LIST OF PUBLICATIONS

Theodore Voronov

Refereed research papers

1. On super Plücker embedding and cluster algebras. *Selecta Math. N.S.* (2021), in print, arXiv:1906.12011 (With E. Shemyakova.)

2. On differential operators over a map, thick morphisms of supermanifolds, and symplectic micromorphisms. *Differential Geom. Appl.* **74** (2021), 101704, DOI: 10.1016/j.difgeo.2020.101704, (With E. Shemyakova.)

3. On our works on the Buchstaber–Rees theory and its generalization. arXiv:2002.02395 [math.RA] (With H. Khudaverdian.)

4. L-infinity bialgebroids and homotopy Poisson structures on supermanifolds. arXiv:arXiv:1909.04914

5. Thick morphisms, higher Koszul brackets, and L_∞-algebroids. arXiv:1808.10049 (With H. Khudaverdian.)

6. Tangent functor on microformal morphisms. arXiv:1710.04335

7. Vector fields on mapping spaces and a converse to the AKSZ construction. arXiv:1211.6319

8. Thick morphisms of supermanifolds, quantum mechanics, and spinor representation. *J. Geom. Phys.* **148** (2020), 103540. (With H. Khudaverdian)

9. Graded geometry, Q-manifolds, and microformal geometry. *Fortschr. Phys.* **67** (2019), 1910023.

10. Differential operators on the algebra of densities and factorization of the generalized Sturm–Liouville operator. *Lett. Math. Phys.* **109**, Issue 2 (2019), 403–421. DOI: 10.1007/s11005-018-1113-9 (With E. Shemyakova.)

11. Microformal geometry and homotopy algebras. *Proc. Steklov Inst. Math.* **302** (2018), 88–129. DOI: 10.1134/S0081543818060056

12. Differential operators on the superline, Berezinians, and Darboux transformations. *Lett. Math. Phys.* **107**, Issue 9 (2017), 1689–1714 (With S. Li and E. Shemyakova.)

13. "Nonlinear pullbacks" of functions and L_∞-morphisms for homotopy Poisson structures. *J. Geom. Phys.* **111** (2017), 94–110.

14. On volumes of classical supermanifolds. *Sbornik: Mathematics* **207** (11) (2016), 1512–1536.

15. Thick morphisms of supermanifolds and oscillatory integral operators. *Russian Math. Surveys* **71** (4) (2016), 784–786.

16. Darboux transformations for differential operators on the superline. *Russian Math. Surveys* **70** (6) (2015), 207–208. (With S. Hill and E. Shemyakova.)

17. Geometric constructions on the algebra of densities. In: *Topology, Geometry, Integrable Systems, and Mathematical Physics: Novikov's Seminar 2012–2014* (V. M. Buchstaber, B. A. Dubrovin, and I. M. Krichever, eds.), AMS Translations, Ser. 2, 234, (2014), 221–243. (With H. Khudaverdian.)

18. Geometry of differential operators of second order, the algebra of densities, and groupoids. *J. Geom. Phys.* **64** (2013), 31–53. (With H. Khudaverdian.)

19. Q-manifolds and Mackenzie theory, *Comm. Math. Phys.* **315** (2) (2012), 279–310.

20. On a non-Abelian Poincaré lemma. *Proc. Amer. Math. Soc.* **140** (2012), 2855–2872.

21. A short proof of the Buchstaber-Rees theorem. *Phil. Trans. R. Soc. A.* **369** (1939) (2011), 1334–1345. (With H. Khudaverdian.)

22. Q-manifolds and higher analogs of Lie algebroids. In book: *XXIX Workshop on Geometric Methods in Physics.* AIP CP **1307**, pp. 191–202, Amer. Inst. Phys., Melville, NY, 2010.

23. Higher Poisson brackets and differential forms. In book: *Geometric Methods in Physics.* AIP CP **1079**, pp. 203–215, Amer. Inst. Phys., Melville, NY, 2009. (With H. Khudaverdian.)

24. Differential forms and odd symplectic geometry. In book: *Geometry, Topology and Mathematical Physics. S. P. Novikov's seminar: 2006–2007*, V. M. Buchstaber, I. M. Krichever, eds., *Amer. Math. Soc. Transl.* (2), **224**, 2008, pp. 159–171. (With H. Khudaverdian.)

25. Operators on superspaces and generalizations of the Gelfand-Kolmogorov theorem. In book: *XXVI Workshop on Geometric Methods in Physics.* AIP CP **956**, pp. 149–155, Amer. Inst. Phys., Melville, NY, 2007. (With H. Khudaverdian.)

26. On generalized symmetric powers and a generalization of Kolmogorov–Gelfand–Buchstaber–Rees theory. *Russian Math. Surveys.* **62** (3) (2007), 209–210. (With H. Khudaverdian.)

27. New facts about Berezinians. In book: *Supersymmetries and Quantum Symmetries 2005*, E. Ivanov and B. Zupnik, eds., Dubna, 2006, pp. 393–398. (With H. Khudaverdian.)

28. Higher derived brackets for arbitrary derivations. *Travaux Mathématiques*, **XVI** (2005), 163–186.

29. On Berezinians, exterior powers and recurrent sequences. *Lett. Math. Phys.* **74** (2005), 201–228 [Berezin Memorial Volume]. (With H. Khudaverdian.)

30. Higher derived brackets and homotopy algebras. *J. Pure Appl. Algebra* **202** (1–3), 1 November 2005, 133–153.

31. Geometry of differential operators, odd Laplacians, and homotopy algebras. *J. Nonlinear Math. Phys.,* **11** (2004), Supplement, 217–227. (With H. Khudaverdian.)

32. An alternative form of the Helmholtz criterion in the inverse problem of calculus of variations. *Lett. Math. Phys.* **67** (2) (2004), 103–110.

33. On odd Laplace operators. II. In book: *Geometry, Topology and Mathematical Physics. S. P. Novikov's seminar: 2002–2003*, V. M. Buchstaber, I. M. Krichever, eds., *Amer. Math. Soc. Transl.* (2), **212**, 2004, pp. 179–205. (With H. Khudaverdian.)

34. Geometry of differential operators, and odd Laplace operators. *Russian Math. Surveys* **58** (2003), no. 1, 197–198. (With H. Khudaverdian.)

35. On odd Laplace operators. *Lett. Math. Phys.* **62** (2002), 127–142. (With H. Khudaverdian.)

36. Graded manifolds and Drinfeld doubles for Lie bialgebroids. In book: *Quantization, Poisson Brackets and Beyond,* Theodore Voronov, ed., *Contemp. Math.* **315**, Amer. Math. Soc., Providence, RI, 2002, pp. 131–168.

37. On complexes related with calculus of variations. *J. Geom. Phys.* **44** (2-3) (2002), 221–250. (With H. Khudaverdian.)

38. Dual forms on supermanifolds and Cartan calculus. *Comm. Math. Phys.* **228** (1) (2002), 1–16.

39. Cartan calculus for dual forms. *Russian Math. Surveys* **56** (2) (2001), 421–422.

40. Quantization of forms on the cotangent bundle. *Comm. Math. Phys.* **205** (2) (1999), 315–336.

41. Supermanifold forms and integration. A dual theory. In book: *Solitons, Geometry, and Topology: On the Crossroad,* V.M.Buchstaber, S.P.Novikov, eds., *AMS Translations,* ser. 2, **179**, Amer. Math. Soc., Providence, RI, 1997, pp. 153–172.

42. A complex generated by variational derivatives. Lagrangian formalism of infinite order and a generalization of the Stokes formula. *Uspekhi Mat. Nauk* **51** (6) (1996), 195–196.

43. On the Poisson envelope of a Lie algebra. "Noncommutative" moment space. *Funktsion. Anal. Pril.* **29** (3) (1995), 61–64.

44. On characteristic classes of infinite-dimensional vector bundles. *Uspekhi Mat. Nauk* **46** (3) (1991), 185–186.

45. Class of integral transforms induced by morphisms of vector bundles. *Matem. Zametki* **44** (6) (1988), 735–749.

46. Cohomology of supermanifolds and integral geometry. *Doklady Akad. Nauk* **298** (3) (1988), 528–533. (With A. Zorich.)

47. Integration on vector bundles. *Funktsion. Anal. Pril.* **22** (2) (1988), 14–25. (With A. Zorich.)

48. Bordism theory and homotopy properties of supermanifolds. *Funktsion. Anal. Pril.* **21** (3) (1987), 77–78. (With A. Zorich.)

49. Integration on vector bundles with even and odd fiber and the inversion formulas in integral geometry. *Uspekhi Mat. Nauk* **42** (4) (1987), 130. (With A. Zorich.)

50. Integral transformations of pseudodifferential forms. *Uspekhi Mat. Nauk* **41** (6) (1986), 167–168. (With A. Zorich.)

51. Complexes of forms on supermanifold and their homotopy properties. Stokes' formula for $r|s$-forms. *Uspekhi Mat. Nauk* **41** (4) (1986), 165. (With A. Zorich.)

52. Complexes of forms on a supermanifold. *Funktsion. Anal. Pril.* **20** (2) (1986), 58–59. (With A. Zorich.)

Solicited book review

53. General theory of Lie groupoids and Lie algebroids by Kirill C.H. Mackenzie, *Bull. London Math. Soc.* **42** (2010), 185–190.

Article on history of mathematics

54. Felix Alexandrovich Berezin and his work. In book: *Geometric Methods in Physics.* Series: Trends in Mathematics, pp. 3–33, Springer Basel 2013. (With A. V. Karabegov and Yu. A. Neretin.)

Refereed monographs

55. *Geometric Integration Theory on Supermanifolds.* Cambridge Scientific Publ., 2014. (Vol. 3 in the series: Classic Reviews in Mathematics and Mathematical Physics, I. M. Krichever, ed.)
ISBN: 978-1-904868-82-8 **(new expanded edition of [56])**.

56. *Geometric Integration Theory on Supermanifolds.* Harwood Academic Publ., 1992, Chur. ISBN: 3-7186-5199-8.

57. *Quantization on Supermanifolds and the Analytic Proof of the Atiyah Singer Index Theorem.* Sovrem. Problemy Matem. Noveĭshie Dostizh. **38**, 3–118. VINITI, Moscow, 1991, 116 pp. ISSN: 0202-747X. [English translation in: *J. Soviet Math.* **64**(4) (1993), 993-1069.]

Volumes edited

58. *Geometric Methods in Physics. XXXIV Workshop.* Series: Trends in Mathematics. P. Kielanowski, S. T. Ali, P. Bieliavsky, A. Odzijewicz, M. Schlichenmaier, Th. Voronov (eds.), Birkhäuser Basel, 2016. ISBN: ISBN 978-3-319-31755-7 (to appear).

59. *Geometric Methods in Physics. XXXIII Workshop.* Series: Trends in Mathematics. P. Kielanowski, P. Bieliavsky, A. Odzijewicz, M. Schlichenmaier, Th. Voronov (eds.), Birkhäuser Basel, 2015. x + 310 pp. ISBN: ISBN 978-3-319-18211-7.

60. *Geometric Methods in Physics. XXXII Workshop.* Series: Trends in Mathematics. P. Kielanowski, P. Bieliavsky, A. Odesskii, A. Odzijewicz, M. Schlichenmaier, Th. Voronov (eds.), Birkhäuser Basel, 2014. x + 290 pp. ISBN: 978-3-319-06247-1.

61. *Geometric Methods in Physics. XXXI Workshop.* Series: Trends in Mathematics. P. Kielanowski, S. T. Ali, A. Odesskii, A. Odzijewicz, M. Schlichenmaier, Th. Voronov (eds.), Birkhäuser Basel, 2013. x + 290 pp. ISBN: 978-3-0348-0644-2.

62. *Geometric Methods in Physics. XXX Workshop.* Series: Trends in Mathematics. P. Kielanowski, S. T. Ali, A. Odzijewicz, M. Schlichenmaier, Th. Voronov (eds.), Birkhäuser Basel, 2013. xix + 431 pp. ISBN: 978-3-0348-0447-9.

63. *XXIX Workshop on Geometric Methods in Physics*, P. Kielanowski, V. Buchstaber, A. Odzijewicz, M. Schlichenmaier, Th. Voronov (eds.), *AIP Conference Proceedings*, Vol. 1307, Amer. Inst. of Physics, Melville, New York, 2011. 230 pp. ISBN 978-0-7354-0861-6.

64. *Geometric Methods in Physics,* P. Kielanowski, S. T. Ali, A. Odzijewicz, M. Schlichenmaier, Th. Voronov (eds.), *AIP Conference Proceedings*, Vol. 1191, Amer. Inst. of Physics, Melville, New York, 2010. 210 pp. ISBN: 978-0-7354-0728-2.

65. *Geometric Methods in Physics,* P. Kielanowski, A. Odzijewicz, M. Schlichenmaier, Th. Voronov (eds.), *AIP Conference Proceedings*, Vol. 1079, Amer. Inst. of Physics, Melville, New York, 2009. 296 pp. ISBN 978-0-7354-0610-0.

66. *XXVI International Workshop on Geometrical Methods in Physics,* P. Kielanowski, A. Odzijewicz, M. Schlichenmeier, Th. Voronov (eds.), *AIP Conference Proceedings*, Vol. 956, Amer. Inst. of Physics, Melville, New York, 2007. 266 pp. ISBN 978-0-7354-0470-0.

67. *Quantization, Poisson Brackets and Beyond,* Th. Voronov (ed.), *Contemp. Math.*, Vol. 315, Amer. Math. Soc., Providence, RI, 2002. vii+280 pp. ISBN: 0-8218-3201-8.

General articles

68. The Białowieża Meetings on Geometric Methods in Physics: Thirty Years of Success and Inspiration. *Newsletter of European Math. Soc.*, Issue 75 (March 2010), 10–13 (with S. Twareque Ali).

69. Boris Vasilievich Fedosov (obituary). *Russian Math. Surveys.* **67** (1) (2012), 167–174. (With M. A. Agranovich, L. A. Aizenberg, G. L. Alfimov, A. V. Karabegov, M. V. Karasëv, A. A. Komech, V. P. Maslov, V. V. Pukhnachev, M. A. Shubin, D. E. Tamarkin, N. N. Tarkhanov, B. L. Tsygan, and M. I. Vishik.)

Encyclopedia articles

70. Berezin integral. Berezin volume forms. Berezinian. Differential forms. Exterior algebra. Forms on supermanifolds. Integral forms. Orientation. Pfaffian. Proper map of supermanifolds. Pseudodifferential forms. Supermanifolds with boundary.
Invited contribution to: *Concise Encyclopedia in Supersymmetry and Noncommutative Structures in Mathematics and Physics*, Kluwer Acad. Publ., Dordrecht, 2003, 650 pp. ISBN 1-4020-1338-8.

Preprints and unrefereed conference abstracts

71. Quantum microformal morphisms of supermanifolds: an explicit formula and further properties. `1512.04163 [math-ph]`

72. Q-manifolds and Mackenzie theory: an overview. ESI preprint 1952, 2007. `arXiv:0709.4232 [math.DG]`.

73. Mackenzie theory and Q-manifolds. `arXiv:math.DG/0608111`.

74. Quantum categories. Quantization of the category of linear spaces. `arXiv:q-alg/9508005`

75. Supermathematics and some questions of geometry. In book: Proc. of Conf. on Geometry "In Whole", p. 25, Novosibirsk, 1987.

Theses

76. Geometric Integration Theory on Supermanifolds and Its Applications. Ph.D. thesis, Moscow State University, November 1988, 224 pp. Thesis Summary: Moscow State University Press, 1988, 20 pp.

77. Characteristic Classes, Vector Bundles and the Fundamental Group of a Smooth Manifold (on a Certain Continuous Topological Charge). M.A. thesis, Moscow State University, May 1984.

Translation

78. *Foundations of Differentiable Manifolds and Lie Groups*, by F. Warner. Translation from the English into Russian. Mir Publ., Moscow. (With A. V. Khokhlov.) A. A. Kirillov, ed. (First printing: 1987. Second printing: 1994.)