

List of publications by Eugenii Shustin

BOOKS

1. (jointly with G.-M. Greuel and C. Losses) *Introduction to singularities and deformations*. Springer-Verlag, Berlin, Heidelberg, 2007.
2. * (jointly with I. Itenberg and G. Mikhalkin) *Tropical algebraic geometry/ Oberwolfach seminars*, vol. **35**. Birkhauser, 2007.

ARTICLES

1. (jointly with D.A. Gudkov) Classification of non-singular 8th order curves on ellipsoid. In: *Methods of Qualitative Theory*, Gorky University Press, Gorky, 1980, pp. 104–107 (Russian).
2. On invariants of algebraic curve singular points. *Math. Notes of Acad. Sci. USSR* **34** (1983), 962–963.
3. Asymptotic density of certain sets of natural numbers. *J. Soviet Math.* **29** (1985), no. 3, 1364–1369.
4. Gluing of singular algebraic curves. In: *Methods of Qualitative Theory*, Gorky University Press, Gorky, 1985, pp. 116–128 (Russian).
5. The Hilbert-Rohn method and smoothings of real algebraic curve singular points. *Sov. Math. Doklady* **31** (1985), no. 2, 282–286.
6. Counter-examples to the Rokhlin conjecture. *Function. Anal. Appl.* **19** (1985), 162–163.
7. Estimates for the number of singular points of algebraic curves. In: *Differential and Integral Equations*, Gorky University Press, Gorky, 1985, pp. 81–83 (Russian).
8. Versal deformations in the space of plane curves of fixed degree. *Function. Anal. Appl.* **21** (1987), 82–84.
9. New M-curve of the 8th degree. *Math. Notes of Acad. Sci. USSR* **42** (1987), 606–610.
10. On isotopic classification of affine M-curves of 6th degree. In: *Methods of Qualitative Theory*, Gorky University Press, Gorky, 1988, pp. 97–105 (Russian).
11. New M- and (M-1)-curves of degree 8. In: *Rokhlin seminar/ Lecture Notes in Mathematics*, vol. **1346**, Springer, Berlin, 1988, pp. 487–493.
12. Smoothness and irreducibility of moduli spaces of singular algebraic curves. In: *Arithmetic and Geometry of Varieties*, Kuibyshev University Press, Kuibyshev, 1989, pp. 132–145 (Russian).
13. (jointly with A.B. Korchagin) Affine curves of degree 6 and smoothings of ordinary 6th order singular point. *Math. USSR Izvestiya* **33** (1989), no. 3, 501–520.
14. New restrictions in topology of real curves of degree 8n. *Math. USSR Izvestiya* **37** (1991), no. 2, 421–443.
15. On manifolds of singular algebraic curves. *Selecta Math. Sov.* **10** (1991), no. 11, 27–37.
16. Hyperbolic and minimal smoothings of singular points. *Selecta Math. Sov.* **10** (1991), no. 1, 19–25.
17. Dynamical systems in \mathbf{C}^2 and real curves of 8th degree. In: *Methods of Qualitative Theory*, N.-Novgorod University Press, N.-Novgorod, 1991, pp. 120–129 (Russian).
18. Topology of M-curves with a deep nest. In: *Arithmetic and Geometry of Varieties*, Samara University Press, Samara, 1992, pp. 147–158 (Russian).
19. (jointly with V. N. Chervin) Quasi-symmetric and quasi-skew-symmetric bilinear forms over a field. *Math. Notes Russ. Acad. Sci.* **52** (1992), no. 6, 1272–1279.

20. Real plane algebraic curves with prescribed singularities. *Topology* **32** (1993), no. 4, 845–856.
21. (jointly with E. Fridman and L. Fridman) Steady modes in an autonomous system with break and delay. *Differential Equations* **29** (1993), no. 8, 1161–1166.
22. (jointly with E. Fridman and L. Fridman) Steady modes in a discontinuous control system with time delay. *Pure Math. Appl.* **4** (1993), no. 1, 59–73.
23. Smoothness and irreducibility of varieties of algebraic curves with nodes and cusps. *Bull. SMF* **122** (1994), 235–253.
24. (jointly with R. D. Baker, J. Bonin, and F. Lazebnik) On the nowhere zero points in linear mappings. *Combinatorica* **14** (1994), no. 2, 149–157.
25. (jointly with I. Itenberg) Newton polygons and singular points of real polynomial vector fields. *C. R. Acad. Sci. Paris, Ser. I*, **319** (1994), 963–968.
26. Surjectivity of the resultant map: a solution to the inverse Bézout problem. *Communications in Algebra* **23** (1995), no. 3, 1145–1164.
27. Super-high-frequency oscillations in a discontinuous dynamic system with time delay. *Israel J. Math.* **90** (1995), 199–219.
28. (jointly with I. Itenberg) Real algebraic curves with real cusps. *Amer. Math. Soc. Transl. (2)*, **173** (1996), 97–109.
29. Critical points of real polynomials, subdivisions of Newton polyhedra and topology of real algebraic hypersurfaces. *Amer. Math. Soc. Transl. (2)*, **173** (1996), 203–223.
30. Geometry of equisingular families of plane algebraic curves. *J. Algebraic Geometry* **5** (1996), no. 2, 209–234.
31. Smoothness of equisingular families of plane algebraic curves. *International Mathematics Research Notices* **2** (1997), 67–82.
32. Interpolation by convex algebraic hypersurfaces. *J. Approximation theory* **88** (1997), no. 3, 304–315.
33. (jointly with S. Finashin) On imaginary plane curves and Spin quotients of complex surfaces by complex conjugation. In: *Topics in Singularity Theory. V. I. Arnold's 60th Anniversary Collection* (AMS Translations (2), **180**)/ A. Khovanskii etc eds., AMS, Providence R. I., 1997, pp. 93–101.
34. (jointly with G.-M. Greuel and C. Lossen) New asymptotics in the geometry of equisingular families of curves. *International Mathematics Research Notices* **13** (1997), 595–611.
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36. (jointly with G.-M. Greuel and C. Lossen) Geometry of families of nodal curves on the blown up projective plane. *Trans. Amer. Math. Soc.* **350** (1998), no. 1, 251–274.
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38. (jointly with G.-M. Greuel and C. Lossen) Plane curves of minimal degree with prescribed singularities. *Invent. Math.* **133** (1998), no. 3, 539–580.
39. (jointly with I. Tyomkin) Versal deformations of algebraic hypersurfaces with isolated singularities. *Math. Annalen* **313** (1999), no. 2, 297–314.
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41. Deformation of complete intersections in the plane. *Bull. London Math. Soc.* **32** (2000), no. 2, 177–181.

42. (jointly with I. Itenberg) Singular points and limit cycles of planar polynomial vector fields. *Duke Math. J.* **102** (2000), no. 1, 1–37.
43. (jointly with M. Farber) Witten deformation and polynomial differential forms. *Geometriae Dedicata* **80** (2000), no. 1/3, 125–155.
44. (jointly with G.-M. Greuel and C. Lossen) Castelnuovo function, zero-dimensional schemes and singular plane curves. *J. Alg. Geom.* **9** (2000), no. 4, 663–710.
45. (jointly with E. Fridman and L. Fridman) Steady modes and stability in discontinuous delay systems with periodic disturbances. *ASME Journal of Dynamic Systems, Measurement and Control* **122** (2000), no. 4, 732–737.
46. (jointly with V. Kharlamov and J.-J. Risler) Maximal smoothings of real plane curve singular points. In: *Topology, Ergodic Theory, Real Algebraic Geometry: Rokhlin's Memorial/* V. Turaev and A. Vershik, eds. (AMS Translations (2), **202**), AMS, 2001, pp. 167–195.
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51. (jointly with I. Itenberg) Combinatorial patchworking of real pseudo-holomorphic curves. *Turkish J. Math.* **26** (2002), no. 1, 27–51.
52. (jointly with S. Orevkov) Flexible, algebraically unrealizable curves: Rehabilitation of Hilbert-Rohn-Gudkov approach. *J. reine angew. Math.* **551** (2002), 145–172.
53. (jointly with E. Fridman and L. Fridman) Oscillations in a second-order discontinuous system with delay. *Discrete and Continuous Dynamical Systems* **9** (2003), no. 2, 339–358.
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55. (jointly with I. Itenberg and V. Kharlamov) Welschinger invariant and enumeration of real rational curves. *Internat. Math. Res. Notices* **49** (2003), 2639–2653.
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62. A tropical approach to enumerative geometry. *Algebra i Analiz* **17** (2005), no. 2, 170–214 (English translation: *St. Petersburg Math. J.* **17** (2006), 343–375).
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64. A tropical calculation of the Welschinger invariants of real toric Del Pezzo surfaces. *J. Algebraic Geom.* **15** (2006), no. 2, 285–322.
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66. (jointly with I. Tyomkin) Patchworking singular algebraic curves, II. *Israel J. Math.* **151** (2006), 145–166.
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73. (jointly with I. Itenberg and V. Kharlamov) A Caporaso-Harris type formula for Welschinger invariants of real toric Del Pezzo surfaces. *Comment. Math. Helv.* **84** (2009), 87–126.
74. (jointly with H. Kaplan and M. Sharir) On lines and Joints. Preprint at arXiv:0906.0558. *Discrete and Computational Geometry* **44** (2010), 838–843.
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76. (jointly with Z. Izhakian) Idempotent semigroups and tropical algebraic sets. *Journal of EMS* **14** (2012), 489–520.
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81. (jointly with M. Shoval) On Gromov-Witten invariants of del Pezzo surfaces. *International J. Math.* **24** (2013), no.7, 44 pp. DOI: 10.1142/S0129167X13500547.

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84. (jointly with I. Itenberg and V. Kharlamov) Welschinger invariants of real del Pezzo surfaces of degree ≥ 2 . *International J. Math.* **26** (2015), no. 6. DOI: 10.1142/S0129167X15500603.
85. (jointly with Vic. Kulikov) Duality of planar and spacial curves: new insight. *European J. Math.* **1** (2015), no. 3, 462–482. DOI 10.1007/s40879-015-0052-6.
86. (jointly with Vic. Kulikov) On rigid plane curves. *European J. Math.* **2** (2016), no. 1, 208–226. DOI 10.1007/s40879-015-0062-4.
87. (jointly with S. Yu. Orevkov) Real algebraic and pseudoholomorphic curves on the quadratic cone and smoothings of singularity X_{21} . *St. Petersburg Math. J.* **28** (2017), 225–257.
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PROCEEDINGS OF CONFERENCES

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2. Geometry of discriminant and topology of algebraic curves. *Proc. Internat. Congr. of Math., Kyoto, Japan, Aug. 21-29, 1990*, vol. 1, Springer, 1991, pp. 559–567.
3. (jointly with E. Fridman and L. Fridman) Steady modes in a discontinuous control system with time delay. *Proc. Internat. IEEE Workshop on Variable structure and Liapunoff control of uncertain dynamical systems, Sheffield, Sep. 7-9, 1992*, pp. 65–69.
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5. Real plane algebraic curves with many singularities. *Proc. Intern. Conf. Real Algebraic Geometry, Rennes, June 24-29 1991/ Lect. Notes Math.* **1524**, Springer, 1992, pp. 389–401.
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10. (jointly with G.-M. Greuel) Geometry of Equisingular Families of Curves. In: *Singularity Theory/ B. Bruce and D. Mond, eds., Proc. Europ. Singularities Conf., Liverpool, August 1996. Dedicated to C. T. C. Wall in occasion of his 60th birthday (London Math. Soc. Lect. Note Series 263)*, Cambridge Univ. Press, Cambridge, 1999, pp. 79–108.
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