

Prof. Dr. Benjamin Koch

CONTACT

Instituto de Física,
Pontificia Universidad Católica,
Av. Vicuña Mackenna 4860,
Santiago, Chile

Mail: bkoch@fis.puc.cl

Web: <http://www.fis.puc.cl/~bkoch/>
Tel: +56 (0)22 354-4476

LIST OF
PUBLICATIONS

Publications in International Journals

1. *Cosmological constant problem: deflation during inflation;*
Felipe Canales, Benjamin Koch, Cristobal Laporte, Ángel Rincón;
JCAP.no.01, 21, 2020;
DOI: 10.1088/1475-7516/2020/01/021;
[arXiv:1812.10526].
2. *A hidden constraint on the Hamiltonian formulation of relativistic worldlines;*
Benjamin Koch and Enrique Muñoz;
Eur.Phys.J.C, 2019;
DOI: 10.1140/epjc/s10052-019-7459-z;
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3. *Scale-dependent planar anti-de Sitter black hole;*
Ernesto Contreras, Ángel Rincón, Pedro Bargueño, Benjamin Koch;
Eur.Phys.J.Plus, 2019;
DOI: 10.1140/epjp/i2019-13081-5;
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4. *Scale-dependent ($2+1$)-dimensional electrically charged black holes in Einstein-power-Maxwell theory;*
Ángel Rincón, Ernesto Contreras, Pedro Bargueño, Benjamin Koch, Grigorios Panotopoulos;
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[arXiv:1807.08047].
5. *Scale-dependent BTZ black hole;*
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6. *The stepwise path integral of the relativistic point particle;*
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[arXiv:1706.05388].

7. *Scale-dependent polytropic black hole;*
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8. *A regular scale-dependent black hole solution;*
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DOI: 10.1142/S0218271818500323;
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9. *Symmetries of relativistic world-lines;*
Benjamin Koch, Enrique Muñoz, and Ignacio Reyes;
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[arXiv:1706.05386].
10. *Scale dependent three-dimensional charged black holes in linear and non-linear electrodynamics;*
Ángel Rincón, Ernesto Contreras, Pedro Bargueño, Benjamin Koch, Grigorios Panotopoulos, Alejandro Hernández-Arboleda;
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11. *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].
12. *Prospects for CTA observations of the young SNR RX J1713.7-3946;*
F. Acero, et al., CTA Collaboration;
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[arXiv:1704.04136].
13. *Phenomenology of a Higgs triplet model at future e^+e^- colliders;*
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Alfio Bonanno, Benjamin Koch, and Alessia Platania;
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15. *Non-renormalizable Operators for Neutrino Solar Mass Difference Generation in Split SuSy with Bilinear R-parity Violation;*
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16. *A scale dependent black hole in three-dimensional space-time;*
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20. *Collisions of spinning massive particles in a Schwarzschild background;*
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21. *Constraints to Dark Matter from Inert Higgs Doublet Model;*
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25. *On the integration of fields and quanta in time dependent backgrounds;*
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26. *Black holes within asymptotic safety;*
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27. *An angular formalism for spin one half;*
 Benjamin Koch and Nicolás Rojas;
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28. *Closing a window for massive photons;*
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29. *Structural aspects of asymptotically safe black holes;*
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30. *Exact black hole solution for scale dependent gravitational couplings and the corresponding coupling flow;*
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32. *Nondiagonal charged lepton Yukawa matrix: Effects on neutrino mixing in supersymmetry*
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34. *Exact renormalization group with optimal scale and its application to cosmology;*
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35. *Renormalization group improved black hole space-time in large extra dimensions;*
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36. *Explaining Solar Neutrinos
with Heavy Higgs Masses in Partial Split Supersymmetry;*
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37. *Gravity Effects on Neutrino Masses in Split Supersymmetry;*
Marco Aurelio Díaz, Benjamin Koch, Boris Panes;
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38. *Exclusion of black hole disaster scenarios at the LHC;*
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39. *Renormalization group and black hole production in large extra dimensions;*
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40. *Gravitational radiation from elastic particle scattering
in models with extra dimensions;*
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42. *The Gravitational analogue to the hydrogen atom. A summer study at the bor-
ders of quantum mechanics and general relativity;*
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45. *On the null energy condition in scale dependent frameworks with spherical symmetry*;
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46. *Asymptotically Safe gravitational collapse: Kuroda-Papapetrou RG-improved model*;
Alfio Bonanno, Benjamin Koch, and Alessia Platania;
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70 / 70 Gravitation fest, Cartagena, Colombia;
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48. *Cherenkov Telescope Array Contributions to the 35th International Cosmic Ray Conference (ICRC2017)*
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49. *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;
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50. *Setting the Renormalization Scale in QFT*
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51. *The bending of light within gravity with large scale renormalization group effects*
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53. *Non-diagonal Charged Lepton Yukawa Matrix: Effects on Neutrino Mixing in Supersymmetry*
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54. *Quantizing Geometry or Geometrizing the Quantum?*
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55. *Geometrizing the Quantum - a toy model*
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61. *Towards a Realistic MSSM Prediction for Neutrino-nucleon Deep-inelastic Scattering;*
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62. *Signatures for Black Hole Production from Hadronic Observables at the Large Hadron Collider;*
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63. *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;*
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64. *Large Extra Dimensions and the Minimal Scale Constraints through High Precision Experiments;*
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66. *Science with the Cherenkov Telescope Array*;
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67. *On the dynamics of fluctuations in time crystals*;
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68. *Exploring a Tractable Lagrangian for Arbitrary Spin*;
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69. *A Geometrical dual to relativistic Bohmian mechanics: The Multi particle case*;
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