

Bibliografía

- [1] P.A.M. Dirac, *The fundamental equations of quantum mechanics*, Proc. Roy. Soc. **A109** (1926) 642;
- [2] P.A.M. Dirac, *On quantum algebras*, Proc. Camb. Phil. Soc. **23** (1926) 412.
- [3] H. S. Snyder, *Quantized Space-Time*, Phys. Rev. **71** (1947) 38.
- [4] H. S. Snyder, *The electromagnetic field in quantized space-time*, Phys. Rev. **72** (1947) 68.
- [5] A. Connes *Géométrie non commutative* (1990) InterEditions, Paris. Para una versión en inglés ver *Noncommutative Geometry* (1994) Academic Press
- [6] A. Connes and J. Lott, *Particle Models and Noncommutative Geometry*, Nucl. Phys. (Proc. Suppl.) **B18** (1990) 29;
- [7] J.C. Várilly and J.M. Gracia-Bondía, *Connes' Noncommutative Differential Geometry and the Standard Model*, J. Geom. Phys. **12** (1993) 223;
- [8] C.P. Martín, J.M. Gracia-Bondía and J.C. Várilly, *The Standard Model as a Noncommutative Geometry: The Low-Energy Regime*, Phys. Rep. **294** (1998) 363 [hep-th/9605001].
- [9] A.H. Chamseddine, G. Felder and J. Fröhlich, *Gravity in Noncommutative Geometry*, Commun. Math. Phys. **155** (1993) 205 [hep-th/9209044];
- [10] W. Kalau and M. Walze, *Gravity, Noncommutative Geometry and the Wodzicki Residue*, J. Geom. Phys. **16** (1995) 327 [gr-qc/9312031];
- [11] D. Kastler, *The Dirac Operator and Gravitation*, Commun. Math. Phys. **166** (1995) 633;
- [12] A.H. Chamseddine, J. Fröhlich and O. Grandjean, *The Gravitational Sector in the Connes-Lott Formulation of the Standard Model*, J. Math. Phys. **36** (1995) 6255 [hep-th/9503093];

- [13] A. Connes, *Gravity coupled with matter and the foundation of non-commutative geometry*, Commun. Math. Phys. **182** (1996) 155 [hep-th/9603053].
- [14] A.H. Chamseddine and A. Connes, *The Spectral Action Principle*, Commun. Math. Phys. **186** (1997) 731 [hep-th/9606001].
- [15] B. DeWitt, *Gravitation*, Edited by L.Witten, (1962) 266-381
- [16] E. Witten, *Noncommutative Geometry And String Field Theory*, Nucl. Phys. B **268** (1986) 253.
- [17] A. Connes, M. R. Douglas y A. Schwarz, *Noncommutative geometry and matrix theory: Compactification on tori*, JHEP **9802** (1998) 003 [hep-th/9711162].
- [18] M. R. Douglas y C. M. Hull, *D-branes and the noncommutative torus*, JHEP **9802** (1998) 008 [hep-th/9711165].
- [19] N. Seiberg y E. Witten, *String theory and noncommutative geometry*, JHEP **9909** (1999) 032 [hep-th/9908142].
- [20] S. A. Girvin and R. Prange *The quantum Hall effect* (1987)
- [21] J. Bellissard, A. Van Elst and H. Schulz-Valdes *The noncommutative geometry and the quantum Hall effect* [cond-mat/9301005]
- [22] L. Susskind, *The quantum Hall fluid and non-commutative Chern Simons theory*, [hep-th/0101029].
- [23] S. Deser, R. Jackiw and S. Templeton, Annals Phys. **140** (1982) 372 [Erratum-ibid. **185** (1982) 406.1988 APNYA,281,409].
- [24] A. N. Redlich, *Gauge Noninvariance And Parity Violation Of Three-Dimensional Fermions*, Phys. Rev. Lett. **52** (1984) 18.
- [25] E. Witten, *Quantum Field Theory And The Jones Polynomial*, Commun. Math. Phys. **121** (1989) 351.
- [26] G. W. Moore y N. Seiberg, *Taming The Conformal Zoo*, Phys. Lett. B **220** (1989) 422.
- [27] D. G. Barci, J. F. Medeiros Neto, L. E. Oxman y S. P. Sorella, *The point-splitting regularization of (2+1)d parity breaking models*, Nucl. Phys. B **600** (2001) 203 [hep-th/0011154].
- [28] S. D. Deser and A.Ñ. Redlich, *Cp^{**1} - Fermion Correspondence In $D = 3$* , Phys. Rev. Lett. **61** (1988) 1541.

- [29] S. Deser y R. Jackiw, *Higher derivative Chern-Simons extensions*, Phys. Lett. B **451** (1999) 73 [hep-th/9901125].
- [30] S. R. Coleman y B. Hill, *No More Corrections To The Topological Mass Term In QED In Three-Dimensions*, Phys. Lett. B **159** (1985) 184.
- [31] M. Sakamoto y H. Yamashita, *A simple proof of the non-renormalization of the Chern-Simons coupling*, Phys. Lett. B **476** (2000) 427 [hep-th/9910200].
- [32] F. T. Brandt, A. Das y J. Frenkel, *Absence of higher order corrections to the non-Abelian Chern-Simons coefficient*, Phys. Lett. **B494**, 339 (2000), hep-th/0009236; *Absence of higher order corrections to the non-Abelian topological mass term*, Phys. Rev. **D63**, 085015 (2001) [hep-th/0012087].
- [33] S. Elitzur, G. W. Moore, A. Schwimmer and N. Seiberg, *Remarks On The Canonical Quantization Of The Chern-Simons-Witten Theory*, Nucl. Phys. B **326** (1989) 108.
- [34] L. Alvarez-Gaume, J. M. Labastida and A. V. Ramallo, Nucl. Phys. Proc. Suppl. **18B** (1991) 1.
- [35] A. Achucarro y P. K. Townsend, *A Chern-Simons Action For Three-Dimensional Anti-De Sitter Supergravity Theories*, Phys. Lett. B **180** (1986) 89.
- [36] E. Witten, *(2+1)-Dimensional Gravity As An Exactly Soluble System*, Nucl. Phys. B **311** (1988) 46.
- [37] M. Bañados, C. Teitelboim y J. Zanelli, *The Black hole in three-dimensional space-time*, Phys. Rev. Lett. **69** (1992) 1849 [hep-th/9204099].
- [38] M. Bañados, M. Henneaux, C. Teitelboim y J. Zanelli, *Geometry of the (2+1) black hole*, Phys. Rev. D **48** (1993) 1506 [gr-qc/9302012].
- [39] M. Bañados, *Three-dimensional quantum geometry and black holes*, , in “Trends in Theoretical Physics II”, Buenos Aires (1998) H. Falomir, R. Gamboa Saraví y F.A. Schaposnik eds. AIP, [hep-th/9901148].
- [40] O. Coussaert, M. Henneaux y P. van Driel, *The Asymptotic dynamics of three-dimensional Einstein gravity with a negative cosmological constant*, Class. Quant. Grav. **12** (1995) 2961 [gr-qc/9506019].
- [41] J. D. Brown y M. Henneaux, *Central Charges In The Canonical Realization Of Asymptotic Symmetries: An Example From Three-Dimensional Gravity*, Commun. Math. Phys. **104** (1986) 207.

- [42] A. A. Tseytlin, *Born-Infeld action, supersymmetry and string theory*, [hep-th/9908105]. In *Yuri Golfand memorial volume*, ed. M. Shifman, World. Sci, 2000.
- [43] E.S. Fradkin and A. Tseytlin, Phys. Lett. **B163** (1985) 123;
- [44] A. A. Tseytlin, *On non-abelian generalisation of the Born-Infeld action in string theory*, Nucl. Phys. B **501** (1997) 41 [hep-th/9701125].
- [45] J. P. Gauntlett, J. Gomis y P. K. Townsend, *BPS bounds for worldvolume branes*, JHEP **9801** (1998) 003 [hep-th/9711205].
- [46] D. Brecher y M. J. Perry, *Bound states of D-branes and the non-Abelian Born-Infeld action*, Nucl. Phys. B **527** (1998) 121 [hep-th/9801127].
- [47] D. Brecher, *BPS states of the non-Abelian Born-Infeld action*, Phys. Lett. B **442** (1998) 117 [hep-th/9804180].
- [48] A. Hashimoto y W. I. Taylor, *Fluctuation spectra of tilted and intersecting D-branes from the Born-Infeld action*, Nucl. Phys. B **503** (1997) 193 [hep-th/9703217].
- [49] C. Callan Jr. and J. Maldacena, *Brane dynamics from the Born Infeld action* [hep-th/9708147].
- [50] J. Polchinski, *Tasi Lectures on D-Branes*, hep-th/9611050.
- [51] W. Taylor IV, *Lectures on D-branes, Gauge Theories and M(atrices)*, [hep-th/9801182].
- [52] G.W. Gibbons, *Born Infeld particles and Dirichlet p-branes*, hep-th/9709027.
- [53] S. Gonorazky, F. A. Schaposnik y G. A. Silva, *Supersymmetric non-Abelian Born-Infeld theory*, Phys. Lett. B **449** (1999) 187 [hep-th/9812094].
- [54] G. Landi, *An introduction to noncommutative spaces and their geometry*, [hep-th/9701078].
- [55] D. Bigatti, *Non-commutative spaces in physics and mathematics*, Class. Quant. Grav. **17** (2000) 3403 [hep-th/0006012].
- [56] J. C. Varilly, *An introduction to noncommutative geometry*, arXiv:physics/9709045.
- [57] J. Madore, *Noncommutative geometry for pedestrians*, [gr-qc/9906059].
- [58] L. Castellani, *Noncommutative geometry and physics: A review of selected recent results*, Class. Quant. Grav. **17** (2000) 3377 [hep-th/0005210].
- [59] M. R. Douglas and N. A. Nekrasov, *Noncommutative field theory*, [hep-th/0106048].

- [60] R. J. Szabo, *Quantum field theory on noncommutative spaces*, [[hep-th/0109162](#)].
- [61] S. Minwalla, M. Van Raamsdonk y N. Seiberg, *Noncommutative perturbative dynamics*, JHEP **0002** (2000) 020 [[hep-th/9912072](#)].
- [62] F. Ardalan, H. Arfaei and M. M. Sheikh-Jabbari, *Dirac quantization of open strings and noncommutativity in branes*, Nucl. Phys. B **576** (2000) 578 [[arXiv:hep-th/9906161](#)].
- [63] L. Bonora, M. Schnabl, M. M. Sheikh-Jabbari and A. Tomasiello, *Noncommutative $SO(n)$ and $Sp(n)$ gauge theories*, Nucl. Phys. B **589** (2000) 461 [[arXiv:hep-th/0006091](#)].
- [64] M. Chaichian, P. Presnajder, M. M. Sheikh-Jabbari and A. Tureanu, *Noncommutative gauge field theories: A no-go theorem*, [[hep-th/0107037](#)].
- [65] I. Bars, M. M. Sheikh-Jabbari and M. A. Vasiliev, *Noncommutative $O^*(N)$ and $usp^*(2N)$ algebras and the corresponding gauge field theories*, Phys. Rev. D **64** (2001) 086004 [[hep-th/0103209](#)].
- [66] C. Chu, *Induced Chern-Simons and WZW action in noncommutative spacetime*, Nucl. Phys. B **580** (2000) 352 [[hep-th/0003007](#)].
- [67] A. A. Bichl, J. M. Grimstrup, V. Putz y M. Schweda, *Perturbative Chern-Simons theory on noncommutative R^{**3}* , JHEP**0007**, 046 (2000), [[hep-th/0004071](#)].
- [68] N. Grandi y G. A. Silva, *Chern-Simons action in noncommutative space*, [[hep-th/0010113](#)].
- [69] A. P. Polychronakos, *Noncommutative Chern-Simons terms and the noncommutative vacuum*, JHEP **0011** (2000) 008 [[hep-th/0010264](#)].
- [70] G. Chen y Y. Wu, *One-loop shift in noncommutative Chern-Simons coupling*, Nucl. Phys. B **593** (2001) 562 [[hep-th/0006114](#)].
- [71] A. Khare y M. B. Paranjape, *Solitons in 2+1 dimensional non-commutative Maxwell Chern-Simons Higgs theories*, JHEP **0104**, 002 (2001), [[hep-th/0102016](#)].
- [72] G. S. Lozano, E. F. Moreno y F. A. Schaposnik, *Self-dual Chern-Simons solitons in noncommutative space*, JHEP **0102**, 036 (2001), [[hep-th/0012266](#)].
- [73] D. Bak, S. K. Kim, K. Soh y J. H. Yee, *Noncommutative Chern-Simons solitons*, [[hep-th/0102137](#)].
- [74] M. M. Sheikh-Jabbari, *A note on noncommutative Chern-Simons theories*, [[hep-th/0102092](#)].

- [75] V. P. Nair y A. P. Polychronakos, *On level quantization for the noncommutative Chern-Simons theory*, [hep-th/0102181].
- [76] D. Bak, K. Lee y J. Park, *Chern-Simons theories on noncommutative plane*, [hep-th/0102188].
- [77] A. K. Das y M. M. Sheikh-Jabbari, *Absence of higher order corrections to noncommutative Chern-Simons coupling*, JHEP **0106** (2001) 028 [hep-th/0103139].
- [78] A. R. Lugo, *A note on the non-commutative Chern-Simons model on manifolds with boundary*, [hep-th/0111064].
- [79] A. Matusis, L. Susskind y N. Toumbas, *The IR/UV connection in the non-commutative gauge theories*, JHEP **0012** (2000) 002 [hep-th/0002075].
- [80] M. M. Sheikh-Jabbari, *Renormalizability of the supersymmetric Yang-Mills theories on the noncommutative torus*, JHEP **9906** (1999) 015 [hep-th/9903107].
- [81] M. Van Raamsdonk y N. Seiberg, *Comments on noncommutative perturbative dynamics*, JHEP **0003** (2000) 035 [hep-th/0002186].
- [82] K. Furuta y T. Inami, *Ultraviolet property of noncommutative Wess-Zumino-Witten model*, Mod. Phys. Lett. A **15** (2000) 997 [hep-th/0004024].
- [83] E. F. Moreno y F. A. Schaposnik, *Wess-Zumino-Witten and fermion models in non-commutative space*, Nucl. Phys. B **596** (2001) 439 [hep-th/0008118].
- [84] E. F. Moreno y F. A. Schaposnik, *The Wess-Zumino-Witten term in non-commutative two-dimensional fermion models*, JHEP **0003** (2000) 032 [hep-th/0002236].
- [85] J. W. Moffat, *Noncommutative quantum gravity*, Phys. Lett. B **491** (2000) 345 [hep-th/0007181].
- [86] J. W. Moffat, *Perturbative noncommutative quantum gravity*, Phys. Lett. **B493**, 142 (2000), [hep-th/0008089].
- [87] H.Ñishino and S. Rajpoot, *Teleparallel complex gravity as foundation for noncommutative gravity*, arXiv:hep-th/0107216.
- [88] A. H. Chamseddine, *Deforming Einstein's gravity*, Phys. Lett. B **504** (2001) 33 [hep-th/0009153].
- [89] A. H. Chamseddine, *Complexified gravity in noncommutative spaces*, Commun. Math. Phys. **218** (2001) 283 [hep-th/0005222].

- [90] A. H. Chamseddine, *Complex gravity and noncommutative geometry*, Int. J. Mod. Phys. A **16** (2001) 759 [hep-th/0010268].
- [91] M. Born, *On the quantum theory of the electromagnetic field*, Proc. Roy. Soc. **A143** (1934) 410.
- [92] M. Born and L. Infeld, *Foundations Of The New Field Theory*, Proc. Roy. Soc. Lond. **A 144** (1934) 425.
- [93] M. Born and L. Infeld, *On the quantization of the new field equations I, ibid* **A147** (1934) 522;
- [94] M. Born and L. Infeld, *On the quantization of the new field equations II, ibid* **A150** (1935) 141.
- [95] E. Schrödinger, *Contribution to Born new theory of the electromagnetic field*, Proc. Roy. Soc. **A150** (1935) 465.
- [96] P.A.M. Dirac, *An extensible model of the electron*, Proc. Roy. Soc. **A268** (1962) 57.
- [97] G. Gibbons and D.A. Rasheed, *Electric-Magnetic Duality Rotations in Non linear Electrodynamics*, Nucl.Phys. **B454** (1995) 185.
- [98] V. V. Dyadichev and D. V. Gal'tsov, *Sphaleron glueballs in NBI theory with symmetrized trace*, Nucl. Phys. B **590** (2000) 504 [hep-th/0006242].
- [99] S. Deser y R. Puzalowski, *Supersymmetric Nonpolynomial Vector Multiplets And Causal Propagation*, J. Phys. AA **13** (1980) 2501.
- [100] S. Gonorazky, C.Ñunez, F. A. Schaposnik and G. A. Silva, Nucl. Phys. B **531** (1998) 168 [arXiv:hep-th/9805054].
- [101] H. R. Christiansen, C. Nunez y F. A. Schaposnik, *Uniqueness of Bogomolnyi equations and Born-Infeld like supersymmetric theories*, Phys. Lett. B **441** (1998) 185 [hep-th/9807197].
- [102] Y. Okawa, *Derivative corrections to Dirac-Born-Infeld Lagrangian and non-commutative gauge theory*, Nucl. Phys. B **566** (2000) 348 [hep-th/9909132].
- [103] S. Terashima, *On the equivalence between noncommutative and ordinary gauge theories*, JHEP **0002** (2000) 029 [hep-th/0001111].
- [104] Y. Okawa y S. Terashima, *Constraints on effective Lagrangian of D-branes from non-commutative gauge theory*, Nucl. Phys. B **584** (2000) 329 [hep-th/0002194].

- [105] M. R. Garousi, *Transformation of the Dirac-Born-Infeld action under the Seiberg-Witten map*, Nucl. Phys. B **602** (2001) 527 [arXiv:hep-th/0011147].
- [106] M. R. Garousi, *Non-commutative world-volume interactions on D-branes and Dirac-Born-Infeld action*, Nucl. Phys. B **579** (2000) 209 [hep-th/9909214].
- [107] L. Cornalba, *Corrections to the Abelian Born-Infeld action arising from noncommutative geometry*, JHEP **0009** (2000) 017 [hep-th/9912293].
- [108] T. Lee, *Noncommutative Dirac-Born-Infeld action for D-brane*, Phys. Lett. B **478** (2000) 313 [hep-th/9912038].
- [109] J. Pawelczyk, *SU(2) WZW D-branes and their noncommutative geometry from DBI action*, JHEP **0008** (2000) 006 [hep-th/0003057].
- [110] S. Ryang, *Open string and Morita equivalence of the Dirac-Born-Infeld action with modulus Φ* , [hep-th/0003204].
- [111] S. Ferrara y M. A. Lledo, *Some aspects of deformations of supersymmetric field theories*, JHEP **0005** (2000) 008 [hep-th/0002084].
- [112] S. Terashima, *A note on superfields and noncommutative geometry*, Phys. Lett. B **482** (2000) 276 [hep-th/0002119].
- [113] C. Chu y F. Zamora, *Manifest supersymmetry in non-commutative geometry*, JHEP **0002** (2000) 022 [hep-th/9912153].
- [114] S. Cecotti, S. Ferrara y L. Girardello, *Flat Potentials In Higher Derivative Supergravity*, Phys. Lett. B **187** (1987) 327.
- [115] J. D. Lykken, *Introduction to supersymmetry*, [hep-th/9612114].
- [116] N. Nekrasov y A. Schwarz, *Instantons on noncommutative R^{*4} and $(2,0)$ superconformal six dimensional theory*, Commun. Math. Phys. **198** (1998) 689 [hep-th/9802068].
- [117] K. Hashimoto, H. Hata y S. Moriyama, *Brane configuration from monopole solution in non-commutative super Yang-Mills theory*, JHEP **9912** (1999) 021 [hep-th/9910196].
- [118] S. Terashima, *U(1) instanton in Born-Infeld action and noncommutative gauge theory*, Phys. Lett. B **477** (2000) 292 [hep-th/9911245].
- [119] H. W. Braden y N. A. Nekrasov, *Space-time foam from non-commutative instantons*, [hep-th/9912019].
- [120] K. Furuuchi, *Instantons on noncommutative R^{*4} and projection operators*, Prog. Theor. Phys. **103** (2000) 1043 [hep-th/9912047].

- [121] D. Mateos, *Non-commutative vs. commutative descriptions of D-brane Bions*, Nucl. Phys. B **577** (2000) 139 [hep-th/0002020].
- [122] A. Kapustin, A. Kuznetsov y D. Orlov, *Noncommutative instantons and twistor transform*, Commun. Math. Phys. **221** (2001) 385 [hep-th/0002193].
- [123] P. Ho, *Twisted bundle on noncommutative space and $U(1)$ instanton*, [hep-th/0003012].
- [124] K. Kim, B. Lee y H. S. Yang, *Comments on instantons on noncommutative R^{**4}* , [hep-th/0003093].
- [125] N. Grandi and G. A. Silva, Phys. Lett. B **507** (2001) 345 [arXiv:hep-th/0010113].
- [126] M. Banados, O. Chandia, N. Grandi, F. A. Schaposnik and G. A. Silva, *Three-dimensional noncommutative gravity*, Phys. Rev. D **64** (2001) 084012 [arXiv:hep-th/0104264].
- [127] N. Grandi, R. L. Pakman and F. A. Schaposnik, Nucl. Phys. B **588** (2000) 508 [arXiv:hep-th/0004104].