

List of publications of V.B. Petkova *

1. T.D. Palev and V.B. Petkova, Representations of the symplectic algebra in the space of all polynomials of Heisenberg operators, Izv. FI ANEB **XXIII** (1973) 39-47 (in Russian).
2. V.K. Dobrev, E.Ch. Christova, V.B. Petkova and D.B. Stamenov, Conformal covariant operator product expansion of two spin 1/2 fields, Bulg. J. Phys. **1** No 1, (1974) 42-57.
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3. V.K. Dobrev, G. Mack, V.B. Petkova, S.G. Petrova and I.T. Todorov, On Clebsch - Gordan expansion for $O(2h + 1, 1)$, JINR Report E2-7977, Dubna (1974).
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4. V.K. Dobrev, V.B. Petkova, S.G. Petrova and I.T. Todorov, On the exceptional integer points in the representation space of the pseudo-orthogonal group $O(2h + 1, 1)$, Trieste preprint. IC/75/1.
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6. 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,
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7. M.C. Mintchev, V.B. Petkova and I.T. Todorov, Scale and conformal covariance in quantum electrodynamics, Rep. Math. Phys. **9** (1976) 355-376.
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 application to conformal quantum field theory*, **monograph**, Lecture Notes in Physics, vol. **63** (1977) 1-280.
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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.
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10. I.T. Todorov, M.C. Mintchev and V.B. Petkova, *Conformal invariance in quantum field theory*, **monograph**, SNS Pisa, (1978).
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11. G. Mack and V.B. Petkova, Comparison of lattice gauge theories with gauge groups \mathbb{Z}_2 and $SU(2)$, Ann. Phys. **123** (1979) 442-467.
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12. G. Mack and V.B. Petkova, Sufficient condition for confinement of static quarks by a vortex condensation mechanism, Ann. Phys. **125** (1980) 117-134.
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13. G. Mack and V.B. Petkova, \mathbb{Z}_2 - monopoles in the standard $SU(2)$ lattice gauge theory model, Zeit. Phys. **C12** (1982), 177-184.
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14. V.B. Petkova and G.M. Sotkov, Exceptional representations of the conformal group and applications - I, Bulg. J.Phys. **10** (1983), 144-172;
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15. V.B. Petkova and G.M. Sotkov, Exceptional representations of the conformal group and applications - II, Bulg. J. Phys. **10**(1983), 256-277.
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- 16.** V.B. Petkova and G.M. Sotkov, The six-point families of exceptional representations of the conformal group, Lett. Math. Phys. **8** (1984) 217-226.
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- 17.** P. Furlan, V.B. Petkova, G.M. Sotkov and I.T. Todorov, Conformal quantum electrodynamics and nondecomposable representations, Riv. del Nuovo Cim. **8** No 3, (1985) 1-50.
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- 18.** V.B. Petkova, G.M. Sotkov and I.T. Todorov, Conformal gauges and renormalized equations of motion in massless QED, Comm. Math. Phys. **97** (1985) 227-256.
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- 19.** 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.
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- 23.** V.B. Petkova, Two-dimensional (half-) integer spin conformal theories with central charge $c < 1$, Int. J. Mod. Phys. **A3** (1988) 2945-2958 (Sofia preprint and Trieste preprint INFN /AE-87/6).
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- 25.** V.B. Petkova, Structure constants for the (A, D) $c < 1$ minimal conformal theories, Phys. Lett. **B225** (1989) 357-362.
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- 27.** A.Ch. Ganchev and V.B. Petkova, $U_q(sl(2))$ invariant operators and minimal theories fusion matrices, Phys. Lett. **B233** (1989) 374-382.
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- 28.** P. Furlan, A.Ch. Ganchev and V.B. Petkova, Quantum groups and fusion rules multiplicities, Nucl. Phys. **B343** (1990) 205-227.
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- 29.** P. Furlan, A.Ch. Ganchev and V.B. Petkova, Remarks on the quantum group structure of the rational $c < 1$ conformal theories, Int. J. Mod. Phys. **A6** No. 27 (1991) 4859-4884.
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- 30.** P. Furlan, A.Ch. Ganchev, R. Paunov and V.B. Petkova, Reduction of the rational spin $sl(2, \mathbb{C})$ WZNW conformal theory, Phys. Lett. **B267** (1991) 63-70.
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- 31.** P. Furlan, A.Ch. Ganchev, R. Paunov and V.B. Petkova, Solutions of the Knizhnik - Zamolodchikov equation with rational isospins and the reduction to the minimal models, Nucl. Phys. **B394** (1993) 665-706, hep-th/9201080.
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- 32.** A.Ch. Ganchev and V.B. Petkova, Reduction of the Knizhnik - Zamolodchikov equation - a way of producing Virasoro singular vectors, Phys. Lett. **B293** (1992) 56-66, hep-th/9207032.
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- 33.** A.Ch. Ganchev and V.B. Petkova, Virasoro singular vectors via quantum DS reduction, Phys. Lett. **B318** (1993) 77-84, hep-th/9308037.
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- 35.** P. Furlan, A.Ch. Ganchev and V.B. Petkova, Singular vectors of \mathcal{W} algebras via DS reduction of $A_2^{(1)}$, Nucl. Phys. **B431** (1994) 622-664, hep-th/9403075.
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- 37.** V.B. Petkova and J.-B. Zuber, From CFT to graphs, Nucl. Phys. **B463** (1996) 161-193, hep-th/9510175.
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- 38.** P. Furlan, A.Ch. Ganchev and V.B. Petkova, $A_1^{(1)}$ admissible representations –fusion transformations and local correlators, Nucl. Phys. **B491**, no. 3 [PM] (1997) 635-658, hep-th/9608018.
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- 41.** R.E. Behrend, P.A. Pearce, V.B. Petkova and J.-B. Zuber, On the classification of bulk and boundary conformal field theories, Phys. Lett. **B444** (1998) 163-166, hep-th/9809097.
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- 43.** R.E. Behrend, P.A. Pearce, V.B. Petkova and J.-B. Zuber, Boundary conditions in rational conformal field theories, (Nucl. Phys. **B570** (3) [FS], 2000, 525-589) Nucl. Phys. **B579** [FS], (2000) 707-773, hep-th/9908036.
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- 45.** V.B. Petkova and J.-B. Zuber, Generalised twisted partition functions, Phys. Lett. **B504** (2001) 157-164, hep-th/0012021.
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- 46.** V.B. Petkova and J.-B. Zuber, The many faces of Ocneanu cells, Nucl. Phys. **B603** (2001) 449-496, hep-th/0101151.
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- 48.** I.K. Kostov and V.B. Petkova, Bulk correlation functions in 2D quantum gravity, Theor. Math. Phys. **146** (1) (2006) 108-118 (translated from TMF **146**, No. 1 (2006) 132-145), hep-th/0505078.

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- C2. V.B. Petkova, G.M. Sotkov and I.T. Todorov, “Local field representations of the conformal group and their physical interpretation”, in: Proceedings of the **International Workshop Program on Quantum Field Theory: Lectures on Supermanifolds, Geometrical Methods and Conformal Groups** (Varna, 1982), H.D. Doebner, J.D. Hennig, T.D. Palev (Eds.), p. 63-92 (World Scientific, Singapore, 1989.)

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- C3. V.K. Dobrev and V.B. Petkova, “Reducible representations of the extended conformal superalgebra and invariant differential operators”, in: Proceedings of the **Symposium on Conformal Groups and Structures** (Clausthal, 1985), Eds. A.O. Barut and H.D. Doebner, Lecture Notes in Physics, vol. **261**, p. 291-299 (Springer-Verlag, Berlin, 1986).
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