

List of the scientific publications of Vladimir K. Dobrev

1. V.K. Dobrev, One-graviton annihilation of electron-positron pair in external electromagnetic field, Vestnik Mosk. Gos. Univ. No 2 (1972) 184-189 (in Russian).
2. V.K. Dobrev, E.H. Hristova, V.B. Petkova and D.B. Stamenov, Symmetric part of the conformal covariant operator product expansion of two spin 1/2 fields, Talk by V.K.Dobrev at the X Winter School of Theoretical Physics (Karpacz, Poland, 1973); Acta Universitatis Wratislaviensis No 20 (1974) pp. 187-199.
3. V.K. Dobrev, E.H. Hristova, V.B. Petkova and D.B. Stamenov, Conformal covariant operator product expansion (OPE) of two spin 1/2 fields, Bulg. J. Phys. **1** (1974) 42-57.
4. V.K. Dobrev, G. Mack, V.B. Petkova, S.G. Petrova and I.T. Todorov, On Clebsch-Gordan expansion for $O^\uparrow(2h+1, 1)$, Communication JINR Dubna E2-7977 (1974).
5. V.K. Dobrev, V.B. Petkova, S.G. Petrova and I.T. Todorov, On the exceptional integer points in the representations space of the pseudo-orthogonal group $O^\uparrow(2h+1, 1)$, ICTP Trieste preprint IC/75/1 (1975).
6. V.K. Dobrev, G. Mack, V.B. Petkova, S.G. Petrova and I.T. Todorov, On the Clebsch-Gordan expansion for the Lorentz group in n dimensions, Rept. Math. Phys. **9** (1976) 219-246.
7. V.K. Dobrev, V.B. Petkova, S.G. Petrova and I.T. Todorov, Dynamical derivation of vacuum operator product expansion in Euclidean conformal quantum field theory, Phys. Rev. **D13** (1976) 887-912.
8. V.K. Dobrev, G. Mack, V.B. Petkova, S.G. Petrova and I.T. Todorov, **Harmonic Analysis on the n -Dimensional Lorentz Group and Its Applications to Conformal Quantum Field Theory**, Lecture Notes in Physics, No 63, 280 pages (Springer Verlag, Berlin-Heidelberg-New York, 1977).
9. V.K. Dobrev and V.B. Petkova, Elementary representations and intertwining operators for the group $SU^*(4)$, Rep. Math. Phys. **13** (1978) 233-277.
10. V.K. Dobrev, I.T. Todorov and O.I. Yordanov, Extension of the group $SU(2)$ by the full Poincare group, Talk at the IV National Conference of Young Physicists, (Sofia, 1978) (in Bulgarian).
11. V.K. Dobrev and B.L. Markovski, $1/\sqrt{N}$ - expanded $\bar{\varphi}^2\chi$ model. I: Phase transition, Ann. Phys. (N.Y.) **134** (1981) 45-55.
12. V.K. Dobrev, Stiefel-Skyrme-Higgs models, their classical static solutions and Yang-Mills-Higgs monopoles, Lett. Math. Phys. **6** (1982) 161-165.
13. V.K. Dobrev, A.Ch. Ganchev and O.I. Yordanov, Conformal operators from spinor fields : the symmetric tensor case, Phys. Lett. **B119** (1982) 372-376.
14. V.K. Dobrev and A.Ch. Ganchev, Conformal operators from spinor fields : the antisymmetric tensor case, JINR Dubna preprint E2-82-881 (1981).
15. N.S. Craigie, V.K. Dobrev and I.T. Todorov, Conformally covariant composite operators in quantum chromodynamics, Ann. Phys. (N.Y.) **159** (1985) 411-444.
16. V.K. Dobrev, Elementary representations and intertwining operators for $SU(2, 2)$: I, J. Math. Phys. **26** (1985) 235-251.
17. N.S. Craigie and V.K. Dobrev, Renormalization of gauge invariant baryon trilocal operators, ICTP Trieste preprint IC/83/39 (1983).
18. V.K. Dobrev, Multiplet classification of the reducible elementary representations of real semisimple Lie groups: the $SO_e(p, q)$ example, Lett. Math. Phys. **9** (1985) 205-211.
19. V.K. Dobrev and O.Ts. Stoytchev, Structural analysis and elementary representations for $SL(4, R)$, $GL(4, R)$ and their covering groups, J. Math. Phys. **27** (1986) 883-899.
20. V.K. Dobrev, Multiplet classification of the indecomposable highest weight modules over affine Lie algebras and invariant differential operators : the $A_\ell^{(1)}$ example, Talk at the Conference on Algebraic Geometry and Integrable Systems, Oberwolfach (July 1984) and ICTP Trieste preprint IC/85/9 (1985).
21. V.K. Dobrev, Multiplets of indecomposable highest weight modules over infinite-dimensional Lie algebras : the Virasoro - $A_1^{(1)}$ correspondence, Proceedings of the XIII International Conference on Differential-

Geometric Methods in Theoretical Physics, Shumen (1984), eds. H.D. Doebner and T.D. Palev, (World Sci., Singapore, 1986, ISBN 9971-50-070-1) pp. 348-370.

22. V.K. Dobrev and V.B. Petkova, On the group-theoretical approach to extended conformal supersymmetry : classification of multiplets, *Lett. Math. Phys.* **9** (1985) 287-298.

23. V.K. Dobrev and V.B. Petkova, On the group-theoretical approach to extended conformal supersymmetry : function space realizations and invariant differential operators, *Fortschr. d. Phys.* **35** (1987) 537-572; first as ICTP Trieste preprint IC/85/29 (March 1985).

24. V.K. Dobrev and V.B. Petkova, All positive energy unitary irreducible representations of extended conformal supersymmetry, *Phys. Lett.* **B162** (1985) 127-132.

25. V.K. Dobrev, Multiplet classification of the indecomposable highest weight modules over the Neveu-Schwarz and Ramond superalgebras, *Lett. Math. Phys.* **11** (1986) 225-234.

26. V.K. Dobrev and P. Moylan, Induced representations and invariant integral operators for $SU(2, 2)$, *Fort. d. Physik*, **42** (1994) 339-392.

27. V.K. Dobrev and V.B. Petkova, Reducible representations of the extended conformal superalgebra and invariant differential operators; Talk by Petkova V.B. at the Symposium on Conformal Groups and Structures (Clausthal, August 12-14 1985); Proceedings, eds. A.O. Barut and H.D. Doebner, *Lecture Notes in Physics*, Vol. 261 (Springer-Verlag, Berlin, 1986) pp. 291-299.

28. V.K. Dobrev and V.B. Petkova, All positive energy unitary irreducible representations of the extended conformal superalgebra; Talk by Dobrev V.K. at the Symposium on Conformal Groups and Structures (Clausthal, August 12-14 1985); Proceedings, eds. A.O. Barut and H.D. Doebner, *Lecture Notes in Physics*, Vol. 261 (Springer-Verlag, Berlin, 1986) pp. 300-308.

29. V.K. Dobrev, Characters of the irreducible highest weight modules over the Virasoro and super-Virasoro algebras, *Rendiconti Circolo Matematici di Palermo, Serie II, Numero 14* (1987) 25-42.

30. V.K. Dobrev, Characters of the unitarizable highest weight modules over the $N=2$ superconformal algebras, *Phys. Lett.* **B186** (1987) 43-51.

31. V.K. Dobrev, Multiplets of Verma modules over the $osp(2,2)^{(1)}$ super Kac-Moody algebra, Proceedings of the International Symposium on Topological and Geometrical Methods in Field Theory, Espoo (1986), eds. J. Hietarinta et al, (World Sci., Singapore, 1986) pp. 93-102.

32. V.K. Dobrev, Canonical construction of intertwining differential operators associated with representations of real semisimple Lie groups, *Rept. Math. Phys.* **25** (1988) 159-181.

33. V.K. Dobrev, On the relevance of some constructions of highest weight modules over (super-) Kac-Moody algebras (In connection with a paper by Wakimoto), *Comm. Math. Phys.* **111** (1987) 75-80.

34. V.K. Dobrev, Structure of Verma modules and characters of irreducible highest weight modules over $N = 2$ superconformal algebras, Proceedings of the XV International Conference on Differential Geometric Methods in Theoretical Physics, Clausthal (July 1986), eds. H.D. Doebner et al, (World Sci, Singapore, 1987) pp. 289-307.

35. V.K. Dobrev and A.Ch. Ganchev, Modular invariance for the $N = 2$ twisted superconformal algebra, *Mod. Phys. Lett.* **A3** (1988) 127-137.

36. V.K. Dobrev and A.Ch. Ganchev, On the classification of modular invariants for the $N = 2$ twisted superconformal algebra, Talk by Dobrev V.K. at the XVI International Colloquium on Group Theoretical Methods in Physics (Varna, June 1987); in: *Infinite Dimensional Lie algebras and Quantum Field Theory*, Proceedings, eds. H.D. Doebner, J.-D. Hennig and T.D. Palev (World Sci, Singapore, 1988) pp. 1-10.

37. V.K. Dobrev, New Weyl groups for $A_1^{(1)}$ and characters of singular highest weight modules, *Comm. Math. Phys.* **124** (1989) 319-336.

38. V.K. Dobrev, A Weyl group for the Virasoro and $N = 1$ super-Virasoro algebras, *Comm. Math. Phys.* **124** (1989) 501-514.

39. V.K. Dobrev, Extended Weyl group for Kac-Moody algebras, Invited talk at the XVII International Conference on Differential Geometric Methods in Theoretical Physics, (Chester, August 1988), Proceedings, ed. A. Solomon (World Sci, Singapore, 1989) pp. 269-280.

40. V.K. Dobrev and A.Ch. Ganchev, Modular invariants for Theta - functions with characteristics and the twisted $N = 2$ superconformal and $su(2)$ Kac-Moody algebras, *Ann. d. Physik (Leipzig)* **47** (1990) 105-115.
41. V.K. Dobrev and A.Ch. Ganchev, Classification of modular invariant partition functions for the twisted $N = 2$ superconformal algebra, twisted $su(2)$ Kac-Moody algebra and D_{2k} parafermions, *Nucl. Phys.* **B332** (1990) 709-723.
42. V.K. Dobrev, Multiplet classification of highest weight modules over quantum universal enveloping algebras : the $U_q(sl(3, \mathcal{C}))$ example, Talk at the International Group Theory Conference (St. Andrews, 1989), *Proceedings*, eds. C.M. Campbell et al, Vol. 1, London Math. Soc. Lecture Note Series 159 (Cambridge University Press, 1991) pp. 87-104.
43. V.K. Dobrev, Character formulae for $U_q(sl(3, \mathcal{C}))$ representations, Talk at the XIII Johns - Hopkins Workshop "Knots, Topology and Field Theory", (Florence, June 1989), *Proceedings*, ed. L. Lusanna (World Sci, Singapore, 1989) pp. 539-547.
44. V.K. Dobrev, Classification and characters of $U_q(sl(3, \mathcal{C}))$ representations, *Proceedings of the Quantum Groups Workshop*, (Clausthal, 1989) eds. H.D. Doebner and J.D. Hennig, *Lecture Notes in Physics*, Vol. 370 (Springer-Verlag, Berlin, 1990) pp. 107-117.
45. V.K. Dobrev, Character formulae for quantum groups representations, Talk at the Conference "300 Jahre Mathematische Gesellschaft in Hamburg", (Hamburg, March 1990); *Collection of Abstracts*, pp. 91-93.
46. V.K. Dobrev and E. Sezgin, A remarkable representation of the $SO(3, 2)$ Kac-Moody algebra, *Int. J. Mod. Phys.* **A6** (1991) 4699-4719.
47. V.K. Dobrev, Representations of quantum groups, Invited review talk at the International Symposium "Symmetries in Science V: Algebraic Structures, Their Representations, Realizations and Physical Applications", (Schloss Hofen, Lochau, Vorarlberg, Austria, 30.7.-3.8.1990), *Proceedings*, eds. B. Gruber, L.C. Biedenharn and H.D. Doebner (Plenum Press, NY, 1991) pp. 93-135.
48. V.K. Dobrev, Singular vectors of representations of quantum groups, *J. Phys.* **A25** (1992) 149-160.
49. V.K. Dobrev, Characters of the $U_q(sl(3, \mathcal{C}))$ highest weight modules, *Progr. Theor. Phys. Suppl.* **102** (1990) 137-158.
50. V.K. Dobrev and E. Sezgin, Spectrum and Character Formulae of $so(3, 2)$ Unitary Representations, *Lecture Notes in Physics*, Vol. 379 (Springer-Verlag, Berlin, 1991) pp. 227-238; eds. J.-D. Hennig, W. Lücke and J. Tolar.
51. V.K. Dobrev, Representations of quantum groups for roots of 1, Invited review talk, *Proceedings of the 14th Johns Hopkins Workshop "Nonperturbative Methods in Low Dimensional Field Theories"*, (Debrecen, August 1990) eds. G. Domokos et al, (World Sci, Singapore, 1991) pp. 69-106.
52. V.K. Dobrev, Singular vectors of quantum groups representations for straight Lie algebra roots, *Lett. Math. Phys.* **22** (1991) 251-266.
53. V.K. Dobrev, Introduction to quantum groups, Göttingen University preprint, (April 1991), Invited plenary lecture at the 22nd Annual Iranian Mathematics Conference, (March 13-16, 1991, Mashhad, Iran), *Proceedings*, eds. M.R.R. Moghaddam et al, (Ferdowsi University of Mashhad, 1995) pp. 91-121.
54. V.K. Dobrev, Canonical q-Deformations of Noncompact Lie (Super-) Algebras, *J. Phys.* **A26** (1993) 1317-1334, first as Göttingen University preprint, (July 1991).
55. V.K. Dobrev, Singular vectors of representations of quantum groups and B-G-G resolution, Talk at the II Symposium on Topological and Geometrical Methods in Field Theory, (May 26 - June 1, 1991, Turku, Finland), *Proceedings*, eds. J. Mickelsson et al, (World Sci, Singapore, 1992) pp. 104-120.
56. V.K. Dobrev, Duality for the matrix quantum group $GL_{p,q}(2, \mathcal{C})$, *J. Math. Phys.* **33** (1992) 3419-3430.
57. V.K. Dobrev, q - Deformations of noncompact Lie (super-) algebras : the examples of q - deformed Lorentz, Weyl, Poincaré and (super-) conformal algebras, *Proceedings of the Workshop on Quantum Groups of the II Wigner Symposium (Goslar, July 1991)*, eds. H.D. Doebner et al, (World Sci, Singapore, 1993) pp. 287-303.

58. N. Chair, V.K. Dobrev and H. Kanno, $SO(2, \mathcal{C})$ invariant ring structure of BRST cohomology and singular vectors in 2D gravity with $c < 1$ matter, Phys. Lett. **B283** (1992) 194-202; hep-th/9201071.
59. V.K. Dobrev, Three lectures on quantum groups : representations, duality, real forms, J. Geom. Phys. **11** (1993) 367-396. IF: 1.055.
60. L. Dabrowski, V.K. Dobrev, R. Floreanini and V. Husain, Positive energy representations of the conformal quantum algebra, Phys. Lett. **B302** (1993) 215-222; hep-th/9303115.
61. V.K. Dobrev, J. Lukierski, J. Sobczyk and V.N. Tolstoy, q - deformed conformal superalgebra and its Hopf subalgebras, preprint ICTP Trieste IC/92/188 (July 1992).
62. V.K. Dobrev and P. Parashar, Duality for multiparametric quantum $GL(n)$, J. Phys. **A26** (1993) 6991-7002 & Addendum, **32** (1999) 443-444.
63. V.K. Dobrev and P. Parashar, Duality for a Lorentz quantum group, Lett. Math. Phys. **29** (1993) 259-269.
64. V.K. Dobrev, q - deformed conformal algebra and its q - deformed Lorentz, Weyl and Poincaré subalgebras, Int. J. Mod. Phys. (Proc. Suppl.) **3A** (1993) 192-195.
65. V.K. Dobrev, Canonical procedure for q - deformations of noncompact Lie (super-) algebras, Talk at XIX Colloquium on Group Theoretical Methods in Physics, Salamanca, 29.6.-4.7.1992, Proceedings, Anales de Física, Monografias (CIEMAT/RSEF, Madrid, 1993) Vol. I, pp. 91-94.
66. V.K. Dobrev, Quantum algebras : representations and real forms, Invited talk at the Symposium "Symmetries in Science VI: From the Rotation Group to Quantum Algebras" in honor of Professor L.C. Biedenharn on the occasion of his 70th birthday (August 1992, Bregenz, Austria), Proceedings, ed. B. Gruber, (Plenum Press, NY, 1993) pp. 195-215.
67. V.K. Dobrev, Lectures on quantum groups : representations and duality, Lectures at the Annual Nankai Workshop on Quantum Group Theory and Knot Theory, (Tianjin, 9-11.6.1992), Proceedings, "Quantum Groups, Integrable Statistical Models and Knot Theory", eds. M-L. Ge et al, (World Sci, Singapore, 1993) pp. 1-47.
68. V.K. Dobrev, Duality between quantum algebras and matrix quantum groups, Invited talk at the XXVI International Ahrenshoop Symposium on the Theory of Elementary Particles (Wendisch-Rietz, September 1992), Proceedings, eds. B. Dörfel et al, (DESY, Hamburg, 1993) pp. 291-306.
69. V.K. Dobrev and P.J. Moylan, Finite-dimensional singletons of the quantum anti de Sitter algebra, Phys. Lett. **B315** (1993) 292-298.
70. V.K. Dobrev and R. Floreanini, The massless representations of the conformal quantum algebra, J. Phys. **A27** (1994) 4831-4840.
71. L. Dabrowski, V.K. Dobrev and R. Floreanini, q - difference intertwining operators for a Lorentz quantum algebra, J. Math. Phys. **35** (1994) 971-985.
72. V.K. Dobrev, Characters of all $U_q(sl(3, \mathcal{C}))$ highest weight modules, Talk at XVIII Colloquium on Group Theoretical Methods in Physics, Moscow, June 1990, Proceedings, "Symmetries and Algebraic Structures in Physics, Pt. 2 - Integral Systems, Solid State Physics and Theory of Phase Transitions", Proc. Lebedev Institute vol. 188, eds. V.V. Dodonov & V.I. Manko (Nova Science Publishers, New York, 1991) pp. 207-211.
73. V.K. Dobrev, q - difference intertwining operators for $U_q(sl(n))$: general setting and the case $n = 3$, J. Phys. **A27** (1994) 4841-4857 & 6633-6634, hep-th/9405150.
74. V.K. Dobrev, Positive energy representations of noncompact quantum algebras, Invited talk at the Workshop on Generalized Symmetries in Physics (Clausthal, July 1993), Proceedings, eds. H.D. Doebner et al, (World Sci, Singapore, 1994, ISBN 981-02-1771-4), pp. 90-110.
75. V.K. Dobrev, P. Truini and L.C. Biedenharn, Representation theory approach to the polynomial solutions of q - difference equations : $U_q(sl(3))$ and beyond, J. Math. Phys. **35** (1994) 6058-6075; q-alg/9502001.
76. V.K. Dobrev, New q - Minkowski space-time and q - Maxwell equations hierarchy from q - conformal invariance, Phys. Lett. **B341** (1994) 133-138 & **B346** (1995) 427.

77. V.K. Dobrev, Positive energy irreps of noncompact quantum algebras, Talk at XX Intern. Colloquium on Group Theoretical Methods in Physics, Osaka (Toyonaka), 4-9 July 1994, Proceedings, eds. A. Arima et al, (World Sci, Singapore, 1995), pp. 183-186.
78. V.K. Dobrev, q - difference intertwining operators for $U_q(\mathfrak{sl}(4))$ and q - conformal invariant equations, invited talk at the Symposium "Symmetries in Science VIII", (August 1994, Bregenz, Austria), Proceedings, ed. B. Gruber, (Plenum Press, NY, 1995) pp. 55-84.
79. V.K. Dobrev, **Representations of Quantum Groups and q -Deformed Invariant Wave Equations**, Dr. Habil. Thesis, Tech. Univ. Clausthal 1994, (Papierflieger Verlag, Clausthal-Zellerfeld, 1995) ISBN 3-930697-59-9.
80. V.K. Dobrev, New q - Maxwell equations hierarchy and q - Minkowski space-time, Invited talk at the XXVIII International Ahrenshoop Symposium on the Theory of Elementary Particles (Wendisch-Rietz, 30.8.-3.9.1994), Proceedings, eds. D. Lüst et al, (DESY, Hamburg, 1995, ISSN 0418-9833) pp. 89-95.
81. V.K. Dobrev, q - difference conformal invariant operators and equations, Suppl. Rendiconti Circolo Matematici di Palermo, Serie II, Numero 43 (1996) 15-56.
82. V.K. Dobrev, P. Truini and L.C. Biedenharn, Polynomial solutions of q - difference equations and Gelfand–Weyl–Zetlin Basis, in: *Nonlinear, Deformed and Irreversible Quantum Systems*, Proceedings, eds. H.D. Doebner et al, (World Sci, Singapore, 1995; ISBN 981-02-2266-1) pp. 447-461.
83. V.K. Dobrev, New q - Minkowski space - time and generalized q - Maxwell equations hierarchies, in: *Nonlinear, Deformed and Irreversible Quantum Systems*, Proceedings, eds. H.D. Doebner et al, (World Sci, Singapore, 1995; ISBN 981-02-2266-1) pp. 407-415.
84. V.K. Dobrev, New generalized Verma modules and multilinear intertwining differential operators, J. Geom. Phys. **25** (1998) 1-28; IF 1.055.
85. V.K. Dobrev, H.D. Doebner and C. Mrugalla, Lowest weight representations of the Schrödinger algebra and generalized heat equations, Rept. Math. Phys. **39** (1997) 201-218.
86. V.K. Dobrev, Subsingular vectors and conditionally invariant (q -deformed) equations, J. Phys. **A28** (1995) 7135 - 7155.
87. V.K. Dobrev and P.J. Moylan, Positive-energy irreps of the quantum anti de Sitter algebra, Czech. J. Phys. **46** (1996) 171-178.
88. V.K. Dobrev, New q -Minkowski space-time and hierarchies of q -difference conformal invariant equations, Czech. J. Phys. **46** (1996) 163-170.
89. V.K. Dobrev, q - difference intertwining operators and q - conformal invariant equations, Acta Appl. Math. **44** (1996) 81-116.
90. V.K. Dobrev, Group-Theoretical Approach to Noncommutative Spaces and New q - Minkowski Space-Time, Talk at the Fourth International Wigner Symposium, Guadalajara, Mexico, 7-11 August 1995, Proceedings, "IV Wigner Symposium", eds. N.M. Atakishiyev et al, (World Sci, Singapore, 1996; ISBN 981-02-2663-2) pp. 402-405.
91. V.K. Dobrev, Conditionally invariant (q -deformed) equations from Verma Modules Subsingular Vectors, Plenary talk at the VII International Conference "Symmetry Methods in Physics", Dubna, Russia, 10-16 July 1995, Proceedings, eds. A.N. Sissakian and G.S. Pogosyan, (Publishing Department of JINR, Dubna, 1996) Vol. 1, pp. 150-159.
92. V.K. Dobrev, H.D. Doebner and C. Mrugalla, A q -Schrödinger algebra, its lowest weight representations and generalized q -deformed heat/Schrödinger equations, J. Phys. **A29** (1996) 5909-5918.
93. V.K. Dobrev, Conditionally invariant (q -deformed) equations and subsingular vectors, "New Trends in Quantum Field Theory", Proceedings, 2nd Bulgarian Workshop, (August 1995, Razlog, Bulgaria), eds. A.Ch. Ganchev, R. Kerner and I.T. Todorov, (Heron Press, 1996) pp. 168-178.
94. V.K. Dobrev and P. Truini, Polynomial realization of the $U_q(\mathfrak{sl}(3))$ Gelfand-(Weyl)-Zetlin basis, J. Math. Phys. **38** (1997) 3750-3767.
95. V.K. Dobrev and P. Truini, Irregular $U_q(\mathfrak{sl}(3))$ representations at roots of unity via Gelfand-(Weyl)-Zetlin basis, J. Math. Phys. **38** (1997) 2631-2651.

96. V.K. Dobrev, Representations of the Jordanian quantum algebra $U_h(\mathfrak{sl}(2))$, Proceedings of the 10th International Conference 'Problems of Quantum Field Theory', (Alushta, Crimea, Ukraine, 13-18.5.1996), eds. D. Shirkov et al, (Publishing Department of JINR, Dubna, 1996) pp. 104-110.
97. V.K. Dobrev, Kazhdan-Lusztig polynomials, subsingular vectors, and conditionally invariant (q-deformed) equations, Invited talk at the Symposium "Symmetries in Science IX", Bregenz, Austria, (August 1996), Proceedings, eds. B. Gruber and M. Ramek, (Plenum Press, New York and London, 1997) pp. 47-80.
98. V.K. Dobrev and P. Truini, Gelfand pattern and polynomial representations of quantum groups, Proceedings of the International Workshop "Lie Theory and Its Applications in Physics", (Clausthal, August 1995); eds. H.D. Doebner et al, (World Sci, Singapore, 1996, ISBN 981-02-2882-1) pp. 159-170.
99. V.K. Dobrev, H.D. Doebner and C. Mrugalla, q-deformed quantum mechanical evolution equations via a q-deformed Schrödinger algebra, Proceedings of the International Workshop "Lie Theory and Its Applications in Physics", (Clausthal, August 1995); eds. H.D. Doebner et al, (World Sci, Singapore, 1996, ISBN 981-02-2882-1) pp. 187-196.
100. V.K. Dobrev, Representations of quantum groups and (conditionally) invariant q-difference equations, Invited Lecture at the Mini-Semester "Quantum Groups and Quantum Spaces", (November-December 1995, Banach Center, Warsaw), Proceedings "Quantum Groups and Quantum Spaces", eds. R. Budzynski, W. Pusz and S. Zakrzewski, Banach Center Publications 40, Inst. of Math., Polish Acad. Sci., (Warsaw, 1997) pp. 203-222.
101. V.K. Dobrev, Conditionally invariant equations from subsingular vectors, Turk. J. Phys. **21** (1997) 368-376.
102. V.K. Dobrev, H.D. Doebner and R. Twarock, Quantization of kinematics and dynamics on a circle with difference operators and a related q-deformation of the Witt algebra, J. Phys. **A30** (1997) 6841-6859.
103. V.K. Dobrev and P. Moylan, Singleton Representations of $U_q(\mathfrak{so}(3, 2))$, Suppl. Rendiconti Circolo Matematico di Palermo, Serie II, Numero 46 (1997) 73-79.
104. V.K. Dobrev, H.D. Doebner and C. Mrugalla, Lowest weight representations of q-Schrödinger algebra and generalized q-deformed heat/Schrödinger equations, Invited talk (given by V.K.D.) at the IX Max Born Symposium, Karpacz, (September 1996), Proceedings, eds. J. Lukierski et al, "New Symmetries in the Theories of Fundamental Interactions", (PWN, 1997) pp. 149-162.
105. B.L. Aneva, V.K. Dobrev and S.G. Mihov, The dual algebra of the Jordanian $GL_{g,h}(2)$, in: "Supersymmetry and Quantum Field Theory", Invited contribution (of V.K.D.) to the Proceedings of the Volkov Memorial Seminar (January 1997), eds. J. Wess and V.P. Akulov, Lectures Notes in Physics, v 509, (1998) pp. 298-304.
106. B.L. Aneva, V.K. Dobrev and S.G. Mihov, Duality for the Jordanian Matrix Quantum Group $GL_{g,h}(2)$, J. Phys. **A30** (1997) 6769-6781; q-alg/9705028.
107. V.K. Dobrev and P. Truini, Weight Pyramid and Irregular Irreps of $U_q(\mathfrak{sl}(3))$ at Roots of Unity, in: "Quantum Group Symposium at Group21", Proceedings of the Symposium on Quantum Groups of the XXI Intern. Colloquium on Group Theoretical Methods in Physics, (Goslar, July 1996), eds. H.D. Doebner et al, (Heron Press, Sofia, 1997) pp. 308-316.
108. V.K. Dobrev, q-Conformally Covariant q-Minkowski Space-Time and Invariant Equations, Czech. J. Phys. **47** (1997) 1107-1114.
109. V.K. Dobrev and P. Truini, Polynomial realization of the $U_q(\mathfrak{sl}(3))$ Gelfand-(Weyl)-Zetlin basis and irregular irreps at roots of unity, Invited talk (given by V.K.D.) at the Symposium "Symmetries in Science X", Bregenz, Austria, (July 1997), Proceedings, eds. B. Gruber et al, (Plenum Press, New York and London, 1997) pp. 79-119.
110. V.K. Dobrev, Multilinear intertwining differential operators from new generalized Verma modules, Physics of Atomic Nuclei, **61** Number 10 (1998) 1735-1742.
111. V.K. Dobrev, Elementary representations and intertwining operators for quantum groups, Proc., II International Workshop "Lie Theory and Its Applications in Physics", (Clausthal, August 1997); eds. H.D. Doebner et al, (World Sci, Singapore, 1998, ISBN 981-02-3539-9) pp. 362-376.

112. V.K. Dobrev, Conditionally invariant q-d'Alembert equation, Talk at V Wigner Symposium, Vienna, 25-29.8.1997, Proceedings, eds. P. Kasperkovitz et al, (World Sci, Singapore, 1998; ISBN 981-02-3464-3) pp. 16-18.
113. V.K. Dobrev, Induced Representations and Invariant Operators for Quantum Groups, Invited Talk at "Quantum Groups, Deformations and Contractions", Istanbul, (September 1997); Turk. J. Phys., to appear.
114. V.K. Dobrev and E.H. Tahri, Duality for Multiparametric Quantum Deformation of the Supergroup $GL(m/n)$, Int. J. Mod. Phys. **A13** (1998) 4339-4366.
115. V.K. Dobrev, R.P. Roussev and P.A. Terziev, Induced representations of $U_q(so(3))$ with subrepresentations of integer spin only, J. Phys. **A31** (1998) 9269-9277.
116. V.K. Dobrev and S.G. Mihov, Induced representations for duals of two-parameter $GL(2)$ deformations, Invited talk (given by V.K.D.) at the XIV Max Born Symposium, Karpacz, (1999), Proceedings, "New Symmetries and Integrable Models", eds. A. Frydryszak, J. Lukierski and Z. Popowicz, (World Scientific, 2000) pp. 39-61.
117. V.K. Dobrev and B.S. Kostadinov, Noncommutative Quantum Conformal Plane Wave Deformation, Phys. Lett. **B439** (1998) 337-344.
118. V.K. Dobrev and A. Sudbery, Representations of the Generalized Lie Algebra $sl(2)_q$, J. Phys. **A31** (1998) 6635-6645.
119. V.K. Dobrev, B.S. Kostadinov and S.T. Petrov, Solutions of q-Deformed Equations with Quantum Conformal Symmetry, Invited talk (by V.K.D.) at International Conference "Particles, Fields, Gravitation", Lodz, 14-19.4.1998; Proceedings, *Particles, Fields, Gravitation*, ed. J. Rembielinski, Amer. Inst. Phys. Conf. Proc. no 453, ISBN 1-56396-837-1 (Amer. Inst. Phys. 1998) pp. 24-38.
120. V.K. Dobrev and M. El Falaki, Quantum group $U_q(A_\ell)$ singular vectors in Poincare-Birkhoff-Witt basis, Lett. Math. Phys. **49** (1999) 47-57.
121. V.K. Dobrev, R.I. Gushterski, S.T. Petrov and B.S. Zlatev, "Solutions of q-deformed equations with quantum conformal symmetry and nonzero spin", Invited talk by V.K.D. at III International Workshop on "Classical and Quantum Integrable Systems" (Yerevan, Armenia, 1998), Proceedings, eds. L.G. Mardoyan, G.S. Pogosyan and A.N. Sissakian, (Publishing Department of JINR, Dubna, 1998; ISBN 5-85165-521-6) pp. 39-50.
122. V.K. Dobrev and E.H. Tahri, Induced representations of the multiparameter Hopf superalgebras $U_{uq}(gl(m/n))$ and $U_{uq}(sl(m/n))$, J. Phys. **A32** (1999) 4209-4237.
123. V.K. Dobrev, Intertwining operator realization of the AdS/CFT correspondence, Nucl. Phys. **B553** [PM] (1999) 559-582; hep-th/9812194.
124. V.K. Dobrev, A.D. Mitov and P. Truini, Normalized $U_q(sl(3))$ Gelfand-(Weyl)-Zetlin basis and new summation formulae for q-hypergeometric functions, J. Math. Phys. **41** (2000) 7752-7768.
125. V.K. Dobrev, H.D. Doebner and C. Mrugalla, Difference analogues of the free Schrödinger equation, Mod. Phys. Lett. **A14** (1999) 1113-1122.
126. V.K. Dobrev, H.D. Doebner, U. Franz and R. Schott, Lévy Processes on $U_q(g)$ as Infinitely Divisible Representations, in: "Probability on Algebraic Structures", eds. G. Budzban, Ph. Feinsilver and A. Mukherjea, Contemp. Math. vol. 261 (American Math. Society, 2000) pp. 181-192; math.PR/9907016.
127. V.K. Dobrev and B.S. Zlatev, q-plane wave solutions of q-deformed equations with quantum conformal symmetry, Czech. J. Phys. **50** (2000) 53-58.
128. V.K. Dobrev, Lectures on Lie (super) algebras and quantum groups, Two-semester course at TU Clausthal 1998/99, preprint ASI-TPA/18/99 (1999); latest version from March 2012. First version was: V.K. Dobrev, Lectures on Lie algebras and their representations: I, ICTP preprint IC/88/96 (1988), Course of 16 lectures at the ICTP (April-July 1988).
129. V.K. Dobrev and M. El Falaki, Quantum group $U_q(D_\ell)$ singular vectors in Poincare-Birkhoff-Witt basis, J. Phys. **A33** (2000) 6321-6332.

130. V.K. Dobrev, H.D. Doebner, U. Franz and R. Schott, Infinitely divisible representations of $U_q(\mathfrak{g})$, in: ‘Quantum Theory and Symmetries’, Proceedings of a Symposium (Goslar, 1999), eds. H.D. Doebner et al, (World Sci, Singapore, 2000; ISBN 981-02-4237-9) pp. 464-469.
131. V.K. Dobrev, Solutions of Quantum Conformal Equations in Terms of q-Plane Waves, in: ‘Quantum Theory and Symmetries’, Proceedings of a Symposium (Goslar, 1999), eds. H.D. Doebner et al, (World Sci, Singapore, 2000; ISBN 981-02-4237-9) pp. 490-495.
132. V.K. Dobrev, Intertwining operators from the AdS/CFT correspondence, Talk at the VI International Wigner Symposium, Istanbul, 1999; Proceedings, ed. E. Arik, (Bogazici Univ. Press, Istanbul, 2002; ISBN 975-518-187-3, -188-1, -189-x) pp. 19-30.
133. V.K. Dobrev, H.D. Doebner, U. Franz and R. Schott, Lévy Processes on $U_q(\mathfrak{g})$, in: Proceedings of the International Workshop “Lie Theory and Its Applications in Physics III”, (Clausthal, 1999); eds. H.D. Doebner et al, (World Sci, Singapore, 2000; ISBN 981-02-4421-5) pp. 280-292.
134. V.K. Dobrev and S.G. Mihov, Induced Representations of the Two-Parameter Jordanian Quantum Algebra, Czech. J. Phys. **51** (2001) 1299-1305.
135. B.L. Aneva, D. Arnaudon, A. Chakrabarti, V.K. Dobrev and S.G. Mihov, On Combined Standard-Nonstandard or Hybrid (q,h)-Deformations, J. Math. Phys. **42** (2001) 1236-1249; math.QA/0006206.
136. M. Angelova, V.K. Dobrev and A. Frank, Simple applications of q-bosons, J. Phys. **A34** (2001) L503-L509.
137. V.K. Dobrev, S.T. Petrov and B.S. Zlatev, Solutions of q-deformed equations with quantum conformal symmetry, Talk by V.K.D. at PDE2000 Conference (Clausthal, Germany, 2000), Proc. “Partial Differential Equations and Spectral Theory”, ed. M. Demuth et al, *Operator Theory: Advances and Applications, Vol. 126* (Birkhäuser, Berlin, 2001) pp. 113-118.
138. V.K. Dobrev, S.T. Petrov and B.S. Zlatev, Helicity Asymmetry of q-Plane Wave Solutions of q-Maxwell Equations, Physics of Atomic Nuclei, **64** (2001) 2110-2115.
139. D. Arnaudon, A. Chakrabarti, V.K. Dobrev and S.G. Mihov, Duality for Exotic Bialgebras, J. Phys. **A34** (2001) 4065-4082; math.QA/0101160.
140. V.K. Dobrev and S.T. Petrov, q-Plane Wave Solutions of q-Maxwell Equations, in: ‘Quantum Theory and Symmetries II’, Proceedings of the 2nd Symposium, (Cracow, 2001), (World Sci, Singapore, 2002) pp. 318-323.
141. N. Aizawa, V.K. Dobrev and H.D. Doebner, Intertwining operators for Schrödinger algebras and hierarchy of invariant equations, in: ‘Quantum Theory and Symmetries II’, Proceedings of the 2nd QTS Symposium, (Cracow, 2001), (World Sci, Singapore, 2002) pp. 222-227; UNN-SCM-M-01-02 (2001).
142. V.K. Dobrev, Positive energy unitary irreducible representations of D=6 conformal supersymmetry, J. Phys. **A35** (2002) 7079-7100; hep-th/0201076.
143. V.K. Dobrev and S.T. Petrov, q-Plane Wave Solutions of the Full q-Maxwell Equations, Phys. Part. Nucl. **33** (7) (2002) 43-52.
144. V.K. Dobrev, AdS/CFT Correspondence and Supersymmetry, Lectures at Summer School in Modern Mathematical Physics, (Sokobanja, Serbia, 13-25.8.2001); Proceedings, eds. B. Dragovich and B. Sazdović, SFIN XV (A3) (Belgrade, 2002; ISBN 86-82441-09-8) pp. 107-134; hep-th/0207116.
145. D. Arnaudon, A. Chakrabarti, V.K. Dobrev and S.G. Mihov, Duality and representations for new exotic bialgebras, J. Math. Phys. **43** (2002) 6238-6264; math.QA/0206053.
146. V.K. Dobrev, H.D. Doebner and R. Twarock, Quantum mechanics with difference operators, Rep. Math. Phys. **50** (2002) 409-431; quant-ph/0207077.
147. D. Arnaudon, A. Chakrabarti, V.K. Dobrev and S.G. Mihov, Spectral decomposition and Baxterisation of exotic bialgebras and associated noncommutative geometries, Int. J. Mod. Phys. **A18** (2003) 4201-4213; math.QA/0209321.
148. V.K. Dobrev, All positive energy UIRs of D=6 conformal supersymmetry, in: Proc. XXIV Intern. Colloquium on Group Theoretical Methods in Physics, (Paris, 2002), “GROUP 24. Physical and Mathematical Aspects of Symmetries”, IOP Conference Series, Number 173, eds. R. Kerner et al (Institute of Physics

Publishing, Bristol and Philadelphia, 2003) pp. 653-656.

149. D. Arnaudon, A. Chakrabarti, V.K. Dobrev and S.G. Mihov, On Exotic Bialgebras, Czech. J. Phys. **53** (2003) 963-969.

150. M.N. Angelova, V.K. Dobrev and A. Frank, Revisiting the Quantum Group Symmetry of Diatomic Molecules, Eur. Phys. J. **D31** (2004) 27-37; cond-mat/0312326.

151. V.K. Dobrev and R.B. Zhang, Positive Energy Unitary Irreducible Representations of the Superalgebras $osp(1|2n, R)$, Phys. Atom. Nuclei, **68** (2005) 1660-1669; hep-th/0402039.

152. V.K. Dobrev, A.M. Miteva, R.B. Zhang and B.S. Zlatev, On the Unitarity of D=9,10,11 Conformal Supersymmetry, Czech. J. Phys. **54** (2004) 1249-1256; hep-th/0402056.

153. D. Arnaudon, A. Chakrabarti, V.K. Dobrev and S.G. Mihov, Exotic bialgebras: non-deformation quantum groups, in: Proceedings of the 5-th International Workshop "Lie Theory and Its Applications in Physics", eds. H.D. Doebner et al (World Scientific, Singapore, 2004) pp. 392-402; math.QA/0407085.

154. V.K. Dobrev and S.T. Petrov, q-Conformal Invariant Equations and q-Plane Wave Solutions, J. Math. Phys. **45** (2004) 3788-3799; math.QA/0404493.

155. V.K. Dobrev, H.D. Doebner and R. Twarock, Quantum Mechanics on the Circle through Hopf q -Deformations of the Kinematical Algebra with Possible Applications to Lévy Processes, in: "Quantum Probability and Infinite Dimensional Analysis" (From Foundations to Applications), Vol. 18 of Conference series: "Quantum Probability and White Noise Analysis", Conference Proceedings: Krupp-Kolleg (Greifswald, Germany 22-28.6.2003), eds. M. Schürmann et al (World Scientific, Singapore, 2005) pp. 153-173.

156. V.K. Dobrev, Characters of the Positive Energy UIRs of D=4 Conformal Supersymmetry, Phys. Part. Nucl. **38** (5) (2007) 564-609, hep-th/0406154.

157. V.K. Dobrev, Characters of D=4 Conformal Supersymmetry, in: Proceedings of the XI International Conference on Symmetry Methods in Physics, (Prague, 2004) eds. C. Burdík, O. Navrátil and S. Posta (Joint Institute for Nuclear Research, Dubna, 2004; ISBN 5-9530-0069-3) on CD, 25 pages.

158. V.K. Dobrev, Decompositions of long superfields in D=4 conformal supersymmetry, in: Proceedings of XXV Intern. Colloquium on Group Theoretical Methods in Physics (Cocoyoc, Mexico, 2004) eds. G.S. Pogosyan, L.E. Vicent and K.B. Wolf et al (Institute of Physics, Bristol, 2005) pp. 237-242.

159. V.K. Dobrev, Characters of D=4 Conformal Supersymmetry, Invited talk at the 3rd Summer School in Modern Mathematical Physics, Zlatibor, Serbia and Montenegro, 20-31.8.2004. Proceedings, eds. B. Dragovich et al, SFIN XVIII (A1) (Belgrade, 2005; ISBN 86-82441-17-9) pp. 309-326.

160. V.K. Dobrev, Invariant Differential Operators and Characters of the AdS_4 Algebra, J. Phys. **A39** (2006) 5995-6020; hep-th/0512354.

161. D. Arnaudon, A. Chakrabarti, V.K. Dobrev and S.G. Mihov, Exotic Bialgebra S03: Representations, Baxterisation and Applications, Annales Henri Poincaré, **7** (2006) 1351-1373, IF=1.529.

162. V.K. Dobrev, $SO(3,2)$ Invariant Differential Operators and Equations, in: Proceedings of the VI International Workshop "Lie Theory and Its Applications in Physics", Varna, 15-21.8.2005 (substructure of QTS-4), eds. H.D. Doebner et al, (Heron Press, Sofia, 2006) pp. 231-248.

163. V.K. Dobrev, Decompositions of superfields in D=4 conformal SUSY, Czech. J. Phys. **56** (2006) 1131-1136.

164. V.K. Dobrev and S.G. Mihov, q-Plane Wave Solutions of q-Weyl gravity, Phys. Atom. Nucl. **71** (5) (2008) 862-867; math.QA/0702080.

165. A. Chakrabarti, V.K. Dobrev and S.G. Mihov, On a "New" Deformation of $GL(2)$, Eur. Phys. J. **B58** (2007) 135-136, math.QA/0701103.

166. B. Abdesselam, A. Chakrabarti, V.K. Dobrev and S.G. Mihov, Higher Dimensional Unitary Braid Matrices: Construction, Associated Structures and Entanglements, J. Math. Phys. **48**, 053508 (2007); math.QA/0702188.

167. V.K. Dobrev, Invariant Differential Operators for Non-Compact Lie Groups: Parabolic Subalgebras, Rev. Math. Phys. **20** (2008) 407-449; hep-th/0702152.

168. B. Abdesselam, A. Chakrabarti, V.K. Dobrev and S.G. Mihov, Higher Dimensional Multiparameter Unitary and Nonunitary Braid Matrices: Even Dimensions, *J. Math. Phys.* **48**, 103505 (2007); arXiv:0706.2787.
169. V.K. Dobrev, Characters of the Unitarizable Highest Weight Modules over the $N=2$ Superconformal Algebras (Encyclopedia entry), arXiv:0708.1719 [hep-th].
170. V.K. Dobrev, Representations and characters of the Virasoro algebra and $N=1$ super-Virasoro algebras (Encyclopedia entry), arXiv:0709.0105 [hep-th].
171. V.K. Dobrev, Positive Energy Representations, Holomorphic Discrete Series and Finite-Dimensional Irreps, *J. Phys.* **A41** (2008) 425206; arXiv:0712.4375 [hep-th].
172. N. Aizawa, V.K. Dobrev, H.D. Doebner and S. Stoimenov, Intertwining operators for Schroedinger algebra in $n \geq 3$ space dimensions, *Bulg. J. Phys.* **35** (2008) (S1) 372-399.
173. B. Abdesselam, A. Chakrabarti, V.K. Dobrev and S.G. Mihov, Exotic Bialgebras from 9×9 Unitary Braid Matrices, *Physics of Atomic Nuclei*, **74**, No. 6, 824-831 (851-857 Russian edition) (2011).
174. V.K. Dobrev, Invariant Differential Operators for Non-Compact Lie Groups: the $E_{6(-14)}$ case, arXiv:0812.2655 [math-ph], Invited Lectures at 5th Mathematical Physics Meeting: Summer School and Conference on Modern Mathematical Physics, Belgrade, 6-17.07.2008, Proceedings, Eds. B. Dragovich, Z. Rakić, (Institute of Physics, Belgrade, 2009) pp. 95-124.
175. V.K. Dobrev, Exceptional Lie Algebra $E_{7(-25)}$ (Multiplets and Invariant Differential Operators), *J. Phys.* **A42** (2009) 285203, arXiv:0812.2690 [hep-th].
176. V.K. Dobrev and S. Stoimenov, Singular Vectors and Invariant Equations for the Schrödinger Algebra in $n \geq 3$ Space Dimensions: the General Case, *Physics of Atomic Nuclei*, **73**, No. 11, 19161924 (2010).
177. V.K. Dobrev, Note on Centrally Extended $su(2/2)$ and Serre Relations, *Fortschr. Phys.* **57**, No. 57, 542545 (2009) arXiv:0903.0511 [hep-th].
178. N. Aizawa and V.K. Dobrev, Intertwining Operator Realization of Non-Relativistic Holography, *Nucl. Phys.* **B828** [PM] (2010) 581593, arXiv:0906.0257 [hep-th].
179. V.K. Dobrev, Invariant Differential Operators of the AdS4 Algebra, in: Proceedings of XXVI Intern. Colloquium on Group Theoretical Methods in Physics (New-York, 2006), eds. J. Birman, S. Catto & B. Nicolescu, (Canopus Publishing Limited, 2009, ISBN 978-0-9549846-9-7) pp. 197-201.
180. B. Abdesselam, A. Chakrabarti, V.K. Dobrev and S.G. Mihov, Exotic Bialgebras from 9×9 Braid Matrices, in: "Quantum Groups, Quantum Foundations, and Quantum Information: a Festschrift for Tony Sudbery", *J. Phys.: Conf. Ser.* Vol. 254 (2010) 012001; 25 pages; ISSN 1742-6588.
181. N. Aizawa and V.K. Dobrev, Non-Relativistic Holography in Schrödinger Setting, Invited talk (by V.K.D.) at the VI Mathematical Physics Meeting, 14-23 September 2010, Proceedings, eds. B. Dragovich and B. Rakić, SFIN XXIV A1 (Institute of Physics, Belgrade, 2011, ISBN 978-86-82441-30-4) pp. 11-25.
182. V.K. Dobrev, Representations and q-Deformation of Anti de Sitter Symmetry, *Bulg. J. Phys.* **38** (2011) 252260; Invited talk at the International Conference on Physics in memory of academician Matey Mateev, (Sofia, 1012.4.2011); Proceedings, eds. D. Kirilova and M. Chizhov.
183. V.K. Dobrev, Group-Theoretical Classification of BPS and Possibly Protected States in $D=4$ Conformal Supersymmetry, *Nucl. Phys.* **B854** (3) (2012) 878-893.
184. N. Aizawa and V.K. Dobrev, Schrödinger Algebra and Non-Relativistic Holography, Invited talk (by V.K.D.) at the VII International Symposium "Quantum Theory and Symmetries" (Prague, 7-13.8.2011); *J. Phys.: Conf. Ser.* **343** (2012) 012007.
185. V.K. Dobrev, Invariant Differential Operators for Non-Compact Lie Groups: the Main $SU(n,n)$ Cases, *Physics of Atomic Nuclei*, **76**, No 8, 983-990 (2013), doi:10.1134/S1063778813080073.
186. V.K. Dobrev, Group-Theoretical Classification of BPS States in $D=4$ Conformal Supersymmetry: the Case of $(1/N)$ -BPS, *Phys. Part. Nucl.* **43** (5) (2012) 616-620, arXiv:1112.3498 [hep-th].
187. V.K. Dobrev, Invariant Operators in Schrödinger Setting, Invited talk at 32nd International Conference on Quantum Probability and Related Topics, Levico (Trento), 29.5-4.6.2011, Proceedings, Vol.

29 of Conference series: "Quantum Probability and White Noise Analysis", eds. L. Accardi and F. Fagnola (World Sci, 2013, ISBN 978-981-4447-53-9) pp. 67-83.

188. V.K. Dobrev, Invariant Differential Operators for Non-Compact Lie Groups: the $Sp(n, \mathbb{R})$ Case, in: Proceedings of the IX International Workshop *Lie Theory and Its Applications in Physics*, (Varna, Bulgaria, June 2011), "Springer Proceedings in Mathematics and Statistics", Vol. 36 (ISBN 978-4-431-54269-8), (Springer, Heidelberg-Tokyo, 2013) pp. 311-335, arXiv:1205.5521 [hep-th].

189. V.K. Dobrev, Invariant Differential Operators for Non-Compact Lie Algebras Parabolically Related to Conformal Lie Algebras, *J. High Energy Phys.* 02 (2013) 015, arXiv:1208.0409.

190. V.K. Dobrev, Explicit Character Formulae for Positive Energy UIRs of $D=4$ Conformal Supersymmetry, *J. Phys.* **A46** (2013) 405202, arXiv:1208.6250.

191. V.K. Dobrev, Invariant Differential Operators for Non-Compact Lie Groups: Euclidean Jordan Groups or Conformal Lie Groups, Plenary talk at the 20th Colloquium 'Integrable Systems and Quantum Symmetries', Prague, 17-23.6.2012; Proceedings, eds. C. Burdik et al., *J. Phys.: Conf. Ser.* **411** (2013) 012012.

192. V.K. Dobrev, Conservation Laws for $SO(p, q)$, in: "Symmetries and Groups in Contemporary Physics", Nankai Series in Pure, Applied Mathematics and Theoretical Physics, Vol. 11 (World Scientific, Singapore, 2013), pp. 461-466; arXiv:1210.8067 [math-ph hep-th math.RT].

193. V.K. Dobrev, Special Reduced Multiplets and Minimal Representations for $Sp(n, \mathbb{R})$, Invited talk at the VII Mathematical Physics Meeting, (9-19 September 2012), Proceedings, eds. B. Dragovich and Z. Rakic, Belgrade Inst. Phys. Press, 2013 [ISBN 978-86-82441-38-0], pp. 151-170, arXiv:1301.2773.

194. V.K. Dobrev, Classification of Invariant Differential Operators for Non-Compact Lie Algebras via Parabolic Relations, *J. Phys.: Conf. Ser.* **512** (2014) 012020; arXiv:1311.7557 [hep-th math.RT].

195. V.K. Dobrev, Non-Relativistic Holography (A Group-Theoretical Perspective), Invited review, *Int. J. Mod. Phys.* **A29** (3&4) (2014) 1430001, arXiv:1312.0219.

196. V.K. Dobrev, Invariant Differential Operators for Non-Compact Lie Groups: the Reduced $SU(3, 3)$ Multiplets, *Phys. Part. Nucl. Lett.* **11** (7) 864871 (2014), arXiv:1312.5998.

197. N. Aizawa and V.K. Dobrev, "Intertwining Operator Realization of anti de Sitter Holography," *Rept. Math. Phys.* **75** (2015) 179-197.

198. V.K. Dobrev, Special Reduced Multiplets and Minimal Representations for $SO(p, q)$, in: Proceedings of the X International Workshop *Lie Theory and Its Applications in Physics*, (Varna, Bulgaria, June 2013), "Springer Proceedings in Mathematics and Statistics", Vol. 111 (ISBN 978-4431552840) (Springer, Heidelberg-Tokyo, 2014) pp. 475-504, arXiv:1412.6702 [math.RT].

199. V.K. Dobrev, Multiplet classification for $SU(n, n)$, *J. Phys.: Conf. Ser.* 563 (2014) 012008, Review paper based on Plenary talk at the International Conference on Integrable Systems and Quantum Symmetries, Prague, June 2014, arXiv:1412.8038 [math.RT].

200. V.K. Dobrev, Invariant Differential Operators for Non-Compact Lie Groups: the $SO^*(12)$ Case, Invited talk at the XXX International Colloquium on Group Theoretical Methods in Physics (Ghent, July 2014), *J. Phys.: Conf. Ser.* 597 (2015) 012032, arXiv:1504.04204 [math.RT].

201. V.K. Dobrev and I. Salom, Positive Energy Unitary Irreducible Representations of the Superalgebras $osp(1|2n, \mathbb{R})$ and Character Formulae, arXiv:1506.02272, Proceedings of the VIII Mathematical Physics Meeting, (Belgrade, 24-31 August 2014) SFIN XXVIII (A1), eds. B. Dragovich et al, (Belgrade Inst. Phys. 2015) [ISBN 978-86-82441-43-4], pp. 59-81.

202. V.K. Dobrev, Invariant Differential Operators for Non-Compact Lie Groups: an Introduction, *Bulg. J. Phys.* **42** no.3 (2015) 236-248; Invited Talk at Matey Mateev Symposium, Sofia, 17 April 2015.

203. V.K. Dobrev, Invariant Differential Operators for Non-Compact Lie Groups: the Reduced $SU(4, 4)$ Multiplets, in: *Symmetry in Integrable Systems and Nuclear Physics*, Book of Lectures of Humboldt Kolleg/ The Third International School (Tsakhadzor, Armenia, July 3-13, 2013), eds. G.S. Pogosyan, E.A. Kolganova, S.I. Vinitzky (Dubna, JINR, 2016, ISBN 978-5-9530-0444-2) pp.6-40; arXiv:1402.0190.

204. V.K. Dobrev, "Classification of Conformal Representations Induced from the Maximal Cuspidal Parabolic", *Physics of Atomic Nuclei*, **80**, No. 2 (2017) 347352.
205. V.K. Dobrev, "Invariant Differential Operators for Non-Compact Lie Groups: Summary of SU(4,4) Multiplets", *Physics of Particles and Nuclei, Letters*, **14**, No. 2 (2017) 277285.
206. V.K. Dobrev, "Invariant Differential Operators in Noncommutative Quantum Group Setting", Talk at Workshop on Noncommutative Field Theory and Gravity 21-27.9.2015, Corfu; Proceedings, PoS CORFU **2015** (2016) 120.
207. V.K. Dobrev and I. Salom, "Positive Energy Unitary Irreducible Representations of the Superalgebra $osp(1|8, R)$ ", *Publ. Inst. Math. Belgrade*, (N.S.) 102 (116) (2017) 49-60, DOI: 10.2298/PIM161217003D (IF 0.195).
208. V.K. Dobrev and P. Moylan, "Anti de Sitter holography via Sekiguchi decomposition", arXiv:1612.03745, in: Proceedings of the XI International Workshop *Lie Theory and Its Applications in Physics*, (Varna, Bulgaria, June 2015), "Springer Proceedings in Mathematics and Statistics" Vol. 191 (Springer, Heidelberg-Tokyo, 2016, ISSN: 2194-1009, ISBN: 978-981-10-2635-5 (Print), 978-981-10-2636-2 (Online), <http://link.springer.com/book/10.1007/978-981-10-2636-2>) pp. 413-421.
209. Vladimir K. Dobrev, **Invariant Differential Operators, Volume 1: Noncompact Semisimple Lie Algebras and Groups**, De Gruyter Studies in Mathematical Physics vol. 35 (De Gruyter, Berlin, Boston, 2016, ISBN 978-3-11-042764-6), 408 + xii pages.
210. V.K. Dobrev and I. Salom, Positive Energy Unitary Irreducible Representations of the Superalgebras $osp(1|2n, R)$ and Character Formulae for $n = 3$, Plenary talk by V.K.D. at the 24-th International Conference on Integrable Systems and Quantum Symmetries, (Prague, June 2016), *J. Phys.: Conf. Ser.* 804 (2017) 012015; doi:10.1088/1742-6596/804/1/012015.
211. V.K. Dobrev, Multiparameter quantum Minkowski space-time and quantum Maxwell equations hierarchy, Invited Talk at the III National Congress of Bulgarian Physicists (Sofia, 2016), *Bulg. J. Phys.* **44** no.1 (2017) 31-38.
212. Vladimir K. Dobrev, **Invariant Differential Operators, Volume 2: Quantum Groups**, De Gruyter Studies in Mathematical Physics, vol. 39 (De Gruyter, Berlin, Boston, 2017, ISBN 978-3-11-043543-6 (h.c.), 978-3-11-042770-7), 394 + xii pages.
213. V.K. Dobrev, Representations of Multiparameter Quantum Groups, *Physics of Atomic Nuclei*, **81**, No. 6, (2018) 826831.
214. V.K. Dobrev, Multiparameter Quantum Group and Quantum Minkowski Space-Time, *Physics of Particles and Nuclei*, **49**, No. 5, (2018) 818822.
215. Vladimir K. Dobrev, **Invariant Differential Operators, Volume 3: Supersymmetry**, De Gruyter Studies in Mathematical Physics, vol. 49 (De Gruyter, Berlin, Boston, 2018, ISBN: 978-3-11-052-7490 (Print), 978-3-11-052-6639, ISSN 2194-3532), 218 + viii pages.
216. V.K. Dobrev, Multiplet Classification of Reducible Verma Modules over the G_2 Algebra, Invited talk at the XXXII International Colloquium on Group Theoretical Methods in Physics (Prague, 9-13.7.2018), to appear in the Proceedings, submitted 25.11.2018.
- 25.11.2018