LIST OF PUBLISHED PAPERS - 2016
Institute for Nuclear Research and Nuclear Energy, Bulgarian Academy of Sciences
Laboratory "Theory of Elementary Particles"

1. **Anguelova, L**. A Gravity Dual of Ultra-slow Roll Inflation. Nuclear Physics B, 911, Elsevier, 2016, ISSN:05503213, DOI:10.1016/j.nuclphysb.2016.08.020, 480-499. ISI IF:3.735

2. **Anguelova, L**. Glueball Inflation and Gauge/Gravity Duality. Proceedings of the XI International Workshop "Lie Theory and Its Applications in Physics", (Varna, Bulgaria, June 2015), Springer Proceedings in Mathematics & Statistics, 191, ed. V. Dobrev (Springer, Tokyo-Heidelberg), 2016, 285-293

3. **Bozhilov, P.**. Some three-point correlation functions in the eta-deformed AdS_5 x S^5. International Journal of Modern Physics A, 31, 1, World Scientific, 2016, ISSN:Print ISSN: 0217-751X, Online ISSN: 1793-656X, DOI:10.1142/S0217751X15502243, 1550224-1-1550224-17. ISI IF:1.699

4. **Bozhilov, Plamen**. Semiclassical structure constants in the eta-deformed AdS_5 x S^5: Leading finite-size corrections. arXiv:1601.00127 [hep-th], 2016

5. **Bozhilov, Plamen**. String solutions in AdS3×S3×S3×S1 with B-field, arXiv:1611.00041 [hep-th]. 2016

6. **Christova, E.**, Leader, E.. The problem of kinematic mass corrections for unpolarized semi-inclusive deep inelastic scattering. Phys. Rev. D, 94, 096001, 2016, DOI:https://doi.org/10.1103/PhysRevD.94.096001, ISI IF:4.643

7. **Damyamov, B. P.**. On balanced products of distributions in Colombeau algebra. International journal of Applied Mathematics, 29, 1, Academic Publications, 2016, ISSN:1311-1728, DOI:http://dx.doi.org/10.12732/ijam.v29i1.12, 155-160

8. **Daniela, D.**, Yazadjiev, S.. Rapidly rotating neutron stars with a massive scalar field—structure and universal relations. JCAP, 1611, 2016, 019-019. ISI IF:5.634

9. **Dobrev, V.K.**, Moylan, P.. Anti de Sitter Holography via Sekiguchi Decomposition. Springer Proceedings in Mathematics and Statistics, 191, Springer, Tokyo-Heidelberg, 2016, ISBN:978-981-10-2635-5, ISSN:2194-1009, DOI:10.1007/978-981-10-2636-2, 413-421

10. **Dobrev, V.K.**, Salom. I. Positive Energy Unitary Irreducible Representations of the Superalgebra osp(1|8,R). https://arxiv.org/1607.03008, 2016

11. **Dobrev, V.K.**. Invariant Differential Operators for Non-Compact Lie Groups: the Reduced SU(4,4) Multiplets. Symmetry in Integrable Systems and Nuclear Physics, Book of Lectures of Humboldt Kolleg/The Third International School, Tsakhadzor, Armenia, 2013, Dubna, JINR, 2016, ISBN:978-5-9530-0444-2, 6-40

12. **Dobrev, V.K.**. Invariant Differential Operators in Noncommutative Quantum Group Setting. Proceedings of Science, PoS(CORFU2015)120, SISSA Medialab S.r.l., 2016, 120

13. **Dobrev, V.K.**. Multiparameter quantum Minkowski space-time and quantum Maxwell equations hierarchy. http://arxiv.org/abs/1612.05034, 2016

14. **Dobrev, Vladimir K.**. Invariant Differential Operators, Volume 1: Noncompact Semisimple Lie Algebras and Groups. De Gruyter Studies in Mathematical Physics, 35, De Gruyter, Berlin, Boston, 2016, ISBN:978-3-11-042764-6, 409

15. Fiziev, P., **Marinov, K.**. Modeling of non-rotating neutron stars in minimal dilatonic gravity. Astrophysics and space science, 362, 8, Springer, 2017, ISSN:1572-946X, DOI:10.1007/s10509-016-2991-x, ISI IF:1.678

16. Furlan, P., **Petkova, V.B.**. W4 Toda example as hidden Liouville CFT. arXiv:1606.02535, 2016

17. **Georgiev, L.**. Thermoelectric Characteristics of Zk Parafermion Coulomb Islands. Springer Proceedings in Mathematics and Statistics, 191, Springer, 2016, ISBN:978-981-10-2635-5, 361-369

18. **Gerdjikov, V S**, Todorov, M D, **Kyuldjiev, A V**. Asymptotic behavior of Manakov solitons: Effects of potential wells and humps. Mathematics and Computers in Simulation, 121, Elsevier, 2016, ISSN:0378-4754, DOI:10.1016/j.matcom.2015.10.004, 166-178. SJR:0.579, ISI IF:0.949

19. **Gerdjikov, V**, Todorov, M, **Kyuldjiev, A**. Adiabatic interactions of Manakov solitons—Effects of cross-modulation. Wave Motion, Elsevier, 2016, ISSN:0165-2125, DOI:dx.doi.org/10.1016/j.wavemoti.2016.08.004, ISI IF:1.449

20. **Ginina, E.**, H. Eberl, A. Bartl, K. Hidaka. The decays $h0 \to b\bar{b}$ and $h0 \to c\bar{c}$ in the light of the MSSM with quark flavour violation. JHEP - Journal of High Energy Physics, 2016, 6, Springer, 2016, ISSN:1029-8479, DOI:10.1007/JHEP06(2016)143, 1-23. ISI IF:6.023

21. **Hadjiivanov, L.**, Furlan, P.. "Spread" restricted Young diagrams from a 2D WZNW dynamical quantum group. Proceedings of the XI International Workshop "Lie Theory and Its Applications in Physics", Varna, Bulgaria, 15-21 June 2015, Springer Proceedings in Mathematics and Statistics, V. Dobrev (ed.), 191, Springer Tokyo Heidelberg, 2016, ISBN:978-981-10-2635-5, ISSN:2194-1009, DOI:10.1007/978-981-10-2636-2_37, 501-510

22. **Hristov, Kiril**, Benini, Francesco, Zaffaroni, Alberto. Black hole microstates in AdS4 from supersymmetric localization. Journal of High Energy Physics, 1605, 54, Springer, 2016, ISSN:1029-8479, DOI:10.1007/JHEP05(2016)054, ISI IF:6.023

23. **Hristov, Kiril**, Benini, Francesco, Zaffaroni, Alberto. Exact microstate counting for dyonic black holes in AdS4. arxiv, 2016

24. **Hristov, Kiril**, Katmadas, Stefanos, Lodato, Ivano. Higher derivative corrections to BPS black hole attractors in 4d gauged supergravity. Journal of High Energy Physics, 1605, 173, Springer, 2016, ISSN:1029-8479, DOI:10.1007/JHEP05(2016)173, ISI IF:6.023

25. **Ivanov, B. V.**. A different approach to anisotropic spherical collapse with shear and heat radiation. Int. J. Mod. Phys. D, 25, 4, World Scientific, 2016, ISSN:0218-2718, DOI:10.142/S0218271816500498, 165 0049. ISI IF:1.963

26. **Ivanov, B. V.**. All solutions for geodesic anisotropic spherical collapse with shear and heat radiation. Astrophys. Space Sci., 361, 1, Springer, 2016, ISSN:0004-640X, DOI:10.1007/s10509-015-2603-1, 18. ISI IF:1.678

27. Leader, E., Sidorov, A. V., **Stamenov, D. B**. Determination of the fragmentation functions from an NLO QCD analysis of the HERMES data on pion multiplicities. Phys. Rev. D, 93, 7, 2016, ISSN:ISSN 1550 -7998, 074026. ISI IF:4.643

28. **Nedanovski Dimitar**. Compact picture for theories with extended superconformal symmetry. Comptes Rendus de L'Academie Bulgare des Sciences, Volume 69, Issue 7, 2016, SJR:0.206, ISI IF:0.233

29. **Nikolov N. M.**. Vertex algebras in higher dimensions are homotopy equivalent to vertex algebras in two dimensions. Lie Theory and its Applications in Physics, Springer Proceedings in Mathematics, 2016

30. **Nikolov, N. M.**. Renormalization of massive Feynman amplitudes and homogeneity (based on a joint work with Raymond Stora). Nuclear Physics B, Volume 912, 1, 2016, 38-50. SJR:2.024

31. **Nissimov, E.**, **Pacheva, S.**, Guendelman, E. Cosmology via Metric-Independent Volume-Form Dynamics. Proceedings 2nd Karl Schwarzschild Meeting on Gravitational Physics (KMS 2015), Springer, 2016, ISSN:0930-8989

32. **Nissimov, E.**, **Pacheva, S.**, Guendelman, E. Gravity-Assisted Emergent Higgs Mechanism in the Post-Inflationary Epoch. International Journal of Modern Physics D, 25, World Scientific, 2016, ISSN:0218-2718, DOI:10.1142/S0218271816440089, 1644008. ISI IF:1.963

33. **Nissimov, E.**, **Pacheva, S.**, Guendelman, E. Metric-Independent Spacetime Volume-Forms and Dark Energy/Dark Matter Unification. Springer Series in Mathematics and Statistics, 191, Springer, 2016, ISBN:978-981-10-2635-5, ISSN:2194-1009, DOI:10.1007/978-981-10-2636-2, 261-273

34. **Nissimov, E.**, **Pacheva, S.**, Guendelman, E. Unified Dark Energy and Dust Dark Matter Dual to Quadratic Purely Kinetic K-Essence. European Physical Journal C, 76, Springer, 2016, ISSN:1434-6044, 90. ISI IF:4.912

35. **Nissimov, E.**, **Pacheva, S.**, **Stoilov, M.**, Guendelman, E. Kruskal-Penrose Formalism for Lightlike Thin-Shell Wormholes. Springer Series in Mathematics and Statistics, 191, Springer, 2016, ISBN:978-981-10-2635-5, ISSN:2194-1009, DOI:10.1007/978-981-10-2636-2, 245-259

36. **Popov, T.**. Quantum Plactic and Pseudo-Plactic Algebras. "Springer Proceedings in Mathematics and Statistics", 191, Springer, Tokyo-Heidelberg, 2016, 441-452

37. Staykov, K., **Doneva, D.**, Yazadjiev, S.. Accretion disks around neutron and strange stars in R+aR(2) gravity. JCAP, 1608, 2016, 061. ISI IF:5.634

38. Staykov, K., **Doneva, D.**, Yazadjiev, S.. Moment-of-inertia–compactness universal relations in scalar-tensor theories and R^2 gravity. Phys.Rev. D, 93, 2016, 084010. ISI IF:4.506

39. **Stoilova, N.I.**, Van der Jeugt, J.. Gel'fand-Zetlin basis for a class of representations of the Lie superalgebra gl($\infty|\infty$). J. Phys. A: Math. Theor., 49, 165204, IOP, 2016, DOI:10.1088/1751-8113/49/16/165204, ISI IF:1.933

40. **Stoilova, N.I.**, Van der Jeugt, J.. Lie Superalgebraic Approach to Quantum Statistics. osp(3|2) Wigner Quantum Oscillator. Bulg.J.Phys., 2017

41. **Stoilova, N.I.**, Van der Jeugt, J.. The parastatistics Fock space and explicit infinite-dimensional representations of the Lie superalgebra osp(2m+1|2n). 191, Springer Proceedings in Mathematics and Statistics , ed. V. Dobrev (Springer, Tokyo-Heidelberg, 2016), 2016, ISBN:978-981-10-2635-5, ISSN:2194-1009, DOI:10.1007/978-981-10-2636-2_1, 169-180

42. **Stoilova, N.I.**. Generalized Quantum Statistics and Lie (Super)Algebras. AIP Conference Proceedings, 1722, 2016, ISBN:978-0-7354-1369-6, DOI:10.1063/1.4944182, 100004-1-100004-4

43. **Stoimen Stoimenov**. Boundedness of two-point correlators covariant under the meta-conformal algebra. Bulgarian Jornal of Physics, 44, 1, Heron Press Ltd Sofia, 2017

44. **Stoimen Stoimenov**. Conformal Invariance of 1D Collisionless Boltzmann Equation. Lie Theory and It's Applications in Physics, 191, Springer Proceedings in Mathematics and Statistics, 2016, ISSN:2194-1009, DOI:10.1007/978-981-10-2636-2_33, 453-463

45. **Stoimenov, S.**. Meta-conformal invariance and the boundedness of two-point correlation functions. Journal of physics A: Mathematical and Theoretical, 49, 47, IOP Publishing, 2016, ISSN:0305-4470, DOI:10.1088/1751-8113, ISI IF:1.933

46. **Todorov, I.**. Hyperlogarithms and Periods in Feynman Amplitudes. Springer Proceedings in Mathematics and Statistics, 191, Springer, 2016, ISBN:978-981-10-2635-5, ISSN:2194-1009, 151-167

47. **Todorov, I.**. Relativistic causality and position space renormalization. Nuclear Physics B, 912, Elsevier, 2016, 79-87. ISI IF:4.327

48. **Tonev, D.**, **Goutev, N.**, **Georgiev, L. S.**. Accelerator physics and nuclear energy education in INRNE-BAS. Proceedings of the 11-th International conference on WWER fuel performance, modelling and experiment support; Varna (Bulgaria); 26 Sep - 3 Oct 2015, 2016, ISSN:ISSN 1313-4531, 25-28

49. **Tonev, D.**, **Goutev, N.**, **Georgiev, L. S.**. Cyclotron laboratory of the Institute for Nuclear Research and Nuclear Energy. Journal of Physics: Conference Series, 724, 1, IOP Publishing Ltd, 2016, ISSN:1742-6588, DOI:10.1088/1742-6596/724/1/012049, 012049. SJR:0.211

50. Yazadjiev, S., **Doneva, D.**, Popchev, D.. Slowly rotating neutron stars in scalar-tensor theories with a massive scalar field. Phys.Rev. D, 93, 2016, 084038. ISI IF:4.506

51. **Кюлджиев, А**. Оценяването на уменията да се решават проблеми в PISA 2012 и изследователските задачи. Неформално образование по физика и астрономия, Херон Прес ООД, София, 2016, ISBN:978-954-580-361-1, 168-171

52. **Тодоров, И.**, **Хаджииванов, Л.**. Квантово преплитане. Светът на физиката, XXXVIII (38), 3/2015, Издание на Съюза на физиците в България и БАН, 2016, ISSN:0861–4210, 243-254

LIST OF SUBMITTED PAPERS – 2016, to appear
Institute for Nuclear Research and Nuclear Energy, Bulgarian Academy of Sciences
Laboratory "Theory of Elementary Particles"

1. **Damyamov B.**. On singular products of distributions in Colombeau algebra. International journal of Applied Mathematics, приета за печат: 2016

2. **Ginina, E.**, H. Eberl, A. Bartl, K. Hidaka. Quark-flavour violating Higgs decays to charm and bottom pairs in the MSSM. Nuclear and Particle Physics Proceedings, HEPHY-PUB 979/16, приета за печат: 2016

3. **Hadjiivanov, L.**, Furlan, P.. Quantum groups as generalized gauge symmetries in WZNW models. Part I. The classical model. Physics of Particles and Nuclei (PEPAN; Физика элементарных частиц и атомного ядра), ОИЯИ Дубна, Русия; Pleiades Publishing, distributed by Springer, приета за печат: 2016, ISSN:Print: 1063-7796, Online: 1531-8559, ISI IF:0.519

4. **Hadjiivanov, L.**, Furlan, P.. Quantum groups as generalized gauge symmetries in WZNW models. Part II. The quantized model. Physics of Particles and Nuclei (PEPAN; Физика элементарных частиц и атомного ядра), ОИЯИ Дубна, Русия; Pleiades Publishing, distributed by Springer, приета за печат: 2016, ISSN:Print: 1063-7796, Online: 1531-8559, ISI IF:0.519

5. Leader E., Sidorov A. V., **Stamenov D. B.**. The strange quark polarization puzzle and the role of fragmentation functions: a status report: The LSS Collaboration. In the Proceedings of 22nd International Spin Symposium, 25 - 30 Sep 2016, Urbana, USA, приета за печат: 2016

6. **Nissimov, E.**, **Pacheva, S.**, Guendelman, E. Quintessential Inflation, Unified Dark Energy and Dark Matter, and Higgs Mechanism. Bulgarian Journal of Physics, Heron Press Ltd., Sofia, приета за печат: 2016, ISSN:1310-0157

7. **Nissimov, E.**, **Pacheva, S.**, **Stoilov, M.**, Guendelman, E. Einstein-Rosen 'Bridge' Revisited and Lightlike Thin-Shell Wormholes. Bulgarian Journal of Physics, Heron Press Ltd., Sofia, приета за печат: 2016, ISSN:1310-0157

8. **Todorov, I.**. Galileo (1564-1642) and Kepler (1571-1630): the modern scientist and the mystic. Bulgarian Journal of Physics, 44, Heron Press Ltd., Sofia, приета за печат: 2016

9. **Todorov, I.**. Perturbative quantum field theory meets number theory. Springer Proceedings in Mathematics and Statistics, Springer, приета за печат: 2016

10. **Todorov, I.**. Renormalization of position space amplitudes in a massless QFT. приета за печат: 2016, ISSN:1547-4771

11. **Anguelova, L.** On Slow-roll Glueball Inflation from Holography, arXiv:1611.00295, Bulgarian Journal of Physics, Heron Press Ltd., Sofia, приета за печат: 2016