CURRICULUM VITAE

VICTOR A. VASSILIEV

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PERSONAL INFORMATION

Born: April 10, 1956 **Citizenship:** citizen of Russia
Married: to Tatiana Vassilieva **Children:** Maria (1982), Fedor (1995), Ivan (1996).

EDUCATION

Dr. of Sci., 1992 Mathematics, Steklov Mathematical Institute of Russian Ac. Sci., Moscow
Ph.D., 1982 Mathematics, Moscow State University (MGU) Advisor: V. I. Arnold
M.S., 1978 Mathematics, Moscow State University (MGU)

AREA OF SPECIALIZATION

Singularity Theory;
Complexity Theory;
Symplectic Geometry and Topology;
Complex Analysis;
Topology;
Integral Geometry;
Partial Differential Equations;
Combinatorics.

PROFESSIONAL EXPERIENCE

1991 – now Professor, Mathematics College, Independent Moscow University
1995 – 1997 Leading researcher,
1997 – now Principal researcher, Department of Geometry and Topology,
Steklov Mathematical Institute of Russian Ac. Sci., Moscow
1990 – 1995 Leading researcher, Department of Mathematics,
Research Institute for System Studies, Moscow
1989 – 90 Senior researcher, Department of Functional Analysis,
Institute of Applied Mathematics, Russian Ac. of Sci., Moscow
1987 – 89 Senior researcher, Statistical Information Systems Research Institute, Moscow
1982 – 86 Teacher, Specialized Mathematical High School # 57, Moscow (part-time)
1981 – 87 Senior researcher, Documents and Archives Research Institute, Moscow

GRANTS AND AWARDS

- Moscow Mathematical Society Award, 1986.
- MSRI Research Professorship, 1997.

- Miller Professorship, Berkeley Univ., 1999.
- Visiting Fellow Commonership, Trinity College, Cambridge University, 2000.
- AMS fSU Aid Fund grant, 1993.
- International Science Foundation Research grant, 1994 – 95. (head of a research team).
- INTAS grant, 1995 – 96 (head of a research team).
- Research grant of the Russian Fund of Basic Research (RFBR), 1995–1997 (head of a research team).
- Research grant of the Netherlands Organization for Scientific Research (NWO), 1996.
- INTAS grant, 1997 – 98 (head of a research team).
- RFBR grant for support of distinguished scientific schools, 1997–99 (co-head).
- Research grant of RFBR, 1998–2000 (head of a research team).
- RFBR grant for support of distinguished scientific schools, 2000–2002 (co-head).
- Research grant of the Netherlands Organization for Scientific Research (NWO), 2000–2002.
- Research grant of RFBR, 2001–2003 (head of a research team).
- INTAS grant, 2001 – 2002 (head of a research team).
- Russian President's grant for support of distinguished scientific schools, 2003–2005 (co-head).

PROFESSIONAL ACTIVITIES AND SERVICES

- Russian Academy of Sciences, ordinary member (since 2003, corresponding member since 1997)
- Moscow Mathematical Society, member (since 1984), board member (since 1992)
- American Mathematical Society, member (since 1995)
- Journal "Functional Analysis and its Applications", vice-chief editor (since 1995)
- Journals "Selecta Mathematica. New Series", "Journal of Knot Theory and its Ramifications", "Moscow Mathematical Journal", "Topology and its Applications", "Izvestiya of Russian Ac. Sci., Ser. Math." editorial board member (since 1994, 1992, 2000, 2003 and 2003 respectively)
- MIR Publishers, Scientific editor of Russian translations of Proceedings of Bourbaki Seminar (1991–96)

- Russian Academy of Sciences Committee on Mathematical Education, member (since 2001)
- Member of the Organizing Committee of the 13 All-Union School on the Operator Theory. Kuybyshev, October 1988.
- Member of the Organizing Committee of the International Geometrical Colloquium. Moscow, May 1993.
- Member of the Organizing Committee of the International Conference dedicated to 60-th anniversary of V. I. Arnold (Toronto, 1997)
- Member of the Program Committee of the L. S. Pontryagin memorial conference, Moscow August–September 1998. (Head of the Topology Section.)
- Co-organizer of a conference on Singularity Theory, Oberwolfach, May 1999.
- Member of the Organizing Committee of the NATO Advanced Study Institute on Singularity Theory at the Newton Mathematical Institute, Cambridge, UK, July–August 2000
- Chairman of the Organizing Committee of the Moscow Mathematical Olympics, 2001
- Co-director of the NATO Advanced Research Workshop on New Techniques in Topological Quantum Field Theory, Calgary, Canada, August 2001
- Co-organizer of a conference on Singularity Theory, Oberwolfach, September 2001.
- Member of the program committee of the international conference "Fundamental Mathematics Today" dedicated to the 10th anniversary of the Independent Moscow University, Moscow, December 26–29, 2001
- Member of the organizing committee of the International conference "Singularity Theory and Bifurcations", Steklov Math. Inst., Moscow, August 2002.
- Co-organizer of a conference on Singularity Theory, Oberwolfach, September 2003.
- Member of the program committee of the Petrovsky memorial conference, Moscow 2004
- Chairman of the organizing committee of the summer mathematical school (Dubna, 2004)
- Chairman of the Commission of Russian Ac. Sci. on teaching mathematics in schools (since 2004)
- Member at large, Executive Committeee of the International Mathematical Union, 2004–2006

INVITED LECTURES AT INTERNATIONAL CONFERENCES

- Conference "Unity and Diversity in Mathematical Science" (Smalefest), Berkeley, August 1990
- Colloquium on quantum groups and knot theory, Leningrad, December 1990
- Conference "Differential equations and related problems", Moscow, May-June 1991
- College on singularity theory, Trieste, ICTP, August – September 1991
- Rencontre Franco-Russe on Geometry, Luminy (France), May 1992.
- International conference dedicated to the memory of A. N. Kolmogorov, Euler Institute, St.-Petersburg, May-June 1993
- International Topology Conference, Athens (Georgia, USA), August 1993
- Conference on moduli spaces of curves, Texel Island, Netherlands, April 1994
- International colloquium dedicated to the 65-th anniversary of Jean Cerf, Bures-Sur-Yvette, May 1994
- **International Congress of Mathematicians, Zürich, August 1994, Plenary (one-hour) lecture**
- Joint meeting of the I. G. Petrovskiĭ seminar and Moscow Mathematical Society, Moscow, January 1995
- AMS-SIAM seminar "The mathematics of numerical analysis", Park City (Utah, USA), July-August 1995
- Conference on Singularity Theory, Oberwolfach, July 1996
- Joint Workshop "Combinatorial Aspects of Finite Type and Quantum Invariants", MSRI, Berkeley, January 1997
- Workshop "Geometric Combinatorics", MSRI, Berkeley, February 1997
- International conference dedicated to the 60-th anniversary of V. I. Arnold, Toronto, June 1997
- "Solitons, Geometry and Topology: on crossroads." International conference dedicated to the 60-th anniversary of S. P. Novikov, Moscow, May 1998.
- International conference on Geometric Combinatorics, Kotor, Montenegro, August-September 1998
- International conference dedicated to 90-th anniversary of L. S. Pontryagin, Moscow, August–September 1998.

- Conference on Singularity Theory, Oberwolfach, May 1999
- International conference dedicated to the 80-th anniversary of V. A. Rochlin, St. Petersburg, August 1999.
- 6-th International Symposium on Effective Methods in Algebraic Geometry (MEGA), Bath (UK), June 2000
- Advanced Study Institute at Newton Inst., Cambridge UK, July–August 2000.
- Royal Society Discussion Meeting "Topological Methods in Physical Sciences", London, 15–16 November 2000
- Informal Workshop in Singularity Theory, November 24–25 2000, Newton Mathematical Institute, Cambridge GB
- Workshop in Singularity Theory, 17–19 May 2001, Utrecht, the Netherlands
- I.G.Petrovsky Centennial Conference, Moscow, 22–27 May, 2001
- Conference on Monodromy Theory, Steklov Mathematical Institute, June 2001
- Research workshop in Low-Dimensional Topology, Calgary, August 2001
- International Conference dedicated to the 10th anniversary of the Independent University of Moscow, Moscow, December 2001
- International Conference "Kolmogorov and contemporary mathematics", Moscow, June 16–21, 2003

VISITING POSITIONS

- Visiting Fellow Commoner, Trinity College, Cambridge UK, October-December 2000
- Invited Researcher, Univercité de Rennes I, April-May 2000
- Miller Visiting Research Professor, UC Berkeley, January-April 1999.
- Research Professor, MSRI, January-March 1997
- Univercité Denis Diderot (Paris-7), Professor, May 1994
- University of Maryland, Visiting Researcher, February-March 1993
- Univercité Denis Diderot (Paris-7), Associate Professor (Maitre des Conferences), June-July 1992

PUBLICATIONS

Books

[1] **Lagrange and Legendre characteristic classes**. Gordon and Breach Publishers. New York a.o., 1988, 274 pp.

[2] Second edition of [1], 1993, 273 pp.

[3] Extended Russian translation of [1]; M., MCCME, 2000, 312 p.

[4] **Singularities. I. Local and global theory** (with V. I. Arnold, V. V. Goryunov and O. V. Lyashko). Moscow, VINITI, 1988, 256 pp. (in Russian).

[5] English translation of [4]. Encycl. Math. Sci., vol.6 (Dynamical systems VI), Springer–Verlag, Berlin & New York, 1993, 245 pp.

[6] Second edition of [5], 1998.

[7] **Singularities. II. Classification and applications** (with V. I. Arnold, V. V. Goryunov and O. V. Lyashko). Moscow, VINITI, 1989, 256 pp.

[8] English translation of [7]. Encycl. Math. Sci., vol. 39 (Dynamical systems VIII), Springer–Verlag, Berlin & New York, 1993, 233 pp.

[9] **Complements of discriminants of smooth maps: topology and applications.** Translations of Math. Monographs, AMS, Providence RI, 1992, 210 pp.

[10] Revised and enlarged edition of [9], 1994, 268 pp.

[11] **Ramified integrals, singularities and lacunas**. Kluwer Academic Publishers, Dordecht (Netherlands), 1994, 289+xvii pp.

[12] **Topology of complements of discriminants,** Moscow, Phasis, 1997, 552 pp. (in Russian).

[13] **Vetvyashiesya Integraly (Branched Integrals)**, Moscow, MCCME, 2000 (in Russian), 432 pp.

[14] **Introduction to Topology,** Moscow, Phasis, 1997, 144 pp. (in Russian).

[15] English translation of [14], AMS, 2001, 149+xiii pp.

[16] Second revised edition of [14], Moscow, Phasis, 20?? (in Russian, to appear).

[17] **Applied Picard–Lefschetz Theory,** Mathematical Surveys and Monographs, Vol. 97, American Mathematical Society, 2002, 324+xi pp.

Articles in Refereed Journals and Periodicals

[18] **Asymptotics of exponential integrals, Newton diagram and classification of the minima points,** Funct. Anal. and its Appl., 11:3 (1977), p. 1–11.

[19] **On the affinneness of normal forms of the $\mu = \text{const}$ strata of germs of smooth functions,** Funct. Anal. and its Appl., 12:3 (1978), p. 72–73.

[20] **Asymptotics of exponential integrals in the complex domain,** Funct. Anal. and its Appl., 13:4 (1979), p. 1–12.

[21] **Characteristic classes of Lagrange and Legendre manifolds dual to singularities of caustics and wave fronts,** Funct. Anal. and its Appl., 15:3 (1981), p. 10–22.

[22] **Self-intersections of wave fronts and Legendre (Lagrange) characteristic numbers,** Funct. Anal. and its Appl., 16:2 (1982), p. 68–69.

[23] **Translator's note to the article of M. F. Atiyah, R. Bott and L. Gårding "Lacunas for hyperbolic differential operators with constant coefficients. II",** Uspekhi Matem. Nauk, 39:3 (1984), p. 221–223. (In Russian.)

[24] **Shaprness and local Petrovsky condition for hyperbolic operators with constant coefficients,** Izvestija Ac. Sci. USSR, Ser. Math., 50:2 (1986), p. 242–283.

[25] **Behavior of general hypergeometric functions in the complex domain** (with I. M. Gel'fand and A. V. Zelevinsky), Russian Math. Doklady, 290:2 (1986), p. 277–281.

[26] **General hypergeometric functions on complex grassmannians** (with I. M. Gel'fand and A. V. Zelevinsky), Funct. Anal. and its Appl., 21:1 (1987), p. 23–38.

[27] **Stable cohomology of complements of discriminant manifolds of singularities of holomorphic functions,** Uspekhi Matem. Nauk, 42:2 (1987), p. 219–220. (Russian, English translation in Russian Math. Surveys 42:2 (1987).

[28] **Cohomology of braid groups and complexity of algorithms,** Funct. Anal. and its Appl., 22:3 (1988), p. 15–24.

[29] **On the topology of spaces of functions without complicated singularities,** Uspekhi Matem. Nauk, 44:3 (1989), p. 149–150. (In Russian, English transl. in Russian Math. Surveys 44:3 (1989).)

[30] **Newton's Principia read 300 Years later** (with V. I. Arnold), Notices Amer. Math. Soc., 36:9 (1989), p. 1148-1154.

[31] **Topological complexity of algorithms of approximate solution of systems of polynomial equations**, Algebra i Analiz, 1:6 (1989), p. 98-113; English transl. in Leningrad Math. J., 1 (1990), p. 1401–1417.

[32] **Topology of spaces of functions without complicated singularities**, Funct. Anal. and its Appl., 23:4 (1989), p. 24–36.

[33] **On the numbers of real and complex moduli of singularities of smooth functions and realizations of matroids** (with V. V. Serganova), Matem. Zametki, 49:1 (1991), p. 19–27. (Russian, Engl. transl. in Math. Notes, 49:1 (1991), p. 15–20.)

[34] **On the spaces of functions interpolating at any k points**, Funct. Anal. and its Appl., 26:3 (1992), p. 72–74.

[35] **Geometry of the local lacunas of hyperbolic operators with constant coefficients,** Mat. Sbornik, 183:1 (1992), 114-129. (Russian, English transl. in Russian Acad. Sci. Sbornik Math. 75 (1993), p. 111–123.)

[36] **A geometric realization of the homology of classical Lie groups, and complexes, S-dual to the flag manifolds,** Algebra i Analiz 3:4 (1991), p. 113–120. (Russian, English transl. in St.-Petersburg Math. J., 3:4 (1992), p. 809–815.)

[37] **Stratified Picard–Lefschetz theory,** Selecta Math., New Ser., 1:3 (1995), p. 597–621.

[38] **On spaces of polynomial knots**, Matem. Sbornik, 187:2 (1996), p. 37–58.

[39] **Topological complexity and reality**, Matem. Zametki (Math. Notes), 1996, 60:5, p. 270–280.

[40] **Holonomic links and Smale principles for multisingularities,** J. of Knot Theory and its Ramifications, 6:1 (1997), p. 115–123.

[41] **Decision trees for orthants,** Information Processing Letters, 62 (1997), p. 265–268.

[42] **Homology of spaces of homogeneous polynomials without multiple roots in $\mathbf{R}^2$**, Proc. Steklov Math. Inst., vol. 221, 1998, p. 143–148.

[43] **On k-neighborly submanifolds in $\mathbf{R}^N$**, Topological Methods in Nonlinear Analysis, 11:2 (1998), p. 273–281.

[44] **How to calculate homology groups of spaces of nonsingular algebraic projective hypersurfaces**. Proc. Steklov Math. Inst., vol. 225, 1999, p. 121–140.

[45] **On a problem by M. Kazarian,** Funct. Anal. and its Appl. 33:3 (1999), p. 73–75.

[46] **Topological order complexes and resolutions of discriminant sets,** Publications de l'Institut Mathématique Belgrade, Nouvelle série, t. 66(80), 1999, 165–185.

[47] **Combinatorial formulas for cohomology of spaces of knots,** Moscow Math. J., 2001, **1**:1, 91–123.

[48] **Homology of spaces of knots in any dimensions,** Philos. Trans. London Royal Society A, **359**:1784 (2001), 1343–1364. (Proceedings of the Royal Society Discussion Meeting "Topological Methods in the Physical Sciences", November 15–16, 2000).

[49] **Topology of plane arrangements and their complements,** Russian Math. Surveys, **56**:2, 2001, 167–203.

[50] **Spaces of Hermitian matrices with simple spectra and their finite-order cohomology.** Moscow Math. Journal, 3:3 (2003), 1145–1165.

[51] **Combinatorial computation of combinatorial formulas for knot invariants**, 100 p., submitted to Transact. of Moscow Math. Society (2003), available via `http://www.pdmi.ras.ru/ arnsem/papers/combcomp`

Articles in Refereed Collections of Works

[52] **Estimates for complex exponential integrals,** Some Questions of Mathematics and Mechanics; Moscow State Univ. Press, 1981, p. 76–77. (In Russian.)

[53] **Sharp and diffuse fronts of hyperbolic equations,** Itogi Nauki i Tekhn. VINITI. Fundamental Directions. Moscow, VINITI, vol. 31, 1988, p. 246–257. (Russian, English transl. in: Encycl. Math. Sci., vol. 31 (Partial differential equations II) Springer–Verlag, Berlin & New York.)

[54] **Stable cohomology of complements to the discriminants of deformations of singularities of smooth functions,** Current Problems of Math., Newest Results, vol. 33, Itogi Nauki i Tekhniki, VINITI, Moscow, 1988, p. 3–29; (Russian, English transl. in J. Soviet Math. 52:4 (1990), p. 3217–3230.)

[55] **Characteristic classes of singularities,** Theory of Operators in Functional Spaces, Kuybyshev, 1989, p. 15–29; English transl. in Amer. Math. Soc. Transl. (2) vol. 153, 1992, p. 11–23.

[56] **Lacunas of hyperbolic partial differential operators and singularity theory,** Theory of Operators in Functional Spaces, Kuybyshev, 1989, p. 30–43; English transl. in Amer. Math. Soc. Transl. (2) vol. 153, 1992, p. 25–37.

[57] **Topology of complements to discriminants and loop spaces,** Theory of Singularities and its Applications (V. I. Arnold, ed.), Advances in Soviet Math., vol. 1 (1990), p. 9–21 (AMS, Providence, RI).

[58] **Cohomology of knot spaces,** Theory of Singularities and its Applications (V. I. Arnold, ed.), Advances in Soviet Math. Vol. 1 (1990), p. 23–69 (AMS, Providence, RI).

[59] **Knot invariants and singularity theory**, In: Singularity Theory (Trieste, 1991), Le D.T., K. Saito and B. Teissier, eds., World Sci. Publishing, River Edge, NJ, 1995, p. 904–919. (Proceedings of the Colloquium in Singularity Theory, Trieste, ICTP, Aug. 19–Sep. 06, 1991).

[60] **Cohomology of braid groups and complexity,** ¿From Topology to Computation: Proc. of the Smalefest conference, M. Hirsch, J. Marsden and M. Shub, eds.; Springer-Verlag, Berlin and New York, 1993, p. 359–367.

[61] **The Smale–Hirsch principle in the catastrophe theory,** From Topology to Computation: Proc. of the Smalefest conference, M. Hirsch, J. Marsden and M. Shub, eds.; Springer–Verlag, Berlin and New York, 1993, p. 117–128.

[62] **Complexes of connected graphs,** The I. M. Gel'fand's mathematical seminars 1990–1992, L. Corvin, I. Gel'fand, J. Lepovsky, Eds.; Birkhäuser, Basel, 1993, p. 223–235.

[63] **Invariants of knots and complements of discriminants,** in: Developments in Math., the Moscow school (V. Arnold, M. Monastyrski, eds.), Chapman & Hall, 1993, p. 194–250.

[64] **Invariants of ornaments,** Singularities and Bifurcations (V. I. Arnold, ed.), Advances in Soviet Math., vol. 21 (1994), p. 225–262 (AMS, Providence, R.I.).

[65] **Ramification in integral geometry and monodromy of complex links**, J. of Mathematical Sciences, 83:4 (1997), p. 554–558.

[66] **Topology of discriminants and their complements,** Proceedings of the Intern. Congress of Math. (Zürich, 1994); Birkhäuser Verlag, Basel; 1995, p. 209–226.

[67] **Topological complexity of root-finding algorithms** Proc. of the AMS/SIAM 1995 Summer Seminar; AMS, 1996, p. 831–856.

[68] **Stratified Picard-Lefschetz theory with twisted coefficients,** in: Topics in Singularity Theory, V. I. Arnold's 60-th anniversary volume, AMS Translations, ser. 2, vol.180; Advances in Math. Sci. 34, 1997, p. 241–255.

[69] **Monodromy of complete intersections and surface potentials** in: Singularities. The Brieskorn Anniversary Volume. Progress in Mathematics, Vol. 162. Birkhäuser Verlag, Basel-Boston-Berlin, 1998, p. 205–237.

[70] **On invariants and homology of spaces of knots in arbitrary manifolds,** in: Topics in Quantum Groups and Finite-Type Invariants. Mathematics at the Independent University of Moscow. B. Feigin and V. Vassiliev, eds. AMS Translations. Ser. 2. Vol. 185. Advances in the Mathematical sciences. AMS, Providence RI, 1998, p. 155–182.

[71] **Topology of two-connected graphs and homology of spaces of knots,** In: "Differential and symplectic topology of knots and curves," AMS Transl. Ser. 2. Vol. 190. (S. L. Tabachnikov, ed.). AMS, Providence RI, 1999, p. 253–286.

[72] **Homology of i-connected graphs and invariants of knots, plane arrangements, etc.** Proc. of the Arnoldfest Conference, Fields Inst. Communications, Vol. **24**, p. 451–469, AMS, Providence RI, 1999.

[73] **On finite-order invariants of triple points free plane curves,** In: AMS Transl. Ser. 2. Vol. 194. Volume dedicated to the 60-th birthday of D. B. Fuchs, (A. Astashkevich and S. Tabachnikov, eds.) AMS, Providence RI, 1999, p. 275–300.

[74] **Mathematical models of catastrophes. Control of catastrophic processes** (with V. I. Arnold, A. A. Davydov, and V. M. Zakalyukin), in: UNESCO Encyclopaedia of Life Support Systems, EOLSS Publishers Co. Ltd., ??.

[75] **Resolutions of discriminants and topology of their complements**, in: New Developments in Singularity Theory, D. Siersma, C.T.C. Wall and V.M. Zakalyukin, eds., Kluwer Academic Publ., Dorderecht, 2001, 87–115.

[76] **Ramified Integrals and Picard–Lefschetz Theories,** 38 p., MCCMO Lecture Notes series, to appear in 2004.

[77] **Algorithms for the combinatorial realization of cohomology classes of spaces of knots**, Proc. Intern. Conf. "Fundamental Mathematics Today" (Moscow, 2001), MCCME, 10–31.

[78] **Combinatorial formulas for cohomology of spaces of knots**, Proceedings of the International Conference "New Methods in Topological Field Theory" (Calgary, 2001), Kluwer, 20 p. (to appear).

Selected Preprints and Manuscripts

[79] **Singularities of caustics and their applications to the investigation of asymptotics of exponential integrals and Lagrange manifolds**. Ph.D. Thesis, Moscow State Univ., 1981, 148 p. (In Russian.)

[80] **Singularities of caustics and their applications to the investigation of asymptotics of exponential integrals and Lagrange manifolds**. Summary of [79], 13 p.

[81] **Homological invariants of knots: algorithms and calculations,** Preprint No.90, Inst. of Applied Math., 23 p. (In Russian)

[82] **Complements of discriminants of smooth maps,** Dr. of Sciences Thesis, Moscow, 1990, 300 p. (In Russian).

[83] **Complements of discriminants of smooth maps,** Summary of [82], Moscow, 1990, 29 p. (In Russian).

[84] **Complements to discriminants of smooth mappings**, ICTP, Trieste, Preprint SMR.567/21, 1991, 17 p.

[85] **Knot invariants and singularity theory**, ICTP, Trieste, Preprint SMR.567/10, 1991, 16 p.; see also [59].

[86] **Stable homotopy type of the complement to affinne plane arrangement,** preprint, 1991, 4 p.

[87] **Invariants of ornaments,** Maryland Univ., March 1993; 30 p.

[88] **Combinatorial computation of combinatorial formulas for knot invariants**, 61 p., preprint NI01018-SGT Newton Math. Inst., May 2001.

Abstracts and Summaries of Talks

[89] **Lagrange singularities and Lagrange characteristic classes,** Uspekhi Matem. Nauk, 37:4 (1982), p. 96–97. (In Russian.)

[90] **Local Petrovsky condition and Picard-Lefschetz theory,** Uspekhi Matem. Nauk, 39:2 (1984), p. 219–220. (In Russian.)

[91] **Sharp fronts of hyperbolic operators with constant coefficients,** Uspekhi Matem. Nauk, 41:4 (1986), p. 162. (In Russian.)

[92] **Topology of complements of discriminant varieties and complexity of algorithms**, Uspekhi Matem. Nauk, 1987, 42:5, p. 203.

[93] **Newton's nonsquarability theorem for multidimensional bodies,** Proc. 13 School on the Operator Theory. Kuybyshev, 1988, p. 42–43. (In Russian).

[94] **Newton's Principia 300 years later,** Uspekhi Matem. Nauk, 1989, **44**(6), p. 167 (with V. I. Arnold).

[95] **Topology of spaces of functions without complicated singularities**, Modern algebraic and funct.-analytic methods in analysis. Voronezh univ., Voronezh, 1990, p. 52–53 (in Russian).

[96] **Topology of discriminants and their complements,** in: Book of Abstracts of the Intern. Congress of Math., Zürich, 1994, p. 12–14.

[97] **Algebraicity of surface potentials and monodromy of complete intersections,** Math. Inst. Oberwolfach, Tagungsbericht 27/1996.

[98] **Invariants of knots in arbitrary manifolds,** Uspekhi Matem. Nauk, 1998, 53:2, p. 171.

[99] **Topological order complexes and topology of discriminants,** Book of abstracts of the international conference "Geometric Combinatorics" (Kotor, Yugoslavia, Aug.28–Sept.03, 1998), p. 11, 1998.

[100] **Topological order complexes and topology of discriminants,** Book of abstracts of the international conference dedicated to 90-th anniversary of L. S. Pontryagin (Moscow, Aug.31–Sept.06, 1998), Vol. Algebra, Geometry and Topology, Moscow, MSU, p. 106–108.

[101] **Order complexes of singular sets and topology of spaces of nonsingular projective varieties,** Abstracts of the international conference "Topology and Dynamics. Rokhlin memorial" (St. Petersburg, Russia, Aug. 19–25, 1999), p. 72–73.

[102] **Order complexes of singular sets and topology of spaces of nonsingular projective varieties**, Math. Inst. Oberwolfach, Tagungsbericht 19/1999.

[103] **Collections of planes and their complements**, Uspekhi Matem. Nauk (Russian Math. Surveys), 2001, No.?, ?? .

[104] **Theory of lacunas and Petrovskii condition for hyperbolic operators**, Book of Abstracts of the International Conference "Differential Equations and Related Topics" dedicated to the Centenary Anniversary of I.G. Petrovskii, Moscow University Press, 2001, p. 18.

[105] **Combinatorial formulas for cohomology of spaces of knots,** Abstracts of the International Conference "Fundamental Mathematics Today" dedicated to the 10-th anniversary of the Independent University of Moscow, Moscow, December 2001, p. 40.

[106] **Cohomology of knot spaces and their combinatorial formulas**, Uspekhi Matem. Nauk (Russian Math. Surveys), 2004, No.?, ?? .

Other

[107] **The mathematical legacy of "Lacunas for hyperbolic equations"**, in: Raoul Bott, Selected Papers. Vol. 2: Differential Operators. Robert D. MacPherson, Ed.; Birkhäuser; Boston, Basel, Berlin; 1994, p. xxiii - xxviii.

[108] **Introduction** to the book: Topics in Singularity Theory. V. I. Arnold's 60-th Anniversary Collection, AMS Translations, Ser. 2, vol. 180. AMS, Providence RI, 1997, p. ix–xiii (with A. G. Khovanskii and A. N. Varchenko).

[109] **V. I. Arnold: to the 60-th anniversary**. Uspekhi Matem. Nauk, 1997, 52:5, p. 235-255 (With D. V. Anosov, A. A. Bolibruch, A. A. Gonchar, M. L. Gromov, S. M. Gusein-Zade, L. D. Faddeev, Yu. S. Ilyashenko, B. A. Khesin, A. G. Khovanskii, M. L. Kontsevich, V. V. Kozlov, Yu. I. Manin, A. I. Neishtadt, S. P. Novikov, Yu. S. Osipov, M. B. Sevryuk, Ya. G. Sinai, A. N. Tyurin, A. N. Varchenko, A. M. Vershik, and V. M. Zakalyukin).

[110] **Introduction** to the book: Geometry of Differential Equations, AMS Translations, Ser. 2, vol. 186. AMS, Providence RI, 1998, p. ix–xi (with A. G. Khovanskii and A. N. Varchenko).

[111] **Comments to some 27 problems**, in: V.I. Arnold's Problems, Moscow, Phasis 2000, pp. 184, 185, 207, 226, 227, 236, 238, 277, 278, 279, 284, 288, 292-293, 300, 310, 312-314, 315-316, 327, 330-331, 337-338, 339, 351, 366-367, 418 (in Russian).

[112] **Comments to an even greater number of problems,** in extended English version of [111], Phasis (to appear).

I have also authored and co-authored six articles on applied mathematics.

Books edited and co-edited

[1] **Proc. of the 13 All-Union School on the Operator Theory,** Kuybyshev, 1988. (In Russian).

[2] **Russian translation of the Proceedings of the Bourbaki Seminare (1989)**, Moscow, Mir Publishers, 1995.

[3] **Russian translation of the Proceedings of the Bourbaki Seminar (1990),** Moscow, Mir Publishers, 1996.

[4] **Russian translation of the Proceedings of the Bourbaki Seminar (1991),** Moscow, Mir Publishers, 1998.

[5] **Topics in Singularity Theory. V. I. Arnold's 60-th Anniversary Collection,** AMS Translations, Ser. 2, vol. 180. AMS, Providence RI, 1997.

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TEACHING EXPERIENCE

In 1973-81, being a student of the Moscow State University, I taught at the Mathematics Correspondence School created by I. M. Gel'fand for high school students from all parts of Russia.

In 1982-86 I taught mathematics at the specialized Moscow Mathematical High School # 57.

In 1987-89 I taught the special courses on Topology for advanced students of this school.

In 1987-91 I taught informal lecture courses on Topology and Singularity Theory for undergraduate students. Among my students in these years were A. Polishchuk, L. Possitselsky, A. Stoyanovsky, R. Bezrukavnikov, N. Nekrasov, M. Entov, S. Barannikov, P. Pushkar', Yu. Makhlin, T. Misirpashaev, O. Kravchenko, S. Shteingold, G. Vinner, M. Braverman and several other currently professional mathematicians and physicists.

In 1991-92 and 92-93 academic years I taught Calculus at the Moscow Independent University, in 1993-94, 1996, Fall 1998, 1999-2000 and 2001 lecture courses on Topology, in 1994-95 on Singularity Theory, in Fall 1995 on Topology of Singularities, in 1997-98 on Additional Chapters of Topology, and in 2002-2003 on Topology of Discriminants and Plane Arrangements at the same university. In 2001-2002 I taught Topology-2 at the MATH IN MOSCOW program at the same university.

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