

LIST OF PUBLICATIONS OF S.A.MERKULOV

1. **(2011)** *Permutahedra, HKR isomorphism and polydifferential Gerstenhaber-Schack complex*. In: “Higher Structure in Geometry and Physics: In Honor of Murray Gerstenhaber and Jim Stasheff”, Cattaneo, A.S., Giaquinto, A., Xu, P. (Eds.), Progress in Mathematics 287, XV, Birkhäuser, Boston.
2. **(2010)** (WITH THOMAS WILLWACHER) *Grothendieck-Teichmüller and Batalin-Vilkovisky*, arXiv:1012.2467.
3. **(2010)** *Wheeled pro(p)file of Batalin-Vilkovisky formalism*, Commun. Math. Phys. **295**, No.3 , 585-638.
4. **(2010)** *Graph complexes with loops and wheels*. In: “Algebra, Arithmetic and Geometry - Manin Festschrift” (eds. Yu. Tschinkel and Yu. Zarhin), Progress in Mathematics, Birkhäuser.
5. **(2010)** *Operads, configuration spaces and quantization*, 59 pp., arXiv:1005.3381. Submitted for publication.
6. **(2009)** *Wheeled props in algebra, geometry and quantization*, 22 pages. To appear in Proceedings of the 5th European Congress of Mathematicians.
7. **(2009)** (WITH S. SHADRIN AND M. MARKL) *Wheeled PROPs, graph complexes and the master equation*. Journal of Pure and Applied Algebra, **213** 496-535.
8. **(2009)** (WITH BRUNO VALLETTE) *Deformation theory of representations of prop(erad)s II*, Journal für die reine und angewandte Mathematik (Qrelle) **636**, 123-174.
9. **(2009)** (WITH BRUNO VALLETTE) *Deformation theory of representations of prop(erad)s I*, Journal für die reine und angewandte Mathematik (Qrelle) **634**, 51-106.
10. **(2008)** *Exotic automorphisms of the Schouten algebra of polyvector fields*, preprint arXiv:0809.2385, 29 pages.
11. **(2008)** *Operad of formal homogeneous spaces and Bernoulli numbers*, Algebra & Number Theory **2**, No. 4, 407-433
12. **(2006)** *Lectures on props, Poisson geometry and deformation quantization*, in Poisson Geometry in Mathematics and Physics, Contemporary Mathematics, 450 (eds. G. Dito, J.H. Lu, Y. Maeda and A. Weinstein), AMS (2009), 223-257.
13. **(2006)** *PROP profile of Poisson geometry*, Commun. Math. Phys. **262**, 117-135.
14. **(2005)** *Nijenhuis infinity and contractible dg manifolds*, Compositio Mathematica **141**, 1238-1254.
15. **(2004)** *De Rham model for string topology*, Intern. Math. Research Notices **55**, 2955-2981

16. (2003) *Operads, deformation theory and F-manifolds*. In: Frobenius manifolds (Festschrift for Yu.I. Manin), 213–251, Aspects Math., E36, Vieweg, Wiesbaden, 2004.
17. (2001) *Semi-infinite A-variations of Hodge structure over extended Kähler cone*, Intern. Math. Research Notices, **21**, 111-1139.
18. (2001) *Extended complex manifolds*, In: Symplectic and contact topology: interactions and perspectives (Toronto, ON/Montreal, QC, 2001), 145–155, Fields Inst. Commun., 35, Amer. Math. Soc., Providence, RI, 2003.
19. (2000) *Frobenius $_{\infty}$  invariants of homotopy Gerstenhaber algebras I*, Duke Math. J. **105**, 411-461.
20. (2000) *An  $L_{\infty}$ -algebra of an unobstructed deformation functor*, Intern. Math. Research Notices, **3**, 147-164.
21. (2000) *The extended moduli space of special Lagrangian submanifolds*, Commun. Math. Phys. **209**, 13-27.
22. (1999) (WITH L.SCHWACHHÖFER) *Classification of holonomy groups of torsion-free affine connections*, Ann. Math. **150**, 77-149.
23. (1999) *Deformation quantization of the n-tuple point*, Commun. Math. Phys. **205**, 369-375.
24. (1999) *Strong homotopy algebras of a Kähler manifold*, Intern. Math. Research Notices, **3**, 153-164.
25. (1999) (WITH S.HUGGETT) *Twistor transform of vector bundles*, Math. Scand. **85**, 219-244.
26. (1999) *Deformation quantization of the n-tuple point*, Commun. Math. Phys. **205**, 369-375.
27. (1998) *The formality of canonical symplectic complexes and Frobenius manifolds*, Intern. Math. Research Notices, **14**, 727-733.
28. (1998) (WITH L.SCHWACHHÖFER) *Twistor solution of the holonomy problem*, in *The Geometric Universe*, Oxford University Press, 1998, pp. 395-402.
29. (1997) (WITH YU.I. MANIN) *Semisimple Frobenius (super)manifolds and quantum cohomology of  $P^r$* , Topol. Methods in Nonlinear Analysis, **9**, 107-161.
30. (1997) *Existence and geometry of Legendre moduli spaces*, Math. Zeit, **226**, 211-265.
31. (1997) *Addendum to the 2nd edition of the book Gauge Field Theory and Complex Geometry* by Yu.I. Manin, Springer-Verlag 1997.
32. (1997) (WITH H.PEDERSEN) *Projective structures on moduli spaces of compact complex hypersurfaces*, Proc. Amer. Math. Soc. **125** (1997), 407-416.

33. (1997) (WITH Q.-S. CHI AND L. SCHWACHHÖFER) *Exotic holonomies  $E_7^{(a)}$* , Int. J. Math. **8**, No.5, 583-594.
34. (1996) *Classification of Segre holonomies of torsion-free affine connections*, preprint MPI 96-107.
35. (1996) (WITH Q.-S. CHI AND L. SCHWACHHÖFER) *On the existence of an infinite series of exotic holonomies*, Inventiones Mathematicae **126** (1996), 391-411
36. (1996) *Affine connections on involutive G-structures*, In: *Geometry and Physics*, Marcel Dekker, 1996, pp. 261-274.
37. (1996) *Geometry of Kodaira moduli spaces*, Proc. Amer. Math. Soc. **124** (1996), 1499-1506.
38. (1995) *Moduli spaces of compact submanifolds of complex fibred manifolds*, Math. Proc. Cambridge Phil. Soc., **118**, 71-91.
39. (1994) *Moduli of compact Legendre submanifolds of complex contact manifolds*, Mathematical Research Letters, **1**, 717-727.
40. (1994) (WITH H. PEDERSEN AND A. SWANN) *Topological quantum field theory on quaternionic manifolds*, Journal of Geometry and Physics **14**, 121-145.
41. (1994) *Relative deformation theory and differential geometry*. In: *Twistor Theory*, Lect. Notes in Pure and Applied Math., vol. 169, 239-261.
42. (1994) (WITH H. PEDERSEN) *Geometry of relative deformations II*. In: *Twistor Theory*, Lect. Notes in Pure and Applied Math., vol. 169, 239-261.
43. (1994) *Geometry of relative deformations I*. In: *Twistor Theory*, Lect. Notes in Pure and Applied Math., vol. 169, 199-237.
44. (1993) *Quaternionic supermanifolds*, Functional Analysis and Its Applications **27**, No.1, pp.78-80.
45. (1993) *Self-dual Einstein supermanifolds and supertwistor theory*. In: *Spinors, Twistors, Clifford Algebras and Quantum Deformations* (Z. Oziewicz et al., eds.), Kluwer Academic Publishers, pp. 141-146.
46. (1993) *Holomorphic geometry of superstring theory*, Journal of Geometry and Physics **10**, 155-174.
47. (1992) *Simple supergravity, supersymmetric non-linear gravitons and supertwistor theory*, Classical and Quantum Gravity **9**, 2369-2393.
48. (1992) *Quaternionic, quaternionic Kähler, and hyper-Kähler supermanifolds*, Letters in Mathematical Physics **25**, 7-16.
49. (1992) *Geometric quantization of N=2 superstring*, Journal of Mathematical Physics **33**, no. 9, 3159-3171.

50. (1992) *On the geometric quantization of bosonic string*, Classical and Quantum Gravity, **9**, No. 10, 2267-2276.
51. (1992) *Supersymmetric non-linear graviton*, Funkt. Anal. Pril. **26**, no. 1 [English translation in Functional Analysis and its Applications **26**, no. 1, 72-73].
52. (1992) *Non-perturbative Neveu-Schwarz superstring and Sdiff  $S^1/\text{OSp}(1|2)$* , JETP Letters **55**, no. 3, 148-150.
53. (1992) *Non-perturbative bosonic string and Diff  $S^1/\text{SL}(2, R)$* , JETP Letters **55**, no. 3, 145-147.
54. (1992) *Superconformal geometry in three dimensions*, Journal of Mathematical Physics **33**, no. 2, 735-757.
55. (1991) *Quantum deformation of compactified Minkowski space*, Zeitschrift für Physik **C52**, 583-588.
56. (1991) *Quantum  $m \times n$ -matrices and  $q$ -deformed Binet-Cauchy formula*, Journal of Physics A: Math. & Gen. **24**, L1243-L1247.
57. (1991) *Twistor transform of Einstein-Weyl superspaces*, Classical and Quantum Gravity **8**, 2149-2162.
58. (1991) *Paraconformal supermanifolds and non-standard supergravity theories*, Classical and Quantum Gravity **8**, 557-569.
59. (1990) *Twistors and Einstein equations*. In *Problems of Theoretical Physics*, pp. 90-95. Moscow: PFU Press [In Russian].
60. (1990) *Twistor transform of conformally Einstein quaternionic manifolds*, Funkt. Anal. Pril. **24**, no. 4, 84-85 [English translation in Functional Analysis and its Applications **24**, no. 4, 334-335].
61. (1990) *Geometry of  $N=1$  supergravity in  $(mn | m+n)$ -dimensional superspace*. Yad. Fiz. **51**, no. 5, 1445-1453 [English translation in Soviet Journal of Nuclear Physics **51**, no. 5, 915-919].
62. (1990)  *$N=2$  superconformal Einstein superspaces*. Classical and Quantum Gravity **7**, no. 3, 439-444.
63. (1989) *Local supertwistors and  $N=2$  conformal supergravity*. Teor. Mat. Fiz. **79**, no. 2, 253-262 [English translation in Theoretical and Mathematical Physics **79**, no. 2, 517-523].
64. (1989) *A conformal non-linear graviton*. Funkt. Anal. Pril. **23**, no. 3, 69-70 [English translation in Functional Analysis and its Applications **23**, no. 3].
65. (1989) *Superconformally flat superspace*. Classical and Quantum Gravity **6**, no. 10, 1433-1443.
66. (1988)  *$N=2$  local supertwistors*. Classical and Quantum Gravity **5**, 1373-1379.

67. (1988) *Conformal invariance in supersymmetric Yang-Mills theories*. *Yad. Fiz.* **48**, 1187-1190 [English translation in *Soviet Journal of Nuclear Physics* **48**, no. 4, 754-755].
68. (1988) *Twistors and conformally invariant fields*. *Teor. Mat. Fiz.* **77**, no. 2, 171-178 [English translation in *Theoretical and Mathematical Physics* **77**, no. 2, 1123-1128].
69. (1987) *N=1 local supertwistors*. *Yad. Fiz.* **46**, 1578-1589 [English translation in *Soviet Journal of Nuclear Physics* **46**, 937-943].
70. (1985) *Supertwistor connection and conformal supergravity*. *Teor. Mat. Fiz.*, **64**, no. 3, 426-431 [English translation in *Theoretical and Mathematical Physics*, **64**, no. 3, 933-937]
71. (1985) *Supersymmetric Yang-Mills theory and conformal invariance*. *Yad. Fiz.* **42**, 1279-1281 [English translation in *Soviet Journal of Nuclear Physics* **42**, no. 5, 754-755].
72. (1985) (with N.V. Mietskievich) *Tensor Analysis for Physicists*. Moscow: PFU Press, 80 pages.
73. (1984) *A conformally invariant theory of gravitation and electromagnetism*, *Classical and Quantum Gravity*, **1**, no. 4, 349-354.
74. (1984) *The twistor connection and gauge invariance principle*, *Communications in Mathematical Physics*, **93**, no. 3, 325-331.