

List of Publications

- [1] P. Hraskó and J. Balog
Rotation Symmetry in the Hamiltonian Dynamics
Nuovo. Cim. 45B (1978) 239
- [2] J. Balog and P. Hraskó
Existence of Magnetic Monopoles in the Unified Field Theory
Phys. Rev. D18 (1978) 4802
- [3] A. Patkós and J. Balog
Is There Tensorial Condensate in the Ground State of QCD?
Phys. Lett. B98 (1981) 205
- [4] J. Balog and G. Pócsik
Decays of Charged Intermediate Vector Bosons into Higgs Scalars
Acta. Phys. Austr. 53 (1981) 207
- [5] J. Balog and P. Hraskó
Thomas Precession and the Operational Meaning of the Lorentz Group Elements
Foundations of Physics 11 (1981) 873
- [6] J. Balog and P. Hraskó
Fermion Boundary Condition and θ angle
Acta. Phys. Austr. Suppl. XXVI (1984) 365
- [7] P. Hraskó and J. Balog
The Fermion Boundary Condition and the θ -angle in QED₂
Nucl. Phys. B245 (1984) 118

- [8] J. Balog
Effective Lagrangian from QCD Anomalies
Phys. Lett. B149 (1984) 197
- [9] J. Balog
Non-topological Anomalies and Wess-Zumino Effective Action
Nucl. Phys. B258 (1985) 361
- [10] J. Balog and P. Vecsernyés
Hidden Local Symmetries from Flavour Anomalies of QCD
Phys. Lett. B163 (1985) 217
- [11] J. Balog and G. Marx
The Fate of Relic Neutrinos
Acta. Phys. Hung. 58 (1985) 35
- [12] J. Balog and P. Hraskó
Schwinger Model in Temporal Gauge
Acta. Phys. Hung. 58 (1985) 233
- [13] J. Balog, P. Forgács, Z. Horváth and P. Vecsernyés
Lattice Classification of the Four-Dimensional Heterotic Strings
Phys. Lett. B197 (1987) 395
- [14] J. Balog and L. O’Raifeartaigh
Covariant Light-Cone Algebra
Nucl. Phys. B318 (1989) 281
- [15] J. Balog and L. O’Raifeartaigh
Critical String Dimensions as Zero Curvature Conditions
*in Proc. of the XVII Int. Conf. on Differential Geometric Methods
in Theoretical Physics, Chester, England
ed. A. I. Solomon (World Scientific, 1989.)*

- [16] J. Balog and M. P. Tuite
The Failure of Atkin-Lehner Symmetry for Lattice Compactified Strings
Nucl. Phys. B319 (1989) 387
- [17] J. Balog, L. O’Raifeartaigh, P. Forgács and A. Wipf
Consistency of String Propagation on Curved Spacetimes: An $SU(1,1)$ based
Counterexample
Nucl. Phys. B325 (1989) 225
- [18] J. Balog, L. O’Raifeartaigh, P. Forgács and A. Wipf
Consistency of String Propagation on Group Manifolds: An $SU(1,1)$ based
Counterexample
in Proc. of the 22nd Int. Symp. on the Theory of Elementary Particles,
Ahrenshoop, GDR
ed. E. Wieczorek (Berlin, 1989)
- [19] P. Forgács, A. Wipf, J. Balog, L. Fehér and L. O’Raifeartaigh
Liouville and Toda Theories as Conformally Reduced WZNW Theories
Phys. Lett. B227 (1989) 214
- [20] J. Balog, P. Forgács, Z. Horváth and P. Vecsernyés
Lattice Classification of 8-Dimensional Chiral Heterotic Strings
Nucl. Phys. B334 (1990) 431
- [21] J. Balog and L. O’Raifeartaigh
Manifest Covariance in the Light-Cone-Gauge
in Proc. of the IIIrd Regional Conference on Mathematical Physics,
Islamabad, Pakistan
ed. F. Hussain and A. Qadir (World Scientific, 1990.)
- [22] J. Balog, L. Fehér, L. O’Raifeartaigh, P. Forgács and A. Wipf
Toda Theory and \mathcal{W} -algebra from a Gauged WZNW Point of View
Annals of Phys. 203 (1990) 76

- [23] J. Balog, L. Fehér, P. Forgács, L. O’Raifeartaigh and A. Wipf
Kac-Moody Realization of \mathcal{W} -Algebras
Phys. Lett. B244 (1990) 435
- [24] J. Balog, L. Dąbrowski and L. Fehér
Classical r-matrix and Exchange Algebra in WZNW and Toda Theories
Phys. Lett. B244 (1990) 227
- [25] J. Balog, L. Dąbrowski and L. Fehér
A New Quantum Deformation of $SL(3)$
Phys. Lett. B257 (1991) 74
- [26] J. Balog, L. Dąbrowski and L. Fehér
Non-Standard Quantum Group in Toda and WZNW Theories
in Proc. of 14th Johns Hopkins Workshop on Current Problems in Particle Theory, Debrecen, Hungary (1990)
- [27] J. Balog and L. Palla
Locality Problem for the Liouville Field
Phys. Lett. B274 (1992) 323
- [28] J. Balog, S. Naik, F. Niedermayer and P. Weisz
Exact Mass Gap of the Chiral $SU(n) \times SU(n)$ Model
Phys. Rev. Lett. 69 (1992) 873
- [29] J. Balog
Form Factors and Asymptotic Freedom in the $O(3)$ σ -model
Phys. Lett. B300 (1993) 145
- [30] J. Balog, P. Forgács, Z. Horváth and L. Palla
A New Family of $SU(2)$ Symmetric Integrable Sigma Models
Phys. Lett. B324 (1994) 403
- [31] J. Balog
Field Theoretical Derivation of the TBA Integral Equation
Nucl. Phys. B419 (1994) 480

- [32] J. Balog and T. Hauer
Polynomial Form-Factors in the $O(3)$ Nonlinear Sigma Model
Phys. Lett. B337 (1994) 115
- [33] J. Balog, P. Forgács, Z. Horváth and L. Palla
Perturbative Quantum (In)Equivalence of Dual Sigma Models in Two
Dimensions
Nucl. Phys. B (Proc. Suppl.) 49 (1996) 16
- [34] J. Balog, M. Niedermaier and T. Hauer
Perturbative versus Nonperturbative QFT: Lessons from the $O(3)$ NLS Model
Phys. Lett. B386 (1996) 224
- [35] J. Balog, P. Forgács, Z. Horváth and L. Palla
Quantum Corrections of Abelian Duality Transformations
Phys. Lett. B388 (1996) 121
- [36] J. Balog and M. Niedermaier
Off Shell Dynamics of the $O(3)$ NLS Model beyond Monte Carlo and Perturba-
tion Theory
Nucl. Phys. B500 (1997) 421
- [37] J. Balog and M. Niedermaier
A Scaling Hypothesis for the Spectral Densities in the $O(3)$ Nonlinear Sigma
Model
Phys. Rev. Lett. 78 (1997) 4151
- [38] J. Balog, L. Fehér and L. Palla
Coadjoint Orbits of the Virasoro Algebra and the Global Liouville Equation
Int. J. Mod. Phys. A13 (1998) 315
- [39] L. K. Balázs, J. Balog, P. Forgács, N. Mohammadi, L. Palla and J. Schnittger
Quantum Equivalence of Sigma Models related by non Abelian Duality Trans-
formations
Phys. Rev. D57 (1998) 3585

- [40] J. Balog, L. Fehér and L. Palla
Coadjoint Orbits of the Virasoro Algebra and the Global Liouville Equation
*Int. J. Mod. Phys. A*13 (1998) 315
- [41] J. Balog, P. Forgács, N. Mohammedi, L. Palla and J. Schnittger
On Quantum T Duality in Sigma Models
*Nucl. Phys. B*535 (1998) 461
- [42] J. Balog, M. Niedermaier, F. Niedermayer, A. Patrascioiu, E. Seiler and P. Weisz
Comparison of the $O(3)$ Bootstrap Sigma Model with the Lattice Regularization at Low Energies
*Phys. Rev. D*60 (1999) 094508
- [43] J. Balog, L. Fehér and L. Palla
The Chiral WZNW Phase Space and its Poisson-Lie Groupoid
*Phys. Lett. B*463 (1999) 83
- [44] J. Balog and P. Forgács
Thermodynamical Bethe Ansatz Analysis in an $SU(2) \times U(1)$ Symmetric Sigma Model
*Nucl. Phys. B*570 (2000) 655
- [45] J. Balog, L. Fehér and L. Palla
Chiral Extensions of the WZNW Phase Space, Poisson-Lie Symmetries and Groupoids
*Nucl. Phys. B*568 (2000) 503
- [46] J. Balog, L. Fehér and L. Palla
Classical Wakimoto Realizations of Chiral WZNW Bloch Waves
*J. Phys. A*33 (2000) 945
- [47] J. Balog, M. Niedermaier, F. Niedermayer, A. Patrascioiu, E. Seiler and P. Weisz
The Intrinsic Coupling in Integrable Quantum Field Theories
*Nucl. Phys. B*583 (2000) 614
- [48] J. Balog and Á. Hegedűs
Two Loop Beta Functions of the Sine-Gordon Model
*J. Phys. A*33 (2000) 6543

- [49] J. Balog, P. Forgács and L. Palla
A Two-Dimensional Integrable Axionic Sigma Model and T Duality
Phys. Lett. B484 (2000) 367
- [50] J. Balog, L. Fehér and L. Palla
The Chiral WZNW Phase Space as a Quasi-Poisson Space
Phys. Lett. A277 (2000) 107
- [51] J. Balog
Kosterlitz-Thouless Theory and Lattice Artifacts
J. Phys. A34 (2001) 5237
- [52] J. Balog, M. Niedermaier, F. Niedermayer, A. Patrascioiu, E. Seiler and P. Weisz
Does the XY Model Have an Integrable Continuum Limit?
Nucl. Phys. B618 (2001) 315
- [53] J. Balog and Á. Hegedűs
Virial Expansion and TBA in $O(N)$ Sigma Models
Phys. Lett. B523 (2001) 211
- [54] J. Balog and P. Weisz
Test of Asymptotic Freedom and Scaling Hypothesis in the 2D $O(3)$ Sigma Model
Nucl. Phys. B668 (2003) 506
- [55] J. Balog and Á. Hegedűs
TBA Equations for Excited States in the Sine-Gordon Model
J. Phys. A37 (2004) 1903
- [56] J. Balog and Á. Hegedűs
TBA Equations for Excited States in the $O(3)$ and $O(4)$ Nonlinear Sigma Model
J. Phys. A37 (2004) 1881
- [57] J. Balog, F. Knechtli, T. Korzec and U. Wolff
Numerical Confirmation of Analytic Predictions for the Finite Volume Mass Gap
of the XY Model
Nucl. Phys. B675 (2003) 555

- [58] J. Balog, F. Knechtli, T. Korzec and U. Wolff
Comparison of Analytic and Numerical Results in the XY Model
Nucl. Phys. B (Proc. Suppl.) 129-130 (2004) 777
- [59] J. Balog and P. Weisz
Structure Functions of 2d Integrable Asymptotically Free Models
hep-th/0405029