

C. Wetterich

List of Publications, 1977-1994

- 1) Q. Shafi, C. Wetterich: Parity violating neutral current in a left-right symmetric gauge model, Phys. Lett. **69B** (1977) 464
- 2) Q. Shafi, C. Wetterich: Left-right symmetric gauge models and possible existence of a neutral gauge boson with mass in the PETRA-PEP energy range, Phys. Lett. **73B** (1978) 65
- 3) Q. Shafi, C. Wetterich: Implications for $e^+ e^-$ physics and for dilepton production in pp, pp collisions if a light neutral gauge boson exists, Lett. J. Phys. G **4** (1978) 107
- 4) Q. Shafi, C. Wetterich: Parity violation in atoms within left-right symmetric gauge models, Nucl Phys. **B146** (1978) 247
- 5) Q. Shafi, C. Wetterich: Parity violation in SLAC experiment and left-right symmetric gauge models, Phys. Lett. **79B** (1978) 291
- 6) Q. Shafi, C. Wetterich: Right handed neutrinos in gauge theories, Phys. Lett. **81B** (1979) 346
- 7) C. Wetterich: Can radiative corrections to parity violating neutral currents distinguish between the Weinberg-Salam and left-right-symmetric models?, Phys. Rev. **D21** (1980) 802
- 8) Q. Shafi, C. Wetterich: Gauge hierarchies and the unification mass, Phys. Lett. **85B** (1979) 52
- 9) M. Magg, Q. Shafi, C. Wetterich: Gauge hierarchy in presence of discrete symmetry, Phys. Lett. **87B** (1979) 227;
- 10) Q. Shafi, M. Sondermann, C. Wetterich: Fourth colour in $O(10)$, Phys. Lett. **92B** (1980) 304
- 11) M. Magg, C. Wetterich: Neutrino mass problem and gauge hierarchy, Phys. Lett. **94B** (1980) 61
- 12) G. Lazarides, Q. Shafi, C. Wetterich: Proton lifetime and fermion masses in an $SO(10)$ model, Nucl. Phys. **B181** (1981) 287
- 13) C. Wetterich: Neutrino masses and the scale of B-L violation, Nucl. Phys. **B187** (1981) 343
- 14) C. Wetterich: Gauge hierarchy due to strong interactions? Phys. Lett. **104B** (1981) 269
- 15) C. Wetterich: $SO(10)$ unification from higher dimensions, Phys. Lett. **110B** (1982) 379

- 16) C. Wetterich: Spontaneous compactification in higher dimensional gravity, Phys. Lett. **113B** (1982) 377
- 17) C. Wetterich: Massless spinors in more than four dimensions, Nucl. Phys. **B211** (1983) 177
- 18) C. Wetterich: Unified gauge theories from higher dimensions, Acta Physica Polonica **B14** (1983) 431
- 19) C. Wetterich: Dimensional reduction of Weyl, Majorana and Majorana-Weyl spinors, Nucl. Phys. **B222** (1983) 20
- 20) C. Wetterich: Chirality index and dimensional reduction of fermions, Nucl. Phys. **B223** (1983) 109
- 21) C. Wetterich: Fine tuning problem and the renormalization group, Phys. Lett. **140B** (1984) 215
- 22) Q. Shafi, C. Wetterich: Cosmology from higher dimensional gravity, Phys. Lett. **129B** (1983) 387
- 23) C. Wetterich: Discrete symmetries in Kaluza-Klein theories, Nucl. Phys. **B234** (1984) 413
- 24) C. Wetterich: Realistic Kaluza-Klein theories? in: "Perspectives in particles and fields", Cargese 1983, p. 569, eds . M. Lévy, J.-L. Basedevant, D. Speiser, J. Weyer, M. Jacob and R. Gastmans, Plenum Press, New York (1985)
- 25) Q. Shafi, C. Wetterich: Modification of GUT predictions in the presence of spontaneous compactification, Phys. Rev. Lett. **52** (1984) 875
- 26) C. Wetterich: Kaluza-Klein cosmology, in: "Monopole '83", ed. J.L. Stone, Plenum Press, New York (1984) , p. 117
- 27) C. Wetterich: Dimensional reduction of fermions in generalized gravity, Nucl. Phys. **B242** (1984) 473
- 28) F. Buccella , L. Cocco, C. Wetterich: An SO(10) model with $54 + 126 + 10$ Higgs, Nucl. Phys. **B243** (1984) 273
- 29) C. Wetterich: Chiral fermion generations from higher dimensional gravity, Nucl. Phys. **B244** (1984) 359
- 30) S. Randjbar-Daemi, C. Wetterich: Spontaneous symmetry breaking in six dimensional Einstein-Yang-Mills theory, Phys. Lett. **148B** (1984) 48
- 31) C. Wetterich: Kaluza-Klein cosmology and the inflationary universe, Nucl. Phys. **B252** (1985) 309
- 32) C. Wetterich: Chiral fermions in six dimensional gravity, Nucl. Phys. **B253** (1985) 366

- 33) H. Nicolai, C. Wetterich: On the spectrum of Kaluza-Klein theories with non-compact internal spaces, *Phys. Lett.* **150B** (1985) 347
- 34) Q. Shafi, C. Wetterich: Inflation with higher dimensional gravity, *Phys. Lett.* **152B** (1985) 51
- 35) C. Wetterich: The cosmological constant and non-compact internal spaces in Kaluza-Klein theories, *Nucl. Phys.* **B255** (1985) 480
- 36) C. Wetterich: Spontaneous symmetry breaking and fermion chirality in higher dimensional gauge theory, *Nucl. Phys.* **B260** (1985) 402
- 37) Panagiotakopoulos, Q. Shafi, C. Wetterich: Top quark mass in grand unified theories with intermediate scales, *Phys. Rev. Lett.* **55** (1985) 787
- 38) C. Wetterich: Can grand unified theories predict the top quark mass? in: "Perspectives in electroweak interactions", Moriond 1985, p. 229, ed. J. Tran Thanh Van, Editions Frontières (1986)
- 39) C. Wetterich: Fermion mass predictions from higher dimensions, *Nucl. Phys.* **B261** (1985) 461
- 40) C. Wetterich: Fermion chirality from higher dimensions and Kaluza-Klein theories with non-compact internal space, in: "Proc. Second Jerusalem Winter School on Theoretical Physics, Physics in higher dimensions", p. 206, eds. T. Piran and S. Weinberg, World Scientific, (1986)
- 41) S. Randjbar-Daemi, C. Wetterich: Kaluza-Klein solutions with non-compact internal spaces, *Phys. Lett.* **166B** (1986) 65
- 42) C. Wetterich: Quark and lepton masses in a six dimensional SO(12) model, in "Particles and the Universe", Thessaloniki 1985, p. 231, eds. G. Lazarides and Q. Shafi, North Holland, Amsterdam (1986)
- 43) C. Wetterich: Half integer charged hadrons from higher dimensions? *Phys. Lett.* **167B** (1986) 325
- 44) G. Ingelman, C. Wetterich: Hunting half integer charged, heavy hadrons from higher dimensions, *Phys. Lett.* **174B** (1986) 109
- 45) C. Wetterich: Fermion masses and mixings from higher dimensions, *Nucl. Phys.* **B279** (1987) 711
- 46) J. Bijnens, C. Wetterich: A scan for models with realistic fermion mass patterns, *Phys. Lett.* **176B** (1987) 431
- 47) J. Bijnens, C. Wetterich: Fermion masses from symmetry, *Nucl. Phys.* **B283** (1987) 237
- 48) M. Reuter, C. Wetterich: Classical stability for spontaneous compactification in higher derivative gravity, *Nucl. Phys.* **B289** (1987) 757

- 49) M. Reuter, C. Wetterich: Time evolution of the cosmological constant, Phys. Lett. **188B** (1987) 38
- 50) Q. Shafi, C. Wetterich: Inflation from higher dimensions, Nucl. Phys. **B289** (1987) 787
- 51) J. Bijnens, C. Wetterich: Quark, lepton and neutrino masses in grand unified theories with local generation group, Nucl. Phys. **B292** (1987) 443
- 52) Q. Shafi, C. Wetterich: Heating after higher dimensional inflation, Nucl. Phys. **B297** (1988) 697
- 53) R. D. Peccei, J. Solà, C. Wetterich: Adjusting the cosmological constant dynamically: cosmons and a new force weaker than gravity, Phys. Lett. **195B** (1987) 183
- 54) J. Bijnens, C. Wetterich: Hierarchical structure of fermion masses and mixings, Phys. Lett. **199B** (1987) 525
- 55) C. Wetterich: Cosmologies with variable Newton's constant, Nucl. Phys. **B302** (1988) 645
- 56) C. Wetterich: Cosmology and the fate of dilatation symmetry, Nucl. Phys. **B302** (1988) 668
- 57) M. Reuter, C. Wetterich: Spectrum degeneracy and new symmetries for generalized Euler form actions, Nucl. Phys. **B304** (1988) 653
- 58) C. Wetterich: The mass of the Higgs particle, in "Superstrings, unified theories and cosmology 1987", eds. G. Furlan, J.C. Pati, D.W. Sciama, E. Sezgin and Q. Shafi, World Scientific (1988), p. 403
- 59) R.D. Peccei, J. Solà, C. Wetterich: A new phase of QED? Phys. Rev. **D37** (1988) 2492
- 60) C. Wetterich: A new intermediate range scalar force? in "5th force and neutrino physics", eds. O.Fackler and J. Tran Thanh Van, Editons Frontières (1988), p. 383
- 61) C. Wetterich: On the connection between the scales of weak and strong interactions, Phys. Lett. **209B** (1988) 59
- 62) C. Wetterich: General statistics, Nucl. Phys. **B314** (1989) 40
- 63) C. Wetterich: Eine neue skalare Kraft? Phys. Bl. **44** (1988) 174
- 64) B. Kastening, R.D. Peccei, C. Wetterich: Scalar interactions with intermediate range, Phys. Rev. **D39** (1989) 1772
- 65) C. Wetterich: The structure of the fermion mass matrices from symmetries and higher dimensions, in "Quarks '88", eds. A.N. Tavkhelidze et al., World Scientific (1989) p. 337

- 66) C. Wetterich: Can inflation explain small density fluctuations in the universe, Nucl. Phys. **B324** (1989) 141
- 67) J. Ellis, S. Kalara, K.A. Olive, C. Wetterich: Density dependent couplings and astrophysical bounds on light scalar particles, Phys. Lett. **228B** (1989) 264
- 68) C. Wetterich: A relation between the scales of weak and strong interactions, in "Higgs particle (s)", ed. A. Ali, E. Majorana Int. Science Series (1989) p. 95
- 69) A. Ringwald, C. Wetterich: Average action for the N-component Φ^4 -theory, Nucl. Phys. **B334** (1990) 506
- 70) C. Wetterich: Quadratic renormalization of the average potential and the naturalness of quadratic mass relations for the top quark, Z.Phys. **C48** (1990) 693
- 71) C. Wetterich: Average action and the renormalization group equations, Nucl. Phys. **B352** (1991) 529
- 72) A. Ringwald, C. Wetterich: How strong are weak interactions in the multi TeV range?, Nucl. Phys. **B353** (1991) 303
- 73) C. Wetterich: Electroweak multi-particle production at TeV energies?, Nucl. Phys. **B** (Proc. Suppl.) **22A** (1991) 43
- 74) A. Ringwald, F. Schrempp, C. Wetterich: Phenomenology of geometrical flavour interactions at TeV energies, Nucl. Phys. **B365** (1991) 3
- 75) J. Ellis, A.V. Khoze, A. Ringwald, F. Schrempp, C. Wetterich: Signatures for geometrical flavour interactions and B + L violation at the LHC, in: Proc. LHC workshop, Aachen (1990)
- 76) C. Wetterich: The average action for scalar fields near phase transitions, Z.Phys. **C57** (1993) 451
- 77) C.Wetterich: Geometry from general statistics, Nucl. Phys. **B397** (1993) 299
- 78) S. Bornholdt, C. Wetterich: Self-organizing criticality, large anomalous mass dimension and the gauge hierarchy problem, Phys. Lett. **282B** (1992) 399
- 79) M. Reuter, C. Wetterich: Average action for the Higgs model with abelian gauge symmetry, Nucl. Phys. **B391** (1993) 147
- 80) N. Tetradis, C. Wetterich: Scale dependence of the average potential around the maximum in Φ^4 -theories, Nucl. Phys. **B383** (1992) 197
- 81) M. Pindor, R. Raczka, C. Wetterich: High energy behaviour of total cross sections in weak interactions, Z.Phys. **C61** (1993) 125
- 82) N. Tetradis, C.Wetterich: The high temperature phase transition in Φ^4 -theories, Nucl. Phys.**B398** (1993) 659

- 83) S. Bornholdt, C. Wetterich: Average action for models with fermions, *Z. Phys.* **C58** (1993) 585
- 84) C. Wetterich: Exact evolution equation for the effective potential, *Phys. Lett.* **301B** (1993) 90
- 85) M. Reuter, C. Wetterich: Running gauge coupling in three dimensions and the electroweak phase transition, *Nucl. Phys.* **B408** (1993) 91
- 86) M. Reuter, N. Tetradis, C. Wetterich: The large N limit and the high temperature phase transition for the Φ^4 theory, *Nucl. Phys.* **B 401** (1993) 567
- 87) C. Wetterich: Improvement of the average action, *Z. Phys.* **C60** (1993) 461
- 88) C. Wetterich: Exact renormalization group equations for the average action and systematic expansions, *Int. J. Mod. Phys.* **A9** (1994) 3571
- 89) N. Tetradis, C. Wetterich: Critical exponents from the effective average action, *Nucl. Phys.* **B422 [FS]** (1994) 541
- 90) N. Tetradis, C. Wetterich: High temperature phase transitions without infrared divergences, *Int. J. Mod. Phys.* **A9** (1994) 4029
- 91) M. Reuter, C. Wetterich: Effective average action for gauge theories and exact evolution equations, *Nucl. Phys.* **B417** (1994) 181
- 92) M. Reuter, C. Wetterich: Exact evolution equations for scalar electrodynamics, *Nucl. Phys.* **B427** (1994) 291
- 93) U. Ellwanger, C. Wetterich: Evolution equations for the quark-meson transition, hep-ph/9402221, *Nucl. Phys.* **B423** (1994) 137-167
- 94) T. Papenbrock, C. Wetterich: Two loop results from improved one loop computations, hep-th/9403164, *Z. Phys.* **C65** (1995) 519-535
- 95) M. Reuter, C. Wetterich: Search for the QCD ground state, hep-ph/9405300, *Phys. Lett.* **B334** (1994) 412
- 96) C. Wetterich: High temperature field theory beyond perturbation theory, hep-th/9408054, "Electroweak Physics and the Early Universe", eds. J. Romao and F. Freire, Plenum Press (1994) 229