaterinburg, Russia, August 22-27, 2011 (invited talk).

Algebraic Graph Theory Summer School 2011, Rogla, Slovenia, June, 26 – July 2, 2011 (talk).

7th Slovenian International Conference on Graph Theory, Bled, Slovenia, June 19-25, 2011 (invited talk).

2th International Workshop on Symmetries of Graphs and Networks, Rogla, Slovenia, August, 1-6, 2010 (talk).

International conference "Discrete mathematics, algebra and their applications" (DIMA09), Minsk, Belarus, October 19-22, 2009 (talk).

International conference dedicated to 80th birthday of A.I.Kostrikin, Nal'chik, Russia, July 6-12, 2009 (talk).

5th Workshop Graph Embeddings and Maps on Surfaces, Low Tatras, Slovakia, June, 28- July 3, 2009 (talk).

5th Japan-Korea Workshop on Algebra and Combinatorics, Kyushu University, Fukuoka, Japan, September 19-20, 2008 (invited talk).

International Conference on Algebraic Aspects of Association Schemes and Scheme Rings, Regina, Canada, July 8-11, 2008 (talk).

6th Slovenian International Conference on Graph Theory, Bled, Slovenia, June 24-30, 2007 (talk).

International conference on Group Theory, Nal'chik, Russia, June 10-15, 2006 (talk).

International workshop "Groebner Bases in Cryptography, Coding Theory, and Algebraic Combinatorics" , Linz, Austria, May 1–7, 2006 (talk).

Second International Conference "Methods of Logic in Mathematics", St.-Petersburg, Russia, July 18–24, 2005 (talk).

International workshop "Recent Progress in Association Schemes", St.-Petersburg, Russia, July 5-7, 2005 (organizer, talk).

Com²MaC Conference on Association Schemes, Codes and Designs, Busan, Korea, July, 2004 (talk).

Workshop Open Problems on Association Schemes, Busan, Korea, July, 2004 (invited talk).

6th IMACS Conference on Applications of Computer Algebra, St. Petersburg, Russia, June, 2000 (member of conference committee, talk).

International Algebraic Conference dedicated to the memory of D.K.Faddeev, St. Petersburg, Russia, June, 1997 (talk).

The Second International Conference on Mathematical Algorithms, Nijnii Novgorod, Russia, June, 1995 (member of conference committee, talk).

Algebra and Combinatorics: Interactions and Applications, Conference dedicated to the memory of Lev Arkad'evic Kaluznin on the occasion of his 80th birthday, Königstein, Germany, 1994 (talk).

The 1st International Conference on Algebraic Combinatorics AL-COM, Vladimir, USSR, 1991 (talk).

The Conference on Molecular Graphs in Chemical Researches, Kalinin, USSR, 1990 (lecture).

The 8th Conference on Mathematical Logic, Moscow, URSS, September 16–18, 1986 (talk).

The 4th Conference on Applications of Methods of Mathematical Logic, Tallinn, URSS, 1986 (talk).

Soviet Conference on Estimation of Complexity of Computation, Grodno, Belorussia, May, 1983 (talk).

The all-union workshop on graphs, hipergraphs and matroid theory, Odessa, USSR, 1980 (talk).