

Dario Zappalà : Pubblicazioni in ordine cronologico.

- [1] **1987-Articolo in rivista** : P.Castorina, M.Consoli and D.Zappalà,
“*A non-gaussian variational approach to the one-dimensional anharmonic oscillator*”,
N. Cimento **B 100** (1987) 751.
- [2] **1988-Articolo in rivista** : P.Castorina, M.Consoli and D.Zappalà,
“*Finite temperature Hartree-Fock approximation to $\lambda\Phi^4$ theory*”,
Phys. Lett. **B 201** (1988) 90.
- [3] **1990-Articolo in rivista**: V.Branchina, P.Castorina and D.Zappalà,
“*Convexity property of the variational approximations to the effective potential*”,
Phys. Rev. **D 41** (1990) 1948.
- [4] **1990-Articolo in rivista** : V.Branchina, P.Castorina, M.Consoli and D.Zappalà,
“*Nontriviality of spontaneously broken $\lambda\phi^4$ theories*”,
Phys. Rev. **D 42** (1990) 3587.
- [5] **1990-Articolo in rivista** : V.Branchina, P.Castorina, M.Consoli and D.Zappalà,
“*Hadronic width of the Z from a global fit to $e^+e^- \rightarrow$ hadrons data*”,
Phys. Rev. Lett. **65** (1990) 3237.
- [6] 1991-Contributo in Atti di convegno : M. Consoli and D. Zappalà,
“*Renormalization group and stability analysis of $\lambda\phi^4$ theories*”,
in “*Vacuum Structure in Intense Fields*”, Cargese; B. Muller and H. Fried eds.;
Plenum Press, NATO ASI Series, Vol. 255, (1991) 333.
- [7] 1991-Contributo in Atti di convegno : M.Consoli, V.Branchina and D.Zappalà,
“*The status of the Standard Model at LEP*”,
in “*Standard Model and Beyond, from LEP to UNK and LHC*”, Dubna;
S. Dubnicka, D. Ebert and A. Sazonov eds; World Scientific (1991) 46.
- [8] 1991-Contributo in Atti di convegno: M.Consoli, V.Branchina, P.Castorina, D.Zappalà,
“*Experimental constraints about the Top and theoretical ideas about the Higgs*”,
in “*91 Electroweak Interactions and Unified Theories*”, Moriond; Tran ThanhVan ed.;
Editions Frontieres, (1991) 131.
- [9] **1992-Articolo in rivista** : V.Branchina, P.Castorina, M.Consoli and D.Zappalà,
“*Vacuum instability as the origin of asymptotic freedom*”,
Phys. Lett. **B 274** (1992) 404.
- [10] **1992-Articolo in rivista** : V.Branchina, M.Consoli, R.Fiore and D.Zappalà,
“*Combined fit to $R(e^+e^- \rightarrow$ hadrons) and data from the CERN e^+e^- collider LEP*”,
Phys. Rev. **D 46** (1992) 75.
- [11] 1992-Contributo in Atti di convegno: M.Consoli, V.Branchina, P.Castorina, D.Zappalà,
“*Non-perturbative analysis and the continuum limit in $\lambda\phi^4$ theories*”,
in “*Warsaw 1991, Puzzles on the Electroweak Scale*”; Z.Ajduk, S.Pokorski, A.K.Wroblewski eds.;
World Scientific (1992) 336.
- [12] **1993-Articolo in rivista** : D.Zappalà,
“*Heavy-quark thresholds and the effective strong coupling constant*”,
Phys. Rev. **D 47** (1993) 5191.
- [13] **1994-Articolo in rivista** : D.A.Morris, T.N.Truong and D. Zappalà,
“*Higgs boson interference in $\gamma\gamma \rightarrow W^+ W^-$* ”,
hep-ph/9310244, Phys. Lett. **B 323** (1994) 421.

- [14] 1994-Contributo in Atti di convegno : D.A.Morris, T.N.Truong and D. Zappalà, “*Higgs boson interference in $W^+ W^-$ production at a photon-photon collider*”, in “Two-Photon Physics”; F. Kapusta and J. Parisi eds.; World Scientific, (1994) 318.
- [15] **1994-Articolo in rivista** : A.O.Bouzas and D.Zappalà, “*Hadronic spectrum in inclusive semileptonic B decays*”, hep-ph/9403313, Phys. Lett. **B 333** (1994) 215.
- [16] **1996-Articolo in rivista** : R.Fazio and D.Zappalà, “ *ϵ -expansion of the conductivity at the superconductor-Mott-insulator transition*”, Phys. Rev. **B 53** Rapid Communications, (1996) R8883.
- [17] 1996-Contributo in Atti di convegno: K.Wagenblast, R.Fazio, A.van Otterlo, G.Schön, D.Zappalà, G. Zimanyi, “*Response of Josephson-junction arrays and granular superconductors near the superconductor-insulator transition*”, in : ”ICTP Workshop on Josephson Junction Arrays”; Physica **B 222** (1996) 336.
- [18] **1997-Articolo in rivista** : A. Bonanno and D. Zappalà, “*Nonperturbative renormalization group approach for a scalar theory in higher derivative gravity*”, hep-ph/9611271, Phys. Rev. **D 55** (1997) 6135.
- [19] 1997-Contributo in Atti di convegno : A.Bonanno, J.Polonyi and D.Zappalà, “*Renormalization group analysis of the heavy field decoupling in a scalar theory*”, in: ”Quark Confinement and the Hadron Spectrum II”; N. Brambilla and G. Proserpi eds.; World Scientific (1997) 250. hep-ph/9609408.
- [20] **1997-Articolo in rivista** : A.Bonanno and D.Zappalà, “*Fixed point analysis of a scalar theory with an external field*”, hep-th/9709155, Phys. Rev. **D 56** (1997) 3759.
- [21] **1998-Articolo in rivista** : A.Bonanno and D.Zappalà, “*Two loop results from the derivative expansion of the blocked action*”, hep-th/9712038, Phys. Rev. **D 57** (1998) 7383.
- [22] **1999-Articolo in rivista** : A. Bonanno, V. Branchina, H. Mohrbach, D. Zappalà, “*Wegner-Houghton equation and derivative expansion*”, hep-th/9903173, Phys. Rev. **D 60** (1999) 065009.
- [23] **2001-Articolo in rivista** : A. Bonanno, D. Zappalà, “*Towards an accurate determination of the critical exponents with the renormalization group flow equations*”, hep-th/0010095, Phys. Lett. **B 504** (2001) 181.
- [24] 2001-Contributo in Atti di convegno : A. Bonanno, D. Zappalà, “*Chiral symmetry breaking in the Wegner-Houghton RG approach*”, in: ”Phase transitions in strong interactions, CRIS 2000”, A. Insolia, S. Costa, C. Tuvè eds.; Nucl. Phys. **A 681**, (2001) 108. hep-ph/0006169.
- [25] **2001-Articolo in rivista** : M. Mazza, D. Zappalà, “*Proper time regulator and renormalization group flow*”, hep-th/0106230, Phys. Rev. **D 64** (2001) 105013.
- [26] **2001-Articolo in rivista** : D. Zappalà, “*Improving the renormalization group approach to the quantum-mechanical double well potential*”, quant-ph/0108019, Phys. Lett. **A 290** (2001) 35.
- [27] **2002-Articolo in rivista** : G. Andronico, V. Branchina, D. Zappalà, “*Comment on “Feynman effective classical potential in the Schroedinger formulation”*”, quant-ph/0205067. Phys. Rev. Lett. **88** (2002) 178901.

- [28] **2002-Articolo in rivista** : D. Zappalà,
“Perturbative and nonperturbative aspects of the proper time renormalization group”,
 hep-th/0202167. Phys.Rev. **D 66** (2002) 105020.
- [29] **2003-Articolo in rivista** : P. Castorina, M. Mazza, D. Zappalà,
“Renormalization group analysis of the three-dimensional Gross-Neveu model at finite temperature and density”, hep-th/0305162. Phys. Lett. **B 567** (2003) 31.
- [30] **2003-Articolo in rivista** : P. Castorina, D. Zappalà,
“Noncommutative electrodynamics and ultra high energy gamma rays”,
 hep-ph/0310116, Europhys. Lett. **64** (2003) 641.
- [31] **2003-Articolo in rivista** : P. Castorina, D. Zappalà,
“Nonuniform symmetry breaking in noncommutative $\lambda\phi^4$ theory”,
 hep-th/0303030, Phys. Rev. **D 68** (2003) 065008.
- [32] **2004-Articolo in rivista** : P. Castorina, A. Iorio, D. Zappalà,
“Noncommutative synchrotron”,
 hep-th/0212238, Phys. Rev. **D 69** (2004) 065008.
- [33] 2004-Contributo in Atti di convegno : P. Castorina, A. Iorio, D. Zappalà,
“Violation of Lorentz invariance and dynamical effects in high energy gamma rays”,
 in: “GZK and Surroundings, CRIS 2004”, C. Aramo, A. Insolia, C. Tuvè eds.;
 Nucl. Phys. Proc. Suppl. **B 136** (2004) 333. hep-ph/0407363.
- [34] **2004-Articolo in rivista** : V. Branchina, H. Faivre, D. Zappalà,
“Effective action and the quantum equation of motion”,
 hep-th/0306050, Eur. Phys. J. **C 36** (2004) 271.
- [35] **2004-Articolo in rivista** : M. Baldo, P. Castorina, D. Zappalà,
“Gluon condensation and deconfinement critical density in nuclear matter”,
 nucl-th/0311038, Nucl. Phys. **A 743** (2004) 3.
- [36] **2004-Articolo in rivista** : P. Castorina, G. Riccobene, D. Zappalà,
“Inhomogeneous chiral symmetry breaking in noncommutative four-fermion interactions”,
 hep-th/0402188, Phys. Rev. **D 69** (2004) 105024.
- [37] **2005-Articolo in rivista** : P. Castorina, G. Riccobene, D. Zappalà,
“Non-commutative dynamics and roton-like spectra in bosonic and fermionic condensates”,
 hep-th/0405093, Phys. Lett. **A 337** (2005) 463.
- [38] **2005-Articolo in rivista** : P. Castorina, A. Iorio, D. Zappalà,
“On the vacuum Cerenkov radiation and the elusive effects of Lorentz violation”,
 hep-ph/0411197, Europhys. Lett. **69** (2005) 912.
- [39] 2005-Contributo in Atti di convegno : P. Castorina, D. Zappalà,
“Symmetry breaking in non-commutative cut-off field theories”,
 in: “Quark Confinement and the Hadron Spectrum VI”, U. D’Alesio et al. eds.;
 AIP Conf. Proc. **756** (2005) 460. hep-th/0412059.
- [40] 2005-Contributo in Atti di convegno : P. Castorina, D. Zappalà,
“Energetic model of tumor growth”,
 in: “Complexity, Metastability and Nonextensivity”, C. Beck et al. eds.;
 World Scientific (2005) 272. q-bio.TO/0412040.

- [41] **2005-Articolo in rivista** : P. Castorina, M. Grasso, M. Oertel, M. Urban, D. Zappalà, “*Non-standard pairing in asymmetric trapped Fermi gases*”, cond-mat/0504391, Phys. Rev. **A72** (2005) 025601.
- [42] **2005-Articolo in rivista** : P. Castorina, G. Nardulli, D. Zappalà, “*Nambu Jona-Lasinio model of anti- q q Bose Einstein condensation and pseudogap phase*”, hep-ph/0505089, Phys. Rev. **D72** (2005) 076006.
- [43] **2005-Articolo in rivista** : O. Bertolami, J.G. Rosa, C.M.L. de Aragao, P. Castorina, D. Zappalà, “*Noncommutative gravitational quantum well*”, hep-th/0505064, Phys. Rev. **D72** (2005) 025010.
- [44] **2006-Articolo in rivista** : O. Bertolami, J.G. Rosa, C.M.L. de Aragao, P. Castorina, D. Zappalà, “*Scaling of variables and the relation between noncommutative parameters in noncommutative quantum mechanics*”, hep-th/0509207, Mod.Phys.Lett. **A21** (2006) 795.
- [45] 2006-Contributo in Atti di convegno : P. Castorina, G. Nardulli, D. Zappalà, “*Indications of a pseudogap in the Nambu Jona-Lasinio model*”, in: ”QCD@WORK 2005”, P. Colangelo et al. eds.; AIP Conf. Proc. **806** (2006) 286. hep-ph/0511056.
- [46] **2006-Articolo in rivista** : M. Consoli, D. Zappalà, “*Renormalization-group flow for the field strength in scalar self-interacting theories*”, hep-th/0606010, Phys. Lett. **B 641** (2006) 368.
- [47] **2006-Articolo in rivista** : P. Castorina, D. Zappalà, “*Tumor Gompertzian growth by cellular energetic balance*”, q-bio.CB/0407018, Physica **A365** (2006) 473.
- [48] **2007-Articolo in rivista**: M.Baldo, G.F.Burgio, P.Castorina, S.Plumari, D.Zappalà, “*Quark matter in neutron stars within the Nambu - Jona-Lasinio model and confinement*”, hep-ph/0607343, Phys.Rev. **C75** (2007) 035804.
- [49] **2007-Articolo in rivista** : P. Castorina, D. Zappalà, “*Inhomogeneous phase of a gluon plasma at finite temperature and density*”, hep-ph/0703218, Europhys. Lett. **80** (2007) 22001.
- [50] **2008-Articolo in rivista** : P. Castorina, M. Consoli, D. Zappalà, “*An Alternative heavy Higgs mass limit*”, arXiv:0710.0458 [hep-ph], J. Phys. **G35** (2008) 075010.
- [51] **2008-Articolo in rivista** : P. Castorina, D. Zappalà, “*Spontaneous breaking of translational invariance in non-commutative $\lambda\phi^4$ theory in two dimensions*”, arXiv:0711.2659 [hep-th], Phys. Rev. **D77** (2008) 027703.
- [52] 2008-Contributo in Atti di convegno: M. Baldo, G.F. Burgio, P. Castorina, S. Plumari, D. Zappalà, “*Hybrid neutron stars within the Nambu-Jona-Lasinio model and confinement*”, in: “Exotic States of Nuclear Matter EXOCT07”, U. Lombardo et al. eds.; World Scientific (2008) 431. e-Print: arXiv:0710.5388 [hep-ph].
- [53] **2008-Articolo in rivista**: M.Baldo, G.F.Burgio, P.Castorina, S.Plumari, D.Zappalà, “*Astrophysical constraints on the confining models: The Field Correlator Method*”, arXiv:0804.2328 [hep-ph], Phys.Rev. **D78** (2008) 063009.

- [54] 2008-Contributo in Atti di convegno: G.F. Burgio, M. Baldo, P. Castorina, S. Plumari, D. Zappalà, “*Testing the Field Correlator Method with astrophysical constraints*”, in: “*Quark Confinement and the Hadron Spectrum 8*”, M. Neubert et al.eds.; PoS CONFINEMENT8 (2008) 149. e-Print: arXiv:0901.1035 [hep-ph].
- [55] **2010-Articolo in rivista** : V. Branchina, D. Zappalà, “*Time evolution of $T_{\mu\nu}$ and the cosmological constant problem*”, arXiv:0705.2299 [hep-ph], General Relativity and Gravitation **42** (2010) 141.
- [56] **2010-Articolo in rivista** : V. Branchina, D. Zappalà, “*Dilution of zero-point energies in the cosmological expansion*”, arXiv:1005.3657 [astro-ph.CO], Mod. Phys. Lett. **A25** (2010) 2305.
- [57] **2011-Articolo in rivista** : P. Castorina, A. Iorio, D. Zappalà, “*Noncommutativity and Lorentz violation in relativistic heavy ion collisions*”, arXiv:1004.2454 [hep-ph] , Eur. Phys. J. **C71** , (2011) 1653.
- [58] **2011-Articolo in rivista** : P. Castorina, V. Greco, D. Jaccarino, D. Zappalà, “*A reanalysis of finite temperature $SU(N)$ gauge theory*”, arXiv:1105.5902 [hep-ph], Eur. Phys. J. **C71** (2011) 1826.
- [59] **2011-Articolo in rivista** : D.F. Litim, D. Zappalà, “*Ising exponents from the functional renormalization group*”, arXiv:1009.1948 [hep-th] , Phys. Rev. **D83** (2011) 085009.
- [60] 2011-Contributo in Atti di convegno: P. Castorina, A. Iorio, D. Zappalà, “*Noncommutativity and Lorentz Violation in Relativistic Heavy Ion Collisions at LHC*”, in: “*QCD@WORK 2010*”, L. Angelini *et al.* eds. AIP Conf. Proc. **1317** (2011) 60. Prepared for Conference: C10-06-20.2 Proceedings.
- [61] 2011-Contributo in Atti di convegno: P.Castorina, V.Greco, D.Jaccarino, D.Zappalà, “*Quasi-particle degrees of freedom in finite temperature $SU(N)$ gauge theories*”, in:“*11th Workshop on Non-Perturbative Quantum Chromodynamics*”, B.Mueller, C.-I. Tan eds. Prepared for Conference: C11-06-06.4, Proceedings. <http://www.slac.stanford.edu/econf/C1106064/>
- [62] **2012-Articolo in rivista** : D. Zappalà, “*Enhancement of field renormalization in scalar theories via functional renormalization group*”, arXiv:1206.2480 [hep-th] , Phys. Rev. **D86** (2012) 125003.
- [63] **2013-Articolo in rivista** : V. Branchina, E. Messina, D. Zappalà, “*A compared analysis of the susceptibility in the $O(N)$ theory*”, arXiv:1304.3562 [hep-th] , Int. J. Mod. Phys. **A 28** (2013) 1350078.
- [64] **2013-Articolo in rivista** : S. Plumari, G.F. Burgio, V. Greco, D. Zappalà, “*Quark matter in Neutron Stars within the Field Correlator Method*”, arXiv:1307.3055 [hep-ph] Phys. Rev. **D88** (2013) 083005.
- [65] 2014-Contributo in Atti di convegno: D.Zappalà, G.F.Burgio, V.Greco, S.Plumari, “*Neutron Star masses from the Field Correlator Method Equation of State*”, in: “*2nd International Conference on New Frontiers in Physics 2013*”, L. Bravina et al. eds. EPJ Web Conf. **71** (2014) 00143. arXiv:1312.4464 [hep-ph] . Prepared for Conference: C13-08-28.1
- [66] **2015-Articolo in rivista** : A. Bonanno, D. Zappalà, “*Isotropic Lifshitz critical behavior from the functional renormalization group*” arXiv:1412.7046 [hep-th], Nucl. Phys. **B893** (2015) 501.

- [67] **2015-Articolo in rivista** : M.G. Alford, G.F. Burgio, S. Han, G. Taranto, D. Zappalà,
“Constraining and applying a generic high-density equation of state ”
arXiv:1501.07902 [nucl-th], Phys. Rev. **D92** (2015) 083002.
- [68] **2016-Articolo in rivista** : G.F. Burgio, D. Zappalà,
“Hybrid star structure with the Field Correlator Method ”
arXiv:1509.00841 [nucl-th], Eur. Phys. J. **A52** (2016) 60.
- [69] 2016-Contributo in Atti di convegno: G.F.Burgio, D.Zappalà,
“Structure of hybrid stars with the Field Correlator Method”,
in: “The Modern Physics of Compact Stars 2015”, A. Sedrakian ed.
PoS(MPCS2015)008 .
- [70] **2016-Articolo in rivista** : V. Branchina, E. Messina, D. Zappalà,
”Impact of Gravity on Vacuum Stability”
arXiv:1601.06963 [hep-ph], Europhys. Lett. **116** (2016) 21001.
- [71] **2017-Articolo in rivista** : E. Bentivegna, V. Branchina, F. Contino, D. Zappalà,
“Impact of New Physics on the EW vacuum stability in a curved spacetime background” ,
arXiv:1708.01138 [hep-ph], JHEP **1712** (2017) 100.
- [72] **2017-Articolo in rivista** : D. Zappalà,
“Isotropic Lifshitz point in the $O(N)$ Theory” ,
arXiv:1703.00791 [hep-th], Phys. Lett. **B773** (2017) 213.
- [73] **2018-Articolo in rivista** : D. Zappalà,
“Indications of isotropic Lifshitz points in four dimensions ”,
arXiv:1806.00043 [hep-th], Phys. Rev. **D98** (2018) 085005.
- [74] **2019-Articolo in rivista** : V. Branchina, E. Bentivegna, F. Contino, D.Zappalà,
“Direct Higgs-gravity interaction and stability of our Universe”
arXiv:1905.02975 [hep-ph], Phys.Rev. **D99** (2019) 096029.
- [75] **2020-Articolo in rivista** : D. Zappalà,
“Isotropic Lifshitz scaling in four dimensions”,
arXiv: 1912.03071 [hep-th], Int. J. Geom. Meth. Mod. Phys. **17** (2020) 2050053.
- [76] **2020-Articolo in rivista** : J.-B. Wei, G.F. Burgio, H.-J. Schulze, D. Zappalà,
“Cooling of hybrid neutron stars with microscopic equations of state ”,
arXiv: 2003.08079 [nucl-th], Mon. Not. Roy. Astron. Soc. **498** (2020) 344.
- [77] **2020-Articolo in rivista** : A. Bonanno, M. Park, L. Rachwal, D. Zappalà,
”On the regularization of Lifshitz-type field theories”,
arXiv: 2010.05966 [hep-th], Eur.Phys.J. **C 80** (2020) 1081.
- [78] **2021-Articolo in rivista** : N. Defenu, A. Trombettoni, D. Zappalà,
”Topological phase transitions in four dimensions”,
arXiv: 2003.04909 [cond-mat.quant-gas], Nucl. Phys. **B964** (2021) 115295.