

Publikációs lista
Horváth Zalán

Angol nyelvű publikációk

1. Z. Horváth: "Field theory of spin-two mesons and an equivalence theorem" *Nucl. Phys.* **B33**, 214 (1971)
2. Z. Horváth: "Exactly soluble models for interacting vector and scalar fields" *Acta Phys. Austriaca* **34**, 93 (1971)
3. Z. Horváth: "On the local commutativity of quantized scalar and vector fields" *Acta Phys. Hung.* **34**, 281 (1973)
4. Z. Horváth and G. Pócsik: "High-energy behaviour of ladder graphs with multiple loops" *Lett. al Nuovo Cim.* **2**, 1146 (1971)
5. Z. Horváth and G. Pócsik: "High-energy summation of ladder diagrams in nonpolynomial field theories" *Ann. of Phys.* **74**, 555 (1972)
6. Z. Horváth and G. Pócsik: "High-energy bounds of elastic scattering amplitudes in nonpolynomial field theories" *Proceedings of the International Conference organized by the Lebedev Institute for Physics (Moscow)* **Vol. 3**, 5 (1971)
7. Z. Horváth and G. Pócsik: "Exponential interactions at high energy" *Acta Physica Polonica* **B4**, 211 (1973)
8. Z. Horváth and G. Pócsik: "Analytic renormalization of superpropagators and triangle diagrams" *Acta Phys. Austriaca* **40**, 323 (1974)
9. Z. Horváth and G. Pócsik: "Higher-order corrections to weak processes" *Lett. al Nuovo Cim.* **5**, 445 (1972)
10. Z. Horváth and G. Pócsik: "Analytic renormalization and electron antineutrino scattering" *Proc. of Neutrino '72* **Vol. II.**, 175 (1972)
11. R. Acharya and Z. Horváth: "Determination of mixing angle in Weinberg's $SU(2) \times U(1)$ model" *Lett. al Nuovo Cim.* **4**, 464 (1973)
12. Z. Horváth and R. Acharya: "A unified Bardakci-Weinberg model" *Progr. Theor. Phys.* **50**, 2048 (1973)
13. R. Acharya and Z. Horváth: "Taylor's nonclassical theory of magnetic monopoles as a spontaneously broken $U_L(1) \times U_R(1)$ model" *Lett. al Nuovo Cim.* **8**, 513 (1973)
14. R. Acharya and Z. Horváth: "Electrodinamic determination of finestructure constant and electron-muon mass ratio from Weinberg's renormalization group equations" *Lett. al Nuovo Cim.* **10**, 710 (1974)
15. R. Acharya and Z. Horváth: "A model of imprisoned quarks" *Proc. of Balaton Conf. 1974* **Vol. I.**, 57 (1974)

16. R. Acharya and Z. Horváth: "Scale invariance and chiral noninvariance in a 4-dimensional interacting field theory" *Nuovo Cim.* **33A**, 47 (1976)
17. R. Acharya, B. P. Nigam and Z. Horváth: "Callan-Symanzik and Weinberg equations: frame dependence of fixed points" *Can. J. Phys. (Canada)* **57**, 1662 (1979)
18. Z. Horváth and L. Palla: "Dyons in classical $SU(3)$ gauge theory and a new topologically conserved quantity" *Phys. Rev.* **D14**, 1711 (1976)
19. Z. Horváth and L. Palla: "Monopoles, dyons and other topologically stable solutions in gauge theories" *Acta Phys. Austriaca* **46**, 297 (1977)
20. Z. Horváth and L. Palla: "On the structure of generalized monopole solutions in gauge theories" *Nucl. Phys.* **B116**, 500 (1976)
21. Z. Horváth and L. Palla: "Monopoles and grand unification theories" *Phys. Lett.* **B69**, 197 (1977)
22. Z. Horváth and L. Palla, E. Cremmer and J. Scherk: "Grand unified schemes and spontaneous compactification" *Nucl. Phys* **B127**, 57 (1977)
23. Z. Horváth and L. Palla: "Extended monopoles in gauge field theories" *ICTP Trieste preprint 1977 IC/77/ 35*
24. Z. Horváth and L. Palla: "New exact classical solutions of the Euclidean Yang-Mills theory" *Acta Phys. Austriaca* **50**, 137 (1979)
25. Z. Horváth and L. Palla: "Spontaneous compactification and *monopoles* in higher dimensions" *Nucl. Phys.* **B142**, 327 (1978)
26. P. Forgács and Z. Horváth: "On a static solution of the Einstein-Yang-Mills system in six dimensions" *Gen. Relat. Grav.* **10**, 931 (1979)
27. P. Forgács and Z. Horváth: "On the influence of extra dimensions to the homogeneous isotropic universe" *Gen. Relat. Grav.* **11**, 205 (1979)
28. Z. Horváth and L. Palla: " $O(3)$ symmetric merons in $SU(N)$ gauge theory" *Phys. Rev.* **D21**, 2953 (1980)
29. J. Cervero, Z. Horváth and L. Palla: " $SU(3)$ sourceless classical solutions with a topological quantum number" *Salamanca preprint 54/1979*
30. P. Forgács, Z. Horváth and L. Palla: "Generating the BPS one monopole by a Bäcklund transformation" *Phys. Rev. Lett.* **45**, 505 (1980)
31. Z. Horváth and T. Kiss-Tóth: "On static, axially symmetric solutions of $SU(2)$ monopoles" *Acta Phys. Austriaca* **53**, 91 (1981)
32. P. Forgács, Z. Horváth and L. Palla: "Towards complete integrability in four dimensions" *ITP Budapest Report No 394* (1980)
33. P. Forgács, Z. Horváth and L. Palla: "An exact fractionally charged selfdual solution" *Phys. Rev. Lett.* **46**, 392 (1981)

34. P. Forgács, Z. Horváth and L. Palla: "Exact multimonopole solutions in the Bogomolny Prasad Sommerfield limit" *Phys. Lett.* **B99**, 232 (1981)
35. P. Forgács, Z. Horváth and L. Palla: "Towards complete integrability of the selfduality equations" *Phys. Rev.* **D23**, 1976 (1981)
36. P. Forgács, Z. Horváth and L. Palla: "Generating monopoles of arbitrary charge by Bäcklund transformation" *Phys. Lett.* **B102**, 131 (1981)
37. P. Forgács, Z. Horváth and L. Palla: "Soliton theoretic framework for generating multimonopoles" *Ann. of Phys.* **136**, 371 (1981)
38. P. Forgács, Z. Horváth and L. Palla: "Nonlinear superposition of monopoles" *Nucl. Phys.* **B192**, 141 (1981)
39. P. Forgács, Z. Horváth and L. Palla: "Generating multimonopoles by soliton theoretic method" *Developments in Mathematical Physics* ed. by H. Mitter and L. Pittner, Springer Verlag, Wien-New York 1981, p.613
40. Z. Horváth and T. Kiss-Tóth: "Bäcklund transformation for axially symmetric $SU(N)$ Bogomolny equations" *Zeitschr. für Phys.* **C13**, 325 (1982)
41. P. Forgács, Z. Horváth and L. Palla: "Monopoles and Bäcklund transformation" *Proc. of the Triangle Meeting Hadron Structure' 80* ed. A. Nogová, p.261
42. P. Forgács, Z. Horváth and L. Palla: "One can have noninteger topological charge" *Zeitschr. für Phys.* **C12**, 359 (1982)
43. P. Forgács, Z. Horváth and L. Palla: "Finitely separated multimonopoles generated as solitons" *Phys. Lett.* **B109**, 200 (1982)
44. P. Forgács, Z. Horváth and L. Palla: "On the linearization of source free gauge field equations" *Phys. Lett.* **B115**, 463 (1982)
45. Z. Horváth and T. Kiss-Tóth: "On static, axially symmetric solutions of four dimensional principal σ -models" *J. Phys.* **A15**, L457 (1982)
46. P. Forgács, Z. Horváth and L. Palla: "On generating solutions of classical gauge theories" *Nukleonika* **26**, 1205 (1981)
47. P. Forgács, Z. Horváth and L. Palla: "Solution generating technique for the self duality equations" *Proc. of the Symposium on Particle Phys.* Visegrád 1981, p.425
48. P. Forgács, Z. Horváth and L. Palla: "Physicist's techniques for multimonopole solutions" *Monopoles in QFT* ed. N. Craigie et al, World Scientific Publ. Singapore 1982, p.21
49. P. Forgács, Z. Horváth and L. Palla: "On the construction of axially symmetric $SU(N)$ monopoles" *Nucl. Phys.* **B221**, 235 (1983)
50. P. Forgács, Z. Horváth and L. Palla: "Solution generating technique for self dual monopoles" *Nucl. Phys.* **B229**, 77 (1983)

51. Z. Horváth and S. Rouhani: "SU(3) monopole of unit charge" *Zeitschr. für Phys.* **C22**, 261 (1984)
52. P. Forgács and Z. Horváth: "Topology and saddle point in field theories" *Phys. Lett.* **B138**, 397 (1984)
53. A. M. Din, Z. Horváth and W. J. Zakrzewski: "The Riemann-Hilbert problem and finite action CP^{N-1} model solutions" *Nucl. Phys.* **B233**, 268 (1984)
54. P. Forgács, W.J. Zakrzewski and Z. Horváth: "Classical solutions of CP^{N-1} models in 2 + 1 dimensions" *Nucl. Phys.* **B248**, 187 (1984)
55. P. Forgács, Z. Horváth and L. Palla: "Stable compactifying Einstein-Yang-Mills systems" *Phys. Lett.* **B147**, 311 (1984)
56. P. Forgács, Z. Horváth and L. Palla: "Spontaneous compactification to non symmetric spaces" *Zeitschr. für Phys.* **C30**, 261 (1986)
57. P. Forgács, Z. Horváth and L. Palla: "On a problem of spontaneous compactification" *Acta Phys. Hung.* **62**, 177 (1987)
58. P. Forgács, Z. Horváth and L. Palla: "Compactifying Einstein-Yang-Mills systems on non symmetric spaces" *Proc. of the XIX Int. Symposium Ahrenshoop* ed. F. Kaschluhn, Berlin 1985, p.37
59. J. Balog, P. Forgács, Z. Horváth and P. Vecsernyés: "Lattice classification of the four-dimensional heterotic strings" *Phys. Lett.* **B197**, 395 (1987)
60. P. Forgács, Z. Horváth, L. Palla and P. Vecsernyés: "Higher level Kac-Moody representations and rank reduction in string models" *Nucl. Phys.* **B308**, 477 (1988)
61. P. Forgács, Z. Horváth, L. Palla and P. Vecsernyés: "New heterotic string theories in ten dimensions" *ITP Budapest Report* No.459 (1988)
62. M.G. Benedict, L.Gy. Fehér and Z. Horváth: "Monopoles and instantons from Berry's phase" *J. Math. Phys.* **30**, 1727 (1989)
63. Z. Horváth, L. Palla and P. Vecsernyés: "BRS cohomology and 2d gravity" *Int. J. Mod. Phys.* **A4**, 5261 (1989)
64. Z. Horváth and L. Palla: "Twisted strings and higher level Kac-Moody representations" *Phys. Lett.* **B229**, 368 (1989)
65. J. Balog, P. Forgács, Z. Horváth and P. Vecsernyés: "Lattice classification of 8-dimensional chiral heterotic strings" *Nucl. Phys.* **B334**, 431 (1990)
66. Z. Horváth: "Induced two-dimensional supergravity as a theory of free fields" *Phys. Lett.* **B234**, 30 (1990)
67. Z. Horváth: "Induced two-dimensional gravity and BRST cohomology" *Relativity Today* ed. by Z. Perjés, Nova Science Publications Inc., New York 1992, p. 265-272
68. J. Balog, P. Forgács, Z. Horváth and L. Palla: "A new family of SU(2) symmetric integrable sigma models" *Phys. Lett.* **B324**, 403 (1994)

69. C. Duval, Z. Horváth, P.A. Horváthy: "Vanishing of the conformal anomaly in a gravitational wave" *Phys. Lett.* **B313**, 10 (1993)
70. C. Duval, Z. Horváth, P.A. Horváthy: "Strings in plane-fronted gravitational waves" *Mod. Phys. Lett.* **A8**, 3749 (1993)
71. C. Duval, Z. Horváth, P.A. Horváthy: "The Nappi-Witten example and gravitational waves": hep-th/9404018
72. Z. Horváth, G. Takács: "Free field representation for the $O(3)$ nonlinear sigma model and bootstrap fusion" *Phys. Rev.* **D51**, 2922 (1995)
73. P. Forgács, Z. Horváth, P.A. Horváthy and L. Palla: "The Nappi-Witten string in the light-cone gauge", in the Wigner memorial volume of *Acta Physica Hun. New Series Heavy Ion Phys.* **1**, 65 (1995)
74. P. Forgács, Z. Horváth, P.A. Horváthy: "Bogomolny type equations for gravitating gauged sigma models" *Phys. Lett.* **B340**, 231 (1994)
75. Z. Horváth, G. Takács: "Form-factors of the sausage model obtained with bootstrap fusion from Sine-Gordon theory" *Phys. Rev.* **D53**, 3272 (1996)
76. J. Balog, P. Forgács, Z. Horváth and L. Palla: "Perturbative quantum (in)equivalence of dual σ models in 2 dimensions" *Nucl. Phys. B* (Proc. Suppl.) **B49**, 16 (1996)
77. J. Balog, P. Forgács, Z. Horváth and L. Palla: "Quantum corrections of Abelian duality transformations" *Phys. Lett.* **B388**, 121 (1996)
78. J. Balog, P. Forgács, Z. Horváth and L. Palla: "On the one loop equivalence of dual σ models" *Acta Phys. Hun. New Ser. Heavy Ion Phys.* **5**, 101 (1997)
79. Z. Horváth, R.L. Karp and L. Palla: "On quantum equivalence of dual sigma models: $SL(3)$ examples" *Nucl. Phys.* **B490**, 435 (1997)
80. J. Balog, P. Forgács, Z. Horváth and L. Palla: "Quantum corrections of Abelian duality transformations in sigma models" *Nucl. Phys. B* (Proc. Suppl.) **B56**, 16 (1997)
81. Z. Horvath, Robert L. Karp and L. Palla: "A two loop test of Buscher's T duality" *Phys. Rev.* **D62**, 045005 (2000)
82. C. Duval, Z. Horvath and P.A. Horvathy: "Exotic plasma as classical Hall liquid" *Int.J.Mod.Phys.* **B15**, 3397 (2001)
83. Z. Horvath, O. Lechtenfeld and M. Wolf: "Noncommutative instantons via dressing and splitting approaches" *J. High Energy Phys.* **JHEP 12**, 060 (2002)

Szerkesztett kötetek

1. GAUGE THEORIES AND LEPTON HADRON INTERACTIONS.
PROCEEDINGS, SYMPOSIUM ON PARTICLE PHYSICS,
VISEGRAD, HUNGARY SEPTEMBER 1-4, 1981.
By Z. Horvath, (ed.), L. Palla, (ed.), G. Pocsik, (ed.) (Eotvos U.), G. Vesztergombi,
(ed.) (Budapest, RMKI). 1982. Budapest, Hungary: Cent. Res. Inst. Phys. (1982)
437p.
2. NONPERTURBATIVE METHODS IN QUANTUM FIELD THEORY.
PROCEEDINGS, WORKSHOP AND CONFERENCE,
SIOFOK, HUNGARY, SEPTEMBER 1-7, 1986.
By Z. Horvath, (Ed.), L. Palla, (Ed.), A. Patkos, (Ed.) (Eotvos U.). 1987. SINGA-
PORE, SINGAPORE: WORLD SCIENTIFIC (1987) 416p.
3. FRONTIERS IN NONPERTURBATIVE FIELD THEORY.
PROCEEDINGS, WORKSHOP AND CONFERENCE,
EGER, HUNGARY, AUGUST 18-23, 1988.
By Z. Horvath, (ed.), L. Palla, (ed.), A. Patkos, (ed.) (Eotvos U.). 1989. Singapore,
Singapore: World Scientific (1989) 455 p.
4. NONPERTURBATIVE METHODS IN LOW DIMENSIONAL QUANTUM FIELD
THEORIES.
PROCEEDINGS, 14TH JOHNS HOPKINS WORKSHOP ON CURRENT PROB-
LEMS IN PARTICLE THEORY,
DEBRECEN, HUNGARY, AUGUST 27-30, 1990.
By G. Domokos, (ed.), Z. Horvath, (ed.), S. Kovesi- Domokos, (ed.) (Johns Hopkins
U. and Eotvos U.). 1991. Singapore, Singapore: World Scientific (1991) 490 p.
5. PARTICLES AND THE UNIVERSE.
PROCEEDINGS, 17TH JOHNS HOPKINS WORKSHOP ON CURRENT PROB-
LEMS IN PARTICLE THEORY,
BUDAPEST, HUNGARY, JULY 30 - AUGUST 1, 1993.
By Z. Horvath, (ed.), L. Palla, (ed.), A. Patkos, (ed.) (Eotvos U.). 1994. Singapore,
Singapore: World Scientific (1994) 498 p. (Johns Hopkins workshop proceedings, 17).
6. CONFORMAL FIELD THEORIES AND INTEGRABLE MODELS.
PROCEEDINGS, EOTVOS GRADUATE COURSE,
BUDAPEST, HUNGARY, AUGUST 13-18, 1996.

By Z. Horvath, (ed.), L. Palla, (ed.) (Eotvos U.). 1997. Published in Berlin, Germany: Springer (1997) in (Lecture notes in physics. 498) 250 p

7. NONPERTURBATIVE QFT METHODS AND THEIR APPLICATIONS.

PROCEEDINGS, 24TH JOHNS HOPKINS WORKSHOP ON CURRENT PROBLEMS IN PARTICLE THEORY,

BUDAPEST, HUNGARY, AUGUST 19-21, 2000.

By Z. Horvath, (ed.), L. Palla, (ed.) (Eotvos U.). 2001. 459pp. Published in Singapore, Singapore: World Scientific (2001) 459 p

Magyar nyelvű publikációk

1. Horváth Zalán és Pócsik György: "A rugalmas pion-nukleon szórás" *Magyar Fizikai Folyóirat XVII*, 127 (1968)
2. Z. Horváth: "A kvantumelektrodinamika kísérleti bizonyítékai" *Fizika 77* Gondolat, Budapest 1978
3. Horváth Zalán és Tél Tamás: "Elméleti Fizikai Példatár II" Tankönyvkiadó, Budapest 1983
4. Horváth Zalán: "Részecskefizika példák"
Elméleti Fizikai Példatár IV Tankönyvkiadó, Budapest 1986
5. Horváth Zalán, Nagy Károly, Tompa Kálmán: "Fizika" **Tudománypolitika Magyarországon II. A diszciplínák művelése** Magyar Tudományos Akadémia, Budapest 2001