

- Ángel Rincón, Ernesto Contreras, Pedro Bargueño, Benjamin Koch, Grigorios Panotopoulos, Alejandro Hernández-Arboleda;
Eur.Phys.J.C77.no.7, 494, 2017;
[arXiv:1704.04845].
8. *Geometric description of the Schrödinger equation in $3n+1$ dimensional configuration space* ;
M. Abdul Wasay, Asma Bashir, Benjamin Koch, Abdul Ghaffar;
Accepted in **Int.J.Geom.Meth.Mod.Phys.**, 2017;
DOI: 10.1142/S0219887817501493;
[arXiv:1703.09901].
 9. *Prospects for CTA observations of the young SNR RX J1713.7-3946*;
F. Acero, et al., CTA Collaboration;
Astrophys.J. 840 no.2, 74 2017;
[arXiv:1704.04136].
 10. *Phenomenology of a Higgs triplet model at future e^+e^- colliders*;
Sylvain Blunier, Giovanna Cottin, Marco Aurelio Díaz, and Benjamin Koch;
Phys.Rev.D95:075038, 2017;
[arXiv:1611.07896].
 11. *Cosmic Censorship in Quantum Einstein Gravity*;
Alfio Bonanno, Benjamin Koch, and Alessia Platania;
Class.Quant.Grav.34:095012.no.9, 2017;
[arXiv:1610.05299].
 12. *Non-renormalizable Operators for Neutrino Solar Mass Difference Generation in Split $SuSy$ with Bilinear R -parity Violation*;
Marco Aurelio Diaz, Benjamin Koch, and Nicolas Rojas;
Nucl.Phys.B916:402-413, 2017;
[arXiv:1611.03468].
 13. *A scale dependent black hole in three-dimensional space-time*;
Benjamin Koch, Ignacio A. Reyes, and Ángel Rincón;
Class.Quant.Grav.33:225010, 2016;
[arXiv:1606.04123].
 14. *Improved Reissner-Nordström-(A)dS Black Hole in Asymptotic Safety*;
Cristopher González and Benjamin Koch;
Int.J.Mod.Phys.A31:1650141, 2016;
[arXiv:1508.01502].
 15. *Hidden Photons in Aharonov-Bohm-Type Experiments*
Paola Arias, Christian Diaz, Marco Aurelio Diaz, Joerg Jaeckel, Benjamin Koch, and Javier Redondo;
Phys.Rev.D94:015017, 2016;
[arXiv:1603.01282].

16. *On the Possibility of Non-Geodesic Motion of the Massless Spinning Top*
Cristobal Armaza, Sergio A. Hojman, Benjamin Koch, and Nicolas Zalaquett;
Class.Quant.Grav.**33:145011**, 2016;
[arXiv:1601.05809].
17. *Collisions of spinning massive particles in a Schwarzschild background;*
Cristobal Armaza, Maximo Bañados, and Benjamin Koch;
Class.Quant.Grav.**33:105014**, 2016;
[arXiv:1510.01223].
18. *Constraints to Dark Matter from Inert Higgs Doublet Model;*
Marco Aurelio Díaz, Benjamin Koch, and Sebastian Urrutia-Quiroga;
AHEP.vol.2016 Article.ID.8278375, 2016;
[arXiv:1511.04429].
19. *Black hole solutions for scale dependent couplings:
The de Sitter and the Reissner-Nordström case;*
Benjamin Koch and Paola Rioseco;
Class.Quant.Grav.**33:035002**, 2016;
[arXiv:1501.00904].
20. *Differentiable Path Integrals in Quantum Mechanics;*
Benjamin Koch and Ignacio Reyes;
Int.J.Geom.Meth.Mod.Phys.vol.12.issue.09;
DOI:10.1142/S0219887815501005, 2015;
[arXiv:1404.6551].
21. *Scale setting for self-consistent backgrounds;*
Benjamin Koch, Paola Rioseco, and Carlos Contreras;
Phys.Rev.D**91:025009**, 2015;
[arXiv:1409.4443].
22. *On the integration of fields and quanta in time dependent backgrounds;*
Esteban Castillo, Benjamin Koch, and Gonzalo Palma;
JHEP **1405:111**, 2014;
[arXiv:1312.3338].
23. *Black holes within asymptotic safety;*
Benjamin Koch and Frank Saueressig;
IJMPA.vol.29.issue.8, 2014;
[arXiv:1401.4452].
24. *An angular formalism for spin one half;*
Benjamin Koch and Nicolás Rojas;
Int.J.Geom.Meth.Mod.Phys.vol.11.issue.04, 2014;
DOI: 10.1142/S0219887814500297.
25. *Closing a window for massive photons;*
Sergio A. Hojman and Benjamin Koch;
AHEP.vol.2013 Article.ID.967805, 2013;
[arXiv:1209.4907].

26. *Structural aspects of asymptotically safe black holes;*
Benjamin Koch and Frank Saueressig;
Class.Quant.Grav.**31:015006**,2013;
[arXiv:1306.1546].
27. *Exact black hole solution for scale dependent gravitational couplings and the corresponding coupling flow;*
Carlos Contreras, Benjamin Koch, Paola Rioseco;
Class.Quantum Grav.**30:175009**,2013;
[arXiv:1303.3892].
28. *Higher dimensional geometric description of the Quantum Klein Gordon Equation;*
Benjamin Koch;
Int.J.Geom.Meth.Mod.Phys.**10:1320014**, 2013;
DOI: 10.1142/S0219887813200144
29. *Nondiagonal charged lepton Yukawa matrix: Effects on neutrino mixing in supersymmetry*
Giovanna Cottin, Marco Aurelio Díaz, and Benjamin Koch;
Phys.Rev.**D85:095019**, 2012;
[arXiv:1112.6351].
30. *Gravitino dark matter and neutrino masses in partial split supersymmetry;*
Marco Aurelio Díaz, Sebastián García Sáenz, and Benjamin Koch;
Phys.Rev.**D84:055007**, 2011;
[arXiv:1106.0308].
31. *Exact renormalization group with optimal scale and its application to cosmology;*
Benjamin Koch, Israel Ramirez;
Class.Quant.Grav.**28:055008**, 2011;
[arXiv:1010.2799].
32. *Renormalization group improved black hole space-time in large extra dimensions;*
Thomas Burschil, Benjamin Koch;
JETP Lett.**92:4**, 2010;
[arXiv:0912.4517].
33. *Explaining Solar Neutrinos with Heavy Higgs Masses in Partial Split Supersymmetry;*
Marco Aurelio Díaz, Benjamin Koch, Francisca Garay;
Phys.Rev.**D80:113005**, 2009;
[arXiv:0918.2987].
34. *Gravity Effects on Neutrino Masses in Split Supersymmetry;*
Marco Aurelio Díaz, Benjamin Koch, Boris Panes;
Phys.Rev.**D79:113009**, 2009;
[arXiv:0902.1720].

35. *Exclusion of black hole disaster scenarios at the LHC;*
Benjamin Koch, Marcus Bleicher, Horst Stöcker;
Phys.Lett.B672:71, 2009;
[arXiv:0807.3349].
36. *Renormalization group and black hole production in large extra dimensions;*
Benjamin Koch;
Phys.Lett.B663:334, 2008;
[arXiv:0707.4644].
37. *Gravitational radiation from elastic particle scattering
in models with extra dimensions;*
Benjamin Koch, Marcus Bleicher;
JETP Lett.87:75, 2008;
[hep-th/0512353].
38. *First Order Calculation of the Inclusive Cross Section pp to ZZ
by Graviton Exchange in Large Extra Dimensions;*
Martin Kober, Benjamin Koch, Marcus Bleicher;
Phys.Rev.D76:125001,2007, 2007;
[arXiv:0708.2368].
39. *The Gravitational analogue to the hydrogen atom. A summer study at the bor-
ders of quantum mechanics and general relativity;*
Martin Kober, Benjamin Koch, Marcus Bleicher;
J-Phys.E.28:465, 2007;
[arXiv:physics/0703064].
40. *Gravitational Radiation from Ultrahigh Energy Cosmic Rays
in Models with Large Extra Dimensions;*
Benjamin Koch, Hans Joachim Drescher, Marcus Bleicher;
Astropart.Phys.25:291, 2006;
[arXiv:astro-ph/0602164].
41. *Black Hole Remnants at the LHC;*
Benjamin Koch, Marcus Bleicher, Sabine Hossenfelder;
JHEP 0510:053, 2005;
[arXiv:hep-ph/0507138].

Publications in Conference Proceedings

42. *On the null energy condition in scale dependent frameworks with spherical symmetry;*
Angel Rincon and Benjamin Koch;
J.Phys.Conf.Ser.1043.no1.012015, 2018;
[arXiv:1705.02729].
43. *Asymptotically Safe gravitational collapse: Kuroda-Papapetrou RG-improved model;*
Alfio Bonanno, Benjamin Koch, and Alessia Platania;
PoS CORFU2016 058 , 2017;
[inspire].
44. *BTZ black hole assuming running couplings*
Ángel Rincón, Benjamin Koch, and Ignacio A. Reyes;
70 / 70 Gravitation fest, Cartagena, Colombia;
J.Phys.Conf.Ser. 831, no.1, 012007, 2017.
45. *Cherenkov Telescope Array Contributions to the 35th International Cosmic Ray Conference (ICRC2017)*
F. Acero, et al., CTA Collaboration;
C17-07-12, 2017.
46. *Contributions of the Cherenkov Telescope Array (CTA) to the 6th International Symposium on High-Energy Gamma-Ray Astronomy (Gamma 2016)*
F. Acero, et al., CTA Collaboration;
6th International Symposium on High-Energy Gamma-Ray Astronomy, Heidelberg, Germany;
C16-07-11.5, 2016.
47. *Setting the Renormalization Scale in QFT*
Carlos Contreras, Benjamin Koch, and Paola Rioseco;
Proceedings del XIII Simposio Chileno de Física; Concepcion, Chile;
J.Phys.Conf.Ser. 720, no.1, 012020, 2016.
48. *The bending of light within gravity with large scale renormalization group effects*
Davi Rodrigues, Benjamin Koch, Oliver Piattella, and Ilya Shapiro;
Verao Cuantico;
Valparaiso, Chile;
AIP Conf. Proc. 1647:57, 2015.

49. *Black holes and running couplings: A comparison of two complementary approaches*
 Benjamin Koch, Carlos Contreras, Paola Rioseco, and Frank Saueressig;
 Karl Schwarzschild Meeting;
 Frankfurt, Germany;
C13-07-22.2, 2013.
50. *Non-diagonal Charged Lepton Yukawa Matrix: Effects on Neutrino Mixing in Supersymmetry*
 Giovanna Cottin, Marco Aurelio Díaz, and Benjamin Koch;
 FLASY 2011;
 Valencia, Spain;
C11-07-11.1, 2012.
51. *Quantizing Geometry or Geometrizing the Quantum?*
 Benjamin Koch;
 Quantum Theory Reconsideration of Foundations 5;
 Vaxjo, Sweden;
AIP Conf.Proc.1232:313, 2010.
52. *Geometrizing the Quantum - a toy model*
 Benjamin Koch;
 13th Max Born Symposium;
 Wroclaw, Poland;
AIP Conf.Proc.1196:161, 2009.
53. *Heavy Ion Collisions at the LHC - Last Call for Predictions;*
 N. Armesto, (ed.) et al.;
 Workshop on Heavy Ion Collisions at the LHC: Last Call for Predictions;
 Geneva, Switzerland;
J.Phys.G35:054001, 2008;
 [arXiv:0711.0974].
54. *Early black hole signals at the LHC;*
 Benjamin Koch, Marcus Bleicher, Horst Stöcker;
 7th Latin American Symposium on Nuclear Physics and Applications;
 Cusco, Peru;
AIP Conf.Proc.947:376, 2007.
55. *An introduction to mini black holes at LHC;*
 Horst Stöcker, Benjamin Koch, Marcus Bleicher;
 36th International Symposium on Multiparticle Dynamics,
 Rio de Janeiro, Brazil;
Braz.J.Phys.37:836, 2007.

56. *Black Holes at LHC?*
 Benjamin Koch, Marcus Bleicher, Horst Stöcker;
 Quark matter;
 Shanghai;
J.Phys.G34:535, 2007;
 [arXiv:hep-ph/0702187].
57. *Black Holes and Qasistable Remnants at the LHC;*
 Benjamin Koch, Marcus Bleicher, Sabine Hossenfelder;
 Fundamental Interactions;
 Lake Louise, Canada;
Fund.Interactions.21:235, 2006.
58. *Towards a Realistic MSSM Prediction for Neutrino-nucleon Deep-inelastic Scattering;*
 Oliver Brein, Wolfgang Hollik, Benjamin Koch;
 14th International Conference on Supersymmetry and the Unification of Fundamental Interactions; Irvine, USA;
IPPP-06-74, 2006;
 [arXiv:hep-ph/0611033].
59. *Signatures for Black Hole Production from Hadronic Observables at the Large Hadron Collider;*
 Thomas J. Humanic, Benjamin Koch, Horst Stöcker;
 International Symposium on Heavy Ion Physics (ISHIP);
 Frankfurt, Germany;
Int.J.Mod.Phys.E16:841, 2006
 [arXiv:hep-ph/0607097].
60. *Mini Black Holes at the LHC: Discovery through Di-jet Suppression, Mono-jet Emission and a Supersonic boom in the Quark-gluon Plasma in ALICE, ATLAS and CMS;*
 B. Betz, Marcus Bleicher, U. Harbach, T. Humanic, B. Koch , H. Stöcker;
 22nd Winter Workshop on Nuclear Dynamic;
 La Jolla, USA, 2006;
 [arXiv:hep-ph/0606193].
61. *Large Extra Dimensions and the Minimal Scale Constraints through High Precision Experiments;*
 U. Harbach, B. Koch, Marcus Bleicher, S. Hossenfelder;
 Annual Meeting of the Division of Particles and Fields;
 Riverside, California, USA;
Int.J.Mod.Phys.A20:3334, 2005.
62. *Radiative Corrections to Deep-inelastic Neutrino-nucleon Scattering in the MSSM;*
 Oliver Brein, Wolfgang Hollik, Benjamin Koch;
 International Conference on Linear Colliders (LCWS 2004);
 Paris, France;
 [arXiv:hep-ph/0408331].

Submitted Publications

63. *Science with the Cherenkov Telescope Array*;
Cherenkov Telescope Array Consortium;
[arXiv:1709.07997].

Preprint only

64. *On the dynamics of fluctuations in time crystals*;
Esteban Castillo, Benjamin Koch, and Gonzalo Palma;
[arXiv:1410.2261].
65. *Exploring a Tractable Lagrangian for Arbitrary Spin*;
Benjamin Koch and Nicolas Rojas;
[arXiv:1107.3144].
66. *A Geometrical dual to relativistic Bohmian mechanics: The Multi particle case*;
Benjamin Koch;
[arXiv:0901.4106].
67. *Relativistic Bohmian mechanics from scalar gravity*;
Benjamin Koch;
[arXiv:0810.2786].
68. *(2+3) dimensional geometrical dual of the complex Klein-Gordon equation*;
Benjamin Koch;
[arXiv:0801.4635].
69. *Trapping black hole remnants*;
Sabine Hossenfelder, Benjamin Koch, and Marcus Bleicher;
[hep-ph/0507140].