

J. Dittrich - list of publications

28.4.2011

1 Original Journal Papers

- [1.1] J. Dittrich, F. Janouch
On the Full Experiment in Weak Semileptonic Hyperon Decays
Czech. J. Phys. **B21**(1971), 25.
- [1.2] J. Dittrich, F. Janouch
On the Cancellation of Internal Bremsstrahlung for Relativistic Particles
Phys. Letters **34B**(1971), 363.
- [1.3] M. Uhlíř, J. Dittrich
Zero-Mass Scalar and Electrostatic Fields with the Central Symmetry in the General Relativity
Czech. J. Phys. **B23**(1973), 1.
- [1.4] J. Dittrich
On the Process $eZ \rightarrow Z\mu\bar{\nu}_\mu\nu_e$
Nucl. Phys. **B90**(1975), 35.
- [1.5] J. Dittrich
Muon Spectra for the Process $eZ \rightarrow Z\mu\bar{\nu}_\mu\nu_e$
Czech. J. Phys. **B27**(1977), 719.
- [1.6] J. Dittrich
A Dynamical Topology for the Space of States
Czech. J. Phys. **B29**(1979), 1342.

- [1.7] J. Dittrich Asymptotic Behaviour of the Classical Scalar Fields and Topological Charges
Commun. Math. Phys. **82**(1981), 29.
- [1.8] J. Dittrich
Lorentz-Symmetric Solutions of Nonlinear Equations
Czech. J. Phys. **B32**(1982), 625.
- [1.9] J. Dittrich
Conservation of Topological Charges for Finite-Action Fields
Czech. J. Phys. **B34**(1984), 832.
- [1.10] J. Dittrich
On the Topological Charge Conservation in the Three-Dimensional $O(3)$ σ -Model
Aplikace matematiky **29**(1984), 367.
- [1.11] J. Dittrich, P. Exner
Tunneling through a Singular Potential Barrier
J. Math. Phys. **26**(1985), 2000.
- [1.12] J. Dittrich, P. Exner
Proton Decay Cannot Be Suppressed Kinematically
Phys. Rev. **D32**(1985), 1170.
- [1.13] J. Dittrich, P. Exner
Nonexistence of Finite-Energy Solutions in Some Gauge Models
Czech. J. Phys. **B36**(1986), 1255.
- [1.14] J. Dittrich, P. Exner
A Non-Relativistic Model of Two-Particle Decay. I. Galilean Invariance
Czech. J. Phys. **B37**(1987), 503.
- [1.15] J. Dittrich, P. Exner
A Non-Relativistic Model of Two-Particle Decay. II. Reduced Resolvent
Czech. J. Phys. **B37**(1987), 1028.

- [1.16] J. Dittrich, P. Exner
 A Non-Relativistic Model of Two-Particle Decay. III. The Pole Approximation
 Czech. J. Phys. **B38**(1988), 591.
- [1.17] J. Dittrich, P. Exner
 A Non-Relativistic Model of Two-Particle Decay. IV. Relation to the Scattering Theory, Spectral Concentration, and Bound States
 Czech. J. Phys. **B39**(1989), 121.
- [1.18] J. Dittrich, P. Exner, P. Šeba
 Dirac Operators with Spherically Symmetric δ -shell interaction
 J. Math. Phys. **30**(1989), 2875.
- [1.19] J. Dittrich, P. Exner, P. Šeba
 Dirac Hamiltonian with Coulomb Potential and Spherically Symmetric Shell Contact Interaction
 J. Math. Phys. **33**(1992), 2207.
- [1.20] J. Dittrich, V. I. Inozemtsev
 On the Structure of Eigenvectors of the Multidimensional Lamé Operator
 J. Phys. A: Math. Gen. **26**(1993), L753.
- [1.21] J. Dittrich, P. Duclos, P. Šeba
 Instability in a Classical Periodically Driven String
 Phys. Rev. **E49**(1994), 3535.
- [1.21] J. Dittrich, V. I. Inozemtsev
 On the Two-Magnon Bound States for the Quantum Heisenberg Chain with Variable Range Exchange
 Mod. Phys. Lett. **B11**(1997), 453.
- [1.22] J. Dittrich, V. I. Inozemtsev
 On the Second-Neighbour Correlator in 1D XXX Quantum Antiferromagnetic Spin Chain
 J. Phys. A: Math. Gen. **30**(1997), L623.
- [1.23] J. Dittrich, P. Duclos, N. Gonzalez
 Stability and Instability of the Wave Equation Solutions in a Pulsating

Domain
Rev. Math. Phys. **10**(1998), 925.

- [1.24] J. Dittrich, J. Kříž
Curved planar quantum wires with Dirichlet and Neumann boundary conditions
J. Phys. A: Math. Gen. **35**(2002), L269.
- [1.25] J. Dittrich, J. Kříž
Bound states in straight quantum waveguides with combined boundary conditions
J. Math. Phys. **43**(2002), 3892-3915.
- [1.26] J. Dittrich, P. Duclos
Massive scalar field in a one-dimensional oscillating region
J. Phys. A: Math. Gen. **35**(2002), 8213-8230.
- [1.27] V. V. Nesterenko, I. G. Pirozhenko, J. Dittrich
Non-smoothness of the boundary and the relevant heat kernel coefficients
Class. Quantum Grav. **20** (2003), 431-455.
- [1.28] J. Dittrich, V. I. Inozemtsev
On the ground state of ferromagnetic Hamiltonians
Czech. J. Phys. **54** (2004), 775-779.
- [1.29] J. Dittrich, P. Exner, M. Hirokawa
A model of interband radiative transition
J. Math. Soc. Japan **56** (2004), 753-786.
- [1.30] J. Dittrich, V. I. Inozemtsev
Analytic proof of the Sutherland conjecture
Yad. Fiz. **68** (2005), 1721-1723.
- [1.31] J. Dittrich, V. I. Inozemtsev
The Commutativity of Integrals of Motion for Quantum Spin Chains and Elliptic Functions Identities
Regular and Chaotic Dynamics **13** (2008), 19-26.

- [1.32] J. Dittrich, V. I. Inozemtsev
Towards the proof of complete integrability of quantum elliptic many-body systems with spin degrees of freedom. *Regular and Chaotic Dynamics* **14** (2009), 218-222.
- [1.33] J. Dittrich
Integer topological charges for finite energy fields in the $O(3)$ σ -model. *J. Phys. A: Math. Theor.* **43** (2010), 474016 (9 pp).

2 Preprints and Reports (unpublished elsewhere)

- [2.1] J. Dittrich, F. Janouch
Semileptonic Decays of Hyperons
Report ÚJV 2400-F/1970 (Nuclear Research Institute CSAS, Řež, 1970)

3 Proceedings Contributions

- [3.1] J. Dittrich
Weak electroproduction of muons (*in Czech*)
Proc. 4th Conf. Czechoslovak Physicists, Academia, Prague 1976, p. 275.
- [3.2] J. Dittrich
Generalized Topological Charges for a σ -Model
Quantum Chromodynamics (Proc. Extended Triangle Meeting Hadron Structure '80, Smolenice 1980). Ed. A. Nogová. VEDA, Bratislava 1982, p. 239.
- [3.3] J. Dittrich, P. Exner
The Influence of Localization upon the Proton Life-Time (*in Czech*)
Proc. 8th Conference of Czechoslovak Physicists (Bratislava 1985). Eds. J. Šebesta, P. Povinec. FVS JSMF, Bratislava 1985, p. 34.
- [3.4] J. Dittrich
Topological Charge Conservation in Gauge Theories

Proc. Conf. Hadron Structure '83. Ed. I. Lukáč. Physics and Applications Vol. 12/II, Institute of Physics SAS, Bratislava 1985, p. 355.

- [3.5] J. Dittrich, P. Exner
A Non-Relativistic Model of Two-Particle Decay: Resonance and Bound States
Proc. Conf. Hadron Structure '87. Ed. D. Krupa. Physics and Applications Vo. 14, Institute of Physics SAS, Bratislava 1988, p. 247.
- [3.6] J. Dittrich, P. Exner, P. Šeba
Dirac Hamiltonian with Contact Interaction on a Sphere
Schrödinger Operators Standard and Nonstandard (Dubna 1988). Eds. P. Exner, P. Šeba. World Scientific, Singapore 1989, p. 191.
- [3.7] J. Dittrich, P. Exner, P. Šeba
Dirac Hamiltonian with Coulomb Potential and Contact Interaction on a Sphere
Order, Disorder and Chaos in Quantum Systems (Dubna 1989). Eds. P. Exner, H. Neidhardt. Operator Theory: Advances and Applications Vol. 46, Birkhäuser, Basel 1990, p. 209.
- [3.8] J. Dittrich, P. Duclos, P. Šeba
Classical d'Alembert Field in an One-Dimensional Pulsating Region
Mathematical Results in Quantum Mechanics. Eds. M. Demuth, P. Exner, H. Neidhardt, V. Zagrebnov. Birkhäuser, Basel 1994, p. 259.
- [3.9] J. Dittrich, P. Duclos, N. Gonzalez
D'Alembert Field Driven by a Periodically Moving Wall
Proc. Xth Int. Conf. Problems of Quantum Field Theory (Alushta 1996). Eds. D. V. Shirkov, D. I. Kazakov, A. A. Vladimirov. JINR, Dubna 1996, p. 166.
- [3.10] J. Dittrich, P. Duclos, N. Gonzalez
Massless Scalar Field in a Region with the Boundary Periodically Varied in Time (*in Czech*)
Proc. 12th Conf. Czech and Slovak Physicists, Vol. II. Eds. M. Lesňák, J. Luňáček, J. Pištora. Technical University Ostrava, 1996, p. 407.

- [3.11] J. Dittrich, J. Kříž
 Bound states in straight quantum waveguides with combined boundary condition (*in Czech*)
 Proc. 14th Conf. Czech and Slovak Physicists, Vol. II. Eds. P. Baroch, M. Kubásek, Š. Potocký. University of West Bohemia, Pilsen, 2002, p. 601 - 605.
- [3.12] J. Dittrich, J. Kříž
 Straight quantum waveguides with combined boundary conditions
 Mathematical Results in Quantum Mechanics QMATH-8 (Taxco, Mexico, 2001) . Eds. R. Weder, P. Exner, B. Grébert. Contemporary Mathematics Vol. 307, American Mathematical Society, Providence, 2002, p. 107-112.
- [3.13] J. Dittrich, V. V. Nesterenko, I. G. Pirozhenko
 Quantum mechanics with interface
 15th Conf. Slovak and Czech Physicists Proceedings (Košice, 2005). Eds. J. Kováč, M. Reiffers. Slovak Physical Society, Košice, 2006, p. 13-14.
- [3.14] J. Dittrich, V. I. Inozemtsev
 Integrals of motion for quantum spin chains with elliptic Weierstrass function interaction
 16-th Conf. Czech and Slovak Physicists Proceedings (Hradec Králové, 2008). Ed. J. Kříž. MAFY, Hradec Králové, 2009, p. 302-304.

4 Papers without Original Results - reviews, reports on conferences etc.

- [4.1] J. Dittrich, J. Hošek
 Neutral Currents Discovered? (*in Czech*)
 Čs. čas. fyz. **A24**(1974), 610.
- [4.2] J. Dittrich
 XVI. Winter School on Nuclear Physics (*in Czech*)
 Čs. čas. fyz. **A27**(1977), 642.

- [4.3] J. Dittrich, S. Němeček
 JINR-CERN School of Physics 1979 (*in Czech*)
 Čs. čas. fyz. **A30**(1980), 634.
- [4.4] J. Dittrich
 Gauge Theories: Fundamental Interactions and Rigorous Results (*in Czech, a report on summer school*)
 Čs. čas. fyz. **A32**(1982), 193.
- [4.5] J. Dittrich, M. Vymazal, J. Hladký
 XXII. International Conference on the High Energy Physics (*in Czech*)
 Čs. čas. fyz. **A35**(1985), 295.
- [4.6] J. Dittrich
 Applications of the Self-Adjoint Extensions in Quantum Physics (*in Czech, a report on conference*)
 Čs. čas. fyz. **A38**(1988), 409.
- [4.7] J. Dittrich
 Nuclear Winter (*in Czech*)
 Vesmír **68**(1989), 535.
- [4.8] J. Dittrich, J. Janta, T. Jungwirth, M. Nývlt, P. Zakouřil
 Trends in Physics: 10th International Conference of EPS (*in Czech*)
 Čs. čas. fyz. **46**(1996), 265.
- [4.9] J. Dittrich, J. Fischer
 With Professor Herwig Schopper on the Physics, CERN and EPS (*Interview for the Čs. čas. fyz., in Czech*)
 Čs. čas. fyz. **47**(1997),107.
- [4.10] J. Dittrich, P. Wyslych
 12th Conference of Czech and Slovak Physicists (*in Czech*)
 Čs. čas. fyz. **47**(1997), 320.
- [4.11] J. Dittrich
 Activity Report of the Physics Scientific Section UCMP for 1998 (*in Czech*)
 Čs. čas. fyz. **49**(1999), 72.

- [4.12] J. Dittrich, V. Kroha, J. Rameš
 Structure and Interactions of Nuclear and Subnuclear Particles (*in Czech*)
 Akademický Bulletin (2001), No. 9, 16.
- [4.13] J. Dittrich, Z. Kluiber, J. Obdržálek, Š. Zajac
 The International Year of Physics 2005 Started (*in Czech*)
 Čs. čas. fyz. **54**(2005), 68.

5 Edited Volumes

- [5.1] J. Dittrich, P. Exner (editors)
 Rigorous Results in Quantum Dynamics (Proc. Conf. Liblice 1990)
 World Scientific, Singapore 1991.
- [5.2] J. Dittrich, P. Exner, M. Tater (editors)
 Mathematical Results in Quantum Mechanics (Proc. Conf. Prague 1998)
 Operator Theory Advances and Applications Vol. 108
 Birkhäuser, Basel 1999.
- [5.3] J. Dittrich (editor)
 Papers of the Czech-Taiwanese Workshop on the Intermediate- and High-Energy Physics (Prague, March 3-5, 2003)
 Czech. J. Phys. **53** (2003), No. 8.
- [5.4] V. Brabec, J. Dittrich, E. Těšínská (editors)
 Nuclear Physics Institute ASCR – 50 years – Řež 1955-2005 (*in Czech*)
 ISBN 80-239-5526-8. Nuclear Physics Institute ASCR, Řež, 2005.
- [5.5] E. Těšínská, V. Brabec, J. Dittrich (editors)
 50 years of Nuclear Physics Institute ASCR 1955-2005. Memoirs of witnesses (*in Czech*)
 Report NPI ASCR Řež, GEN-01/2005.