

Curriculum vitae

Name: Kazarian
Forenames: Maxim Eduardovich
Date of Birth: 11.04.1965 **Place of birth:** Moscow
Marital status: married, 3 children
Home address: Altaiskaja str., 34, 145
Moscow 107589 RUSSIA
Present position: leading research fellow
Institution: Steklov Mathematical Institute RAS
Mail address: Steklov Mathematical Institute RAS
8 Gubkina St.
119991 Moscow GSP-1 RUSSIA
Tel: (7495)466-35-94
Fax: (7495)135-05-55
e-mail: kazarian@mccme.ru
Web page: <http://www.mi.ras.ru/~kazarian>
Education: 1982-1988 Moscow Aviation Institute
1988-1991 Steklov Mathematical Institute
(postgraduate course)
Academic degrees: Doctor of sciences (phys. & math.)
Habilitation thesis: 'Characteristic classes
in singularity theory' (2003)
Mother tongue: Russian
Other languages: English, French
Domain of interest: Geometry, topology, singularity theory,
characteristic classes, moduli spaces

Invitations, participation in seminars, international conferences and workshops

Arnold's Seminar on Singularities, Moscow University, 1984-present
Conference on Symplectic Geometry, Warwick Univ., U.K., 1990
School on Singularity Theory, ICTP, Trieste, Italy, 1991
Franch-Russian conference on Geometry, Luminy, Marseille, France, 1992
Conference on Singularities and app., Liverpool Univ., U.K., 1993
Geometrical Colloquium, Moscow, 1993
Symposium on Singularities and Differential Equations, Banach Math. Center, Warsaw, Poland, 1993
Workshop on Hamiltonian Systems and Symplectic Geometry, Bochum Univ., Germany, 1993
Conference and Workshop on Singularities, Konstanz Univ., Germany, 1994
Conference on Symplectic Geometry, Cambridge Univ., U.K., 1994
Visiting professor at University Paris-IX Dauphine, France, 1995
Visiting scolar at Harvard University, Boston, U.S.A, 1995
Visiting scolar at Stockholm University, Shweden, 1995
Symposium on Singularities in Pfaff Systems, Banach Math. Center, Warsaw, Poland, 1995
School on Singularity Theory (lecturer), Bayreuth, Germany, 1996
Visiting scolar at Stockholm University, Shweden, 1996
Conference on Symplectic Topology, Three- and Four-dimensional Manifolds, Ascona, Switzerland, 1996
Workshop on Singularities, Oberwolfach, 1996
Workshop on Real and Complex Singularities, Sao Carlos, Brasil, 1996
C.T.C. Wall's 60th birthday Meeting, Liverpool, 1996
Workshop on Discriminant Spaces; braids, links and categories (lecturer), Utrecht, 1996
Program in Singularity Theory and Geomtry, Toronto, May-June 1997 (lecturer)
Conference in honour of V.I.Arnold, Toronto, June 1997 (invited speaker)
Conference in Symplectic Geometry, Toronto, June 1997
Rennes University, France, June 1998
Bochun University, Germany, July-August 1998
Workshop on Monodromy and Differential Equations, Lumini, France, January 1999
Conference on Singularities, Obervolfach, Germany, May 1999
Conference in Berlin "Six Projects in Math. and Phis.", Berlin, June 1999.

Visiting professor at the University Paris-IX Dauphine, France, June 1999
Rokhlin Memorial Conference, invited speaker, St. Petersburg, Russia, August 1999
Workshop on Monodromy and Differential Equations, Barcelona, Spain, June 2000
Programme on Singularity Theory, Cambridge, UK, October-December, 2000
Conference on Monodromy and Differential Equations, Moscow, Russia, 2001
Conference on Singularities, Obervolfach, Germany, September 2001
University of Mainz, Germany, February 2002
BAMC, Warwick, UK, invited speaker, April 2002
Visiting professor at the University Paris-IX Dauphine, France, May 2002
International Conference on Differential Equations, Suzdal, Russia, July, 2002
International conference on Monodromy and Differential Equations, Moscow, Russia, August 2002
Workshop on Singularity Theory, Edinburg, May 2003
Conference 'Current Geometry 2003', Napoli, Italy, June 2003
Plenary speaker at the Conference 'Singularity theory and its applications', Hokkaido, Japan, September 2003
Plenary speaker at the Workshop on Real and Complex Singularities theory and its applications', Marseille, France, 2004
Visiting professor at the University Paris-IX Dauphine, France, May 2004
International conference "Combinatorial methods in physics and knot theory", Moscow, February 2005
Visiting professor at the University Paris-IX Dauphine, France, May 2005
International Conference Algebraic Topology: Old and New. M.M.Postnikov Memorial Conference. Bedlewo, Poland, June 2007, sectional speaker
International Singularities Conference in celebration of the seventieth birthday of C.T.C.Wall July 2007 Liverpool, UK, plenary speaker
International Conference on Moduli spaces of Riemann surfaces and related topics, June 2007, Montreal, Canada, plenary speaker
International Conference 'Analysis and Singularities' in celebration of 70th birthday of V.I.Arnold, MIAN, Moscow, August 2007, sectional speaker
Twente Conference on Lie Groups 10-17 December 2007, Twente, the Netherlands, plenary speaker
Swiss-Russian seminar "Moduli spaces and physics", Zurich University, December 2007, invited speaker
Visiting professor at Utrecht University, the Netherlands, January 2008
Visiting Professor at the University of Toronto, Canada, March 2008
Workshop on Singularities, August 18-22 2008, Edinburgh, UK, plenary speaker
International Conference "Geometry and Integrability in Mathematical Physics", September 15-19 2008, Luminy, France, invited speaker

International Conference on Integrable Systems, Tianjin University, China, November 2009

Visiting Professor at the Rényi Institute of Mathematics, Budapest, Hungary, January 2010

Invited speaker at the Conference on Singularities, Geometry, and Topology in honour of the 60th Anniversary of S. Gusein-Zade, El Escorial, Spain, October 2010

Visiting Professor at the Hokkaido University and Kyoto University, December 2010

Visiting Professor at the Department of Pure Mathematics, University of Tel-Aviv, Israel, March 2011

International Conference "Real Enumerative Questions in Complex and Tropical Geometry", Oberwolfach, Germany, April 2011

Visiting Professor at the Bourgogne University, Dijon, France, January, May 2011

Invited speaker at the International Conference on Real and Complex Singularities. Bedlewo, Poland, May 2011

Publications of M. Kazarian

1. *Caustics of full reflection on the interface of two media.* Proc. Moscow Aviation Institute, **324** (1988), 214–215 (Russian).
2. *Boundary singularities of fundamental systems, flattenings of projective curves and Schubert cells.* Itogi Nauki i Tekhniki, Current problems in mathematics. Newest results. VINITI, Moscow. Vol. **33** (1988), 215–234. English translation in: J. Soviet Math. **52** (1990), no. 4, 3338–3349.
3. *Bifurcations of flattenings and Schubert cells.* in: Theory of singularities and its Applications., Adv. in Soviet Math., **1**. Providence: AMS (1990), 145–156.
4. *Flattenings of projective curves, singularities of the Schubert stratifications of Grassmannian and flag manifolds, and ramifications of Weierstrass points of algebraic curves.* Uspekhi Mat. Nauk, **46** (1991), no. 5(281), 79–119, 190; English translation in: Russian Math. Surveys, **46** (1991), no. 5, 91–136.
5. *Caustics D_4 at points of interface between two media.* in: Symplectic Geometry, London Math. Soc. Lect. Not. Ser. **192** (1993), 115–125.
6. *Hidden singularities and Vassiliev's homology complex of singularity classes.* Mat. Sb., **186** (1995), no. 12, 119–128; translation in Sb. Math. **186** (1995), no.12, 1811–1820.
7. *Characteristic classes of Lagrangian and Legendrian singularities.* Uspekhi Math. Nauk, **50** (1995), no. 4, 45–70; English translation., Russian Math. Surveys **50** (1995), 701–726.
8. *Umbilical characteristic number of Lagrangian mappings of a 3-dimensional pseudo-optical manifold.* Topology, 3. J. Math. Sci., **82** (1996), no. 5, 3672–3679; Banach Center Publ., Polish Ac. Sc., **33** (1996), 161–170.
9. *Nonlinear version of Arnold's theorem on flattening points.* C. R. Acad. Sci. Paris Ser. I Math., **323** (1996), no. 1, 63–68.
10. *Characteristic classes of singularity theory.* The Arnold-Gelfand mathematical seminars, Birkuser Boston (1997) 325–340.
11. (with R. Montgomery, B. Z. Shapiro) *Characteristic classes for the degenerations of two-plane fields in four dimensions.* Pacific J.Math., **179**, no. 2, (1997), 355–370., arXiv:dg-ga/9704001
12. *Relative Morse theory of one-dimensional foliations, and cyclic homology.* Funktsionalnyy analiz i ego prilozh., **31**, no. 1 (1997), 20–31; translation in Funct. Anal. Appl. **31** (1997), no.1, 6–24
13. *Topological Invariants of Fiber Singularities.* V.I.Arnold's 60-th anniversary Collection, AMS Translations, Ser.2, **180** (1997), 141–146.
14. *First-order invariants of Strangeness type for plane curves.* (Russian) Tr. Mat. Inst. Steklova, **221** (1998), p213–224; translation in Proc. Steklov Inst. Math. 1998, no. 2 (**221**), 202–213
15. (with Habsieger, L., Lando, S.), *On the second number of Plutarch.* Amer. Math.

Monthly **105** (1998), no. 5, 446

16. *Chern-Euler number of circle bundles via singularity theory.* Math. Scand., **82** (1998), 207–236.
17. *Characteristic spectral sequence of singularity classes*, (in Russian), Appendix in V.A. Vassiliev, *Lagrange and Legendre Characteristic classes*, Extended Russian translation: Moscow, MCCME, 2000.
18. *Classifying spaces of singularities and Thom polynomials*, in *New developments in Singularity Theory (Cambridge 2000)*, NATO Sci.Ser. II Math.Phys.Chem, **21**, Kluwer Acad. Publ., Dordrecht, 2001, 117-134.
19. *Differential forms, fiber bundles, and connections* (in Russian), MCCME, 2002, 15pp.
20. *Lectures on Differential Geometry 2001–2002* (in Russian), MCCME, 2002, 40 pp.
21. *Thom Polynomials for Lagrange, Legendre, and Critical Point Function Singularities*, Proc. London Math. Soc. (3) **86** (2003) 707-734.
22. *Multisingularities, cobordisms, and enumerative geometry*, Uspekhi Mat. Nauk, no 4, **58** (2003), 29–88; translation in Russian Math. Surveys, (4) **58** (2003), 665-724.
<http://www.mi.ras.ru/~kazarian/papers/multie.pdf>
23. (with S. K. Lando), *Towards the intersection theory on Hurwitz spaces*, (in Russian) Izv. Ross. Akad. Nauk Ser. Mat. **68** (2004), no. 5, 91–122; translation in Izv. Math. **68** (2004), no. 5, 935–964. [arXiv:math/0410388](https://arxiv.org/abs/math/0410388)
24. *Calculus on Manifolds*, MCCME, 2004, 32 pp.
25. *Introduction to Homology Theory* (in Russian, Lecture Courses of MIAN Education Center, **3**, MIAN, 2006.
26. (with S. K. Lando), *An algebro-geometric proof of Witten's conjecture*, J. Amer. Math. Soc. **20** (2007), no. 4, 1079–1089., [arXiv:math/0601760](https://arxiv.org/abs/math/0601760)
27. (with B. Z. Shapiro) *Giambelli formula for subbundles in the tangent bundle*, Pacific J. Math. **230** (2007), no. 1, 233–255., [arXiv:alg-geom/9611016](https://arxiv.org/abs/alg-geom/9611016)
28. *Thom Polynomials*, in: Singularity theory and its applications, 85–135, Adv. Stud. Pure Math., 43, Math. Soc. Japan, Tokyo, 2006.
<http://www.mi.ras.ru/~kazarian/papes/Thomp01.pdf>
29. (with S. K. Lando), *Thom polynomials for mappings of curves with isolated singularities.* (Russian) Tr. Mat. Inst. Steklova **258** (2007), Anal. i Osob. Ch. 1, [arXiv:0706.1523](https://arxiv.org/abs/0706.1523)
30. *Morin maps and their characteristic classes*, preprint (2006)
<http://www.mi.ras.ru/~kazarian/papes/morin.pdf>
31. *KP hierarchy for Hodge integrals*, preprint (2007), Advances in Mathematics, Volume 221, Issue 1, 1 May 2009, Pages 1-21.
32. (with S. K. Lando), *Topological relations on Witten–Kontsevich and Hodge potentials*, to be published at MMJ.