Bibliography in supersymmetry

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October 21, 1996

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References

[1] K. M. Apfeldorf and J. Gomis, *Superconformal theories from superparticle mechanics*, Texas preprint UTTG-93-001, Austin, 1993.

[2] Yu. A. Bahturin, A. A. Mikhalev, V. M. Petrogradsky, et al., *Infinite-dimensional Lie Superalgebras*, Walter de Cruyter, Berlin, 1992.

[3] A. M. Baranov, Yu. I. Manin, I. V. Frolov, et al., *A superanalog of the Selberg trace formula and multiloop contributions for fermionic strings*, Comm. Math. Phys. **111** (1987), 373–392.

[4] A. M. Baranov and A. S. Schwarz, *Multiloop contribution to string theory*, JETP Lett. **42** (1985), 419.

[5] ———, *On the multiloop contribution to the string theory*, Int. J. Mod. Phys. **A2** (1987), 1773.

[6] M. A. Baranov, I. V. Frolov, and A. S. Schwarz, *Geometry of superconformal field theories in two dimensions*, Theor. Math. Phys. **70** (1987), 92–103.

[7] ———, *Geometry of the superconformal moduli space*, Theor. Math. Phys. **79** (1989), 241–252.

[8] C. Bartocci and U. Bruzzo, *Some remarks on the differential-geometric approach to supermanifolds*, J. Geom. Phys. **4** (1987), 391–404.

[9] ———, *Super line bundles*, Lett. Math. Phys. **17** (1989), 263–274.

[10] C. Bartocci, U. Bruzzo, V. G. Pestov, et al., *On an axiomatic approach to supermanifolds*, Soviet Math. Dokl. **321** (1991), 649–652.

[11] C. Bartocci, U. Bruzzo, and D. Hernandez Ruiperez, *The Geometry of Supermanifolds*, Kluwer, Dordrecht, 1991.

[12] M. Batchelor, *Two approaches to supermanifolds*, Trans. Amer. Math. Soc. **258** (1980), 257–270.

[13] ———, *Graded manifolds and supermanifolds*, in Mathematical Aspects of Superspace, (C. J. S. Clarke, A. Rosenblum, and H. J. Seifert, eds.), Reidel, Dordrecht, 1984, p. 91.

[14] M. Batchelor and P. Bryant, *Graded Riemann surfaces*, Comm. Math. Phys. **114** (1988), 243–255.

[15] F. A. Berezin, *Introduction to Superanalysis*, Reidel, Dordrecht, 1987.

[16] F. A. Berezin and M. S. Marinov, Ann. Phys. **104** (1977), 336.

[17] M. Bershadsky, *Super-Riemann surfaces, loop measure, etc...*, Nucl. Phys. **B310** (1988), 79–100.

[18] H. Boseck, *Classical Lie supergroups*, Math. Nachr. **148** (1990), 81–115.

[19] C. P. Boyer and S. Gitler, *The theory of G^∞-supermanifolds*, Trans. Amer. Math. Soc. **285** (1984), 241–267.

[20] U. Bruzzo, *Geometry of rigid supersymmetry*, Hadronic J. **9** (1986), 25–30.

[21] U. Bruzzo and R. Cianci, *Mathematical theory of super fibre bundles*, Class. Q. Grav. **1** (1984), 213–226.

[22] ———, *On the structure of superfields in a field theory on a supermanifold*, Lett. Math. Phys. **11** (1986), 21–26.

[23] U. Bruzzo and J. A. Dominguez Pérez, *Line bundles over families of (super) Riemann surfaces. I: The nongraded case*, J. Geom. Phys. **10** (1993), 251–267.

[24] ———, *Line bundles over families of (super) Riemann surfaces. I: The graded case*, J. Geom. Phys. **10** (1993), 269–286.

[25] P. Bryant, *De Witt supermanifolds and infinite-dimensional ground rings*, J. London Math. Soc. **39** (1989), 347–368.

[26] ———, *Global properties of supermanifolds and their bodies*, Math. Proc. Cambridge Phil. Soc. **107** (1990), 501–523.

[27] J. L. Carr, *Spin structures and superworldsheet topology*, Class. Q. Grav. **6** (1989), 125–140.

[28] R. Catenacci, C. Reina, and P. Teofilatto, *On the body of supermanifolds*, J. Math. Phys. **26** (1985), 671–674.

[29] R. Chakrabarti and R. Jagannathan, *On the representations of $gl_{p,q}(2)$, $gl_{p,q}(1|1)$ and noncommutative spaces*, J. Phys. **A24** (1991), 5863–5701.

[30] D. Chang, I. Phillips, and I. Rozansky, *r-matrix approach to quantum superalgebras $su_q(m|n)$*, J. Math. Phys. **33** (1992), 3710–3715.

[31] S. Cho, *The superconformal structures of super Riemann surfaces*, Progr. Theor. Phys. **86** (1991), 959–962.

[32] R. Cianci, *Supermanifolds and automorphisms of super Lie groups*, J. Math. Phys. **25** (1984), 451–455.

[33] ———, *Infinitely generated supermanifolds, super Lie groups and homogeneous supermanifolds*, in Symmetries in Science, Plenum Press, New York, 1989, pp. 147–162.

[34] ———, *Introduction to Supermanifolds*, Bibliopolis, Naples, 1990.

[35] J. D. Cohn, *$N = 2$ super Riemann surfaces*, Nucl. Phys. **B284** (1987), 349–364.

[36] ———, *Modular geometry of superconformal field theory*, Nucl. Phys. **B306** (1988), 239–270.

[37] R. Coquereaux, A. Jadczyk, and D. Kastler, *Differential and integral geometry of Grassman algebras*, Rev. Math. Phys. **3** (1991), 63–99.

[38] L. Crane and J. M. Rabin, *Super Riemann surfaces: uniformization and Teichmüller theory*, Comm. Math. Phys. **113** (1988), 601–623.

[39] E. D'Hoker and D. H. Phong, *Multiloop amplitudes for the bosonic Polyakov string*, Nucl. Phys. **B269** (1986), 205.

[40] ———, *On determinants of Laplacians on Riemann surfaces*, Comm. Math. Phys. **104** (1986), 537.

[41] ———, *A geometry of string perturbation theory*, Rev. Mod. Phys. **60** (1988), 917–1065.

[42] ———, *Superstrings, super Riemann surfaces and supermoduli space*, Univ. California preprint UCLA/89/TEP/32, Los Angeles, 1989.

[43] J. Distler and P. Nelson, *Semirigid supergravity*, Phys. Rev. Lett. **66** (1991), 1955–1959.

[44] S. N. Dolgikh, A. A. Rosly, and A. S. Schwarz, *Supermoduli spaces*, Comm. Math. Phys. **135** (1990), 91–100.

[45] M. Dubois-Violette, J. Madore, and R. Kerner, *Super matrix geometry*, Class. Q. Grav. **8** (1991), 1077–1089.

[46] M. Eastwood and C. LeBrun, *Thickening and supersymmetric extensions of complex manifolds*, Amer. J. Math. **108** (1986), 1177–1192.

[47] G. Falqui and C. Reina, *A note on global structure of supermoduli spaces*, Comm. Math. Phys. **128** (1990), 247–261.

[48] H. Farkas and I. Kra, *Riemann Surfaces*, Springer-Verlag, Berlin, 1980.

[49] H. Flenner and D. Sundararaman, *Analytic geometry of complex superspaces*, Trans. Amer. Math. Soc. **330** (1992), 1–39.

[50] D. Friedan, *Notes on string theory and two dimensional conformal field theory*, in Unified String Theories, (M. Green and D. Gross, eds.), World Sci., Singapore, 1986, pp. 118–149.

[51] S. J. Gates, M. T. Grisaru, M. Rocek, et al., *Superspace*, Benjamin, Reading, 1983.

[52] S. B. Giddings and P. Nelson, *Torsion constraints and super Riemann surfaces*, Phys. Rev. Lett. **59** (1987), 2619–2622.

[53] ———, *The geometry of super Riemann surfaces*, Comm. Math. Phys. **116** (1988), 607–634.

[54] ———, *Line bundles on super Riemann surfaces*, Comm. Math. Phys. **118** (1988), 289–302.

[55] F. Gieres, *Geometry of supersymmetric gauge theories*, Lect. Notes Phys. **302** (1988), 1–189.

[56] S. Govindarajan, P. Nelson, and S.-J. Rey, Nucl. Phys. **B365** (1991), 633–652.

[57] S. Govindarajan, P. Nelson, and E. Wong, *Semirigid geometry*, Comm. Math. Phys. **147** (1992), 253–275.

[58] M. Grasso and P. Teofilatto, *Gauge theories, flat superforms and reduction of super fiber bundles*, Rep. Math. Phys. **25** (1987), 53–71.

[59] M. B. Green, J. H. Schwarz, and E. Witten, *Superstring Theory*, Vol. 1,2, Cambridge Univ. Press, Cambridge, 1987.

[60] C. Grosche, *Seilberg supertrace formula for super Riemann surfaces, analytic properties of Selberg super Zeta-functions and multiloop contributions for the fermionic string*, Comm. Math. Phys. **133** (1990), 433–486.

[61] C. Haske and R. O. Well, *Serre duality on complex supermanifolds*, Duke Math. J. **54** (1987), 493–500.

[62] L. Hodgkin, *A direct calculation of super-Teichmüller space*, Lett. Math. Phys. **14** (1987), 47–53.

[63] ———, *On metrics and super-Riemann surfaces*, Lett. Math. Phys. **14** (1987), 177–184.

[64] ———, *Super Teichmüller spaces: punctures and elliptic points*, Lett. Math. Phys. **15** (1988), 159–163.

[65] ———, *Problems of fields on super riemann surfaces*, J. Geom. Phys. **6** (1989), 333–338.

[66] ———, *Super-Beltrami differentials*, Class. Q. Grav. **6** (1989), 1725–1738.

[67] A. Hüffmann, *On representations of super coalgebras*, King's College Preprint KCL-TH-94-3, London, 1994, hep-th-9403100.

[68] V. Hussin and L. M. Nieto, *Supergroups factorizations through matrix realization*, J. Math. Phys. **34** (1993), 4199–4220.

[69] A. Inoue and Y. Maeda, *Foundations of calculus on super euclidean space $r^{m|n}$ based on a fréchet-grassmann algebra*, Kodai Math. J. **14** (1991), 72–112.

[70] V. D. Ivashchuk, Theor. Math. Phys. **79** (1989), 30–40.

[71] ———, *Invertibility of elements in infinite-dimensional Grassmann-Banach algebras*, Theor. Math. Phys. **84** (1990), 13–22.

[72] A. Jadczyk and K. Pilch, *Superspaces and supersymmetries*, Comm. Math. Phys. **78** (1981), 373–390.

[73] H. Kachkachi, *$N = 1$, 2d-induced Polyakov supergravity on a super Riemann surface*, Univ. Bordeaux preprint, Gradignan, 80 pp., 1994, hep-th-9406014.

[74] H. Kachkachi and M. Kachkachi, *Superconformal structures and holomorphic 1/2-superdifferentials on $N = 1$ super Riemann surfaces*, Mod. Phys. Lett. **8** (1993), 3643–3658.

[75] M. Kaku, *Introduction to Superstrings*, Springer-Verlag, Berlin, 1988.

[76] ———, *String Field Theory, Conformal Fields and Topology*, Springer-Verlag, Berlin, 1991.

[77] H. Kanno and Y. Myung, *Torsion constraints of (2,0) supergravity and line integrals on $N = 2$ super Riemann surfaces*, Phys. Rev. **40** (1989), 1974–1970.

[78] K. Kawakubo, *The Theory of Transformation Groups*, Clarendon Press, New York, 1991.

[79] S. M. Khoroshkin and V. N.Tolstoy, *Universal r-matrix for quantized (super)algebras*, Comm. Math. Phys. **141** (1991), 599.

[80] A. Yu. Khrennikov, *Superanalysis: theory of generalized functions and pseudo-differential operators*, Theor. Math. Phys. **72** (1987), 24–34.

[81] ———, *Functional superanalysis*, Russian Math. Surv. **43** (1988), 87–114.

[82] ———, *Pseudotopological commutative superalgebras with nilpotent ghosts*, Math. Notes **48** (1990), 114–122.

[83] Y. Kobayashi and S. Nagamachi, *The chain rule of differentiation in superspace*, Lett. Math. Phys. **11** (1986), 293–297.

[84] G. Konisi, T. Saito, and W. Takahasi, *Super differential forms on super riemann surfaces*, Progr. Theor. Phys. **92** (1994), 889–903.

[85] S. Lazzarini and J.-F. Pommaret, *Lie pseudogroups and differential sequences*, J. Geom. Phys. **10** (1993), 47–91.

[86] C. LeBrun, Y. S. Poon, and R. O. Wells, *Projective embeddings of complex supermanifolds*, Comm. Math. Phys. **126** (1990), 433–452.

[87] C. LeBrun and M. Rothstein, *Moduli of super Riemann surfaces*, Comm. Math. Phys. **117** (1988), 159–176.

[88] D. Leites, *Supermanifold Theory*, Math. Methods Sci. Invest., Petrozavodsk, 1983.

[89] ———, *Selected problems of supermanifold theory*, Duke Math. J. **54** (1987), 649–656.

[90] *Seminar on Supermanifolds*, (D. Leites, ed.), Arterisque, Stockholm, 1989.

[91] D. Leites and V. Serganova, *Models of representations of some classical supergroups*, Math. Scandinavica **68** (1991), 131–147.

[92] D. A. Leites, *Introduction to the theory of supermanifolds*, Russian Math. Surv. **35** (1980), 1–64.

[93] A. M. Levin, *Integration on* $(1|1)$*-dimensional supermanifolds*, Russian Math. Surv. **41** (1986), 189–190.

[94] ———, *Supersymmetric elliptic curves*, Func. Anal. Appl. **21** (1987), 83–84.

[95] ———, *Supersymmetric elliptic and modular functions*, Func. Anal. Appl. **22** (1988), 71–71.

[96] J.R. Links, M. Scheunert, and M. D. Gould, *Diagonalization of the braid generator on unitary irreps of quantum supergroups*, Lett. Math. Phys. **32** (1994), 231–240.

[97] Yu. Manin, *Multiparametric quantum deformation of the general linear supergroup*, Comm. Math. Phys. **123** (1989), 123–135.

[98] Yu. I. Manin, *New dimensions in geometry*, Russian Math. Surv. **39** (1984), 51–83.

[99] ———, *Neveu-schwarz scheaves and differential equations for Mamford superforms*, J. Geom. Phys. **5** (1988), 161–181.

[100] ———, *Topics in Noncommutative Differential Geometry*, Princeton University Press, Princeton, 1991.

[101] N. Mankoc-Borstnik, *Spinor and vector representations in four-dimensional grassmann space*, J. Math. Phys. **34** (1993), 3731–3745.

[102] E. Martinec, *Conformal field theory on a (super)-Riemann surface*, Nucl. Phys. **B281** (1987), 157–210.

[103] S. Matsumoto and K. Kakazu, *A note on topology of supermanifolds*, J. Math. Phys. **27** (1986), 2690–2692.

[104] V. V. Minachin, *Berezinians in substitution structures*, Func. Anal. Appl. **22** (1988), 90–91.

[105] S. M. Natanzon, *The Fricke space of super Fuchs groups*, Func. Anal. Appl. **21** (1987), 80–81.

[106] P. Nelson, *Holomorphic coordinates for supermoduli space*, Comm. Math. Phys. **115** (1988), 167–175.

[107] ———, *Introduction to supermanifolds*, Int. J. Mod. Phys. **A3** (1988), 585–590.

[108] ———, *Lectures on supermanifolds and strings*, in Particles, Strings and Supernovae, (A. Jevicki and C.-I. Tan, eds.), World Sci., Teaneck, 1989, pp. 997–1073.

[109] H. Ninnemann, *Deformations of super Riemann surfaces*, Comm. Math. Phys. **150** (1992), 267–288.

[110] V. Pestov, *Interpreting superanalycity in terms of convergent series*, Class. Q. Grav. **6** (1989), L145–L149.

[111] ———, *On a 'super' version of Lie's third fundamental theorem*, Lett. Math. Phys. **18** (1989), 27–33.

[112] ———, *Ground algebras for superanalysis*, Rev. Math. Phys. **29** (1991), 275–287.

[113] ———, *A contribution to nonstandard superanalysis*, J. Math. Phys. **33** (1992), 3263–3273.

[114] ———, *Soul expansion of G^∞ superfunctions*, J. Math. Phys. **34** (1993), 3316–3323.

[115] V. G. Pestov, *Nonstandard hulls of normed Grassmannian algebras and their application in superanalysis*, Soviet Math. Dokl. **317** (1991), 565–569.

[116] ———, *On enlargability of infinite-dimensional Lie superalgebras*, J. Geom. Phys. **10** (1993), 295–314.

[117] A. M. Polyakov, *Gauge Fields and Strings*, Harwood Academic, London, 1987.

[118] J. M. Rabin, *Berezin integration on general fermionic supermanifolds*, Comm. Math. Phys. **103** (1986), 431–439.

[119] ———, *Supermanifold cohomology and the Wess-Zumino term in the covariant superstring action*, Comm. Math. Phys. **108** (1987), 375–389.

[120] ———, *Supermanifolds and super Riemann surfaces*, in Super Field Theories, (H. C. Lee, V. Elias, G. Kunstatter, et al., eds.), Plenum Press, New York, 1987, pp. 557–569.

[121] ———, *Status of the algebraic approach to super Riemann surfaces*, in Physics and Geometry, (L.-L. Chau and W. Nahm, eds.), Plenum Press, New York, 1991, pp. 653–668.

[122] ———, *Super elliptic curves*, San Diego Preprint, 1993.

[123] J. M. Rabin and L. Crain, *How different are the supermanifolds of Rogers and DeWitt?*, Comm. Math. Phys. **102** (1985), 123–137.

[124] J. M. Rabin and L. Crane, *Global properties of supermanifolds*, Comm. Math. Phys. **100** (1985), 141–160.

[125] J. M. Rabin and P. Topiwala, *Super Riemann surfaces are algebraic curves*, San Diego preprint, 1988.

[126] F. Ravndal, Phys. Rev. **D21** (1980), 2828.

[127] A. Rogers, *A global theory of supermanifolds*, J. Math. Phys. **21** (1980), 1352–1365.

[128] ———, *Super Lie groups: global topology and local structure*, J. Math. Phys. **22** (1981), 939–945.

[129] ———, *Graded manifolds, supermanifolds and infinite-dimensional Grassmann algebras*, Comm. Math. Phys. **105** (1986), 374–384.

[130] ———, *Super Riemann surfaces*, in The Interface of Mathematics and Particle Physics, (D. G. Quillen, G. B. Segal, and S. T. Tson, eds.), Clarendon Press, New York, 1990, pp. 87–96.

[131] A. Rogers and M. Langer, *New fields on super riemann surfaces*, Class. Q. Grav. **11** (1994), 2619–2626 (King's College Preprint, London, KCL-TH-94-07, HEP-TH-9405177).

[132] ———, *New fields on super riemann surfaces*, King's College Preprint, London, KCL-TH-94-07, HEP-TH-9405177, 1994.

[133] A. A. Rosly, A. S. Schwarz, and A. A. Voronov, *Geometry of superconformal manifolds*, Comm. Math. Phys. **119** (1988), 129–152.

[134] ———, *Superconformal geometry and string theory*, Comm. Math. Phys. **120** (1989), 437–450.

[135] M. Rothstein, *Deformations of complex supermanifolds*, Proc. Amer. Math. Soc. **95** (1985), 255–260.

[136] A. Salam and E. Sezgin, *Supergravities in Diverse Dimensions*, North Holland, Amsterdam, 1989.

[137] *Superstring Constructions*, (B. Schellekens, ed.), North Holland, Amsterdam, 1989.

[138] M. Scheunert, J. Math. Phys. **34** (1993), 3780.

[139] T. Schmitt, *Infinite dimensional supermanifolds*, in Seminar Analysis of the Karl-Weierstrass-Institute, Teubner, Leipzig, 1988, pp. 256–268.

[140] ———, *On supergeometry and its application in physics*, in Seminar Analysis of the Karl-Weierstrass-Institute, Teubner, Leipzig, 1988, pp. 269–286.

[141] ———, *Supergeometry and Hermitian conjugation*, J. Geom. Phys. **7** (1990), 141–169.

[142] K. Schoutens, *$O(N)$-extended superconformal field theory in superspace*, Nucl. Phys. **B295** (1988), 634–652.

[143] A. S. Schwarz, *To the definition of superspace*, Theor. Math. Phys. **60** (1984), 37–42.

[144] ———, *Fermionic string and universal moduli space*, Nucl. Phys. **B317** (1989), 323–343.

[145] ———, *Superanalogs of symplectic and contact geometry and their applications to quantum field theory*, UC Davis preprint-94-06-01, HEP-TH-9406120, 1994.

[146] J. H. Schwarz, *Superstring theory*, Phys. Reports **89** (1982), 1–223.

[147] V. N. Shander, *Vector fields and differential equations on supermanifolds*, Func. Anal. Appl. **14** (1980), 88–89.

[148] ———, *Orientation of supermanifolds*, Func. Anal. Appl. **22** (1988), 91–92.

[149] W. Siegel, *Introduction to String Field Theory*, World Sci., Singapore, 1990.

[150] O. G. Smolyanov and E. T. Shavgulidze, *The fourier transform and pseudodifferential operators in superanalysis*, Soviet Math. Dokl. **37** (1988), 476–481.

[151] ———, *Representation of solutions of linear evolution superdifferential equations of second order by functional integral*, Soviet Math. Dokl. **40** (1990), 135–139.

[152] P. Teofilatto, *Enlargeable graded Lie algebras of supersymmetry*, J. Math. Phys. **28** (1987), 991–996.

[153] ———, *Line bundles and divisors on a super Riemann surface*, Lett. Math. Phys. **14** (1987), 271–277.

[154] ———, *Discrete supergroups and super Riemann surfaces*, J. Math. Phys. **29** (1988), 2389–2396.

[155] P. Topiwala and J. M. Rabin, *The super GAGA principle and families of super Riemann surfaces*, Proc. Amer. Math. Soc. **113** (1991), 11–20.

[156] L. F. Urrutia and N. Morales, *An extension of the Cayley-Hamilton theorem to the case of supermatrices*, Lett. Math. Phys. **32** (1994), 211–219.

[157] P. van Nieuwenhuizen and P. West, *Principles of Supersymmetry and Supergravity*, Cambridge Univ. Press, Cambridge, 1989.

[158] M. A. Vandyk, *Space-time symmetries in the theory of supergravity,4: Comparison between space-time and superspace formalisms*, Gen. Rel. Grav. **22** (1990), 1259–1270.

[159] V. S. Vladimirov and I. V. Volovich, *Superanalysis. 1. Differential calculus*, Theor. Math. Phys. **59** (1984), 3–27.

[160] D. V. Volkov and V. P. Akulov, *On the possible universal neutrino interaction*, JETP Lett **16** (1972), 621–624.

[161] A. A. Voronov, *Maps of supermanifolds*, Theor. Math. Phys. **60** (1984), 43–48.

[162] T. Voronov, *Geometric Integration on Supermanifolds*, Gordon and Breach, New York, 1991.

[163] J. Wess and J. Bagger, *Supersymmetry and Supergravity*, Princeton Univ. Press, Princeton, 1983.

[164] J. Wess and B. Zumino, *Supergauge transformations in four dimensions*, Nucl. Phys. **B70** (1974), 39.

[165] ———, *Superspace formulation of supergravity*, Phys. Lett. **B66** (1977), 361–364.

[166] B. S. De Witt, *Supermanifolds*, Cambridge Univ. Press, Cambridge, 1984.

[167] Yu. A. Yappa, *On the interpretation of anticommuting variables in the theory of superspace*, Lett. Math. Phys. **14** (1987), 157–159.

[168] O. A. Zakharov, *On the definition of superspace in supergravity theory*, Izv. Vyzov. Phys. **32** (1989), 65–69.

[169] R. B. Zhang, *Graded representations of the temperley-lieb algebra, quantum supergroups, and the jones polynomial*, J. Math. Phys. **32** (1991), 2605–2613.

[170] R. B. Zhang and M. D. Gould, *Universal r-matrices and invariants of quantum supergroups*, J. Math. Phys. **32** (1991), 3261–3267.