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SCHOLARLY PUBLICATIONS AND CREATIVE ACHIEVEMENTS

ARTICLES (in refereed journals):


(with J. Wang) Bound state solutions of the Klein-Gordon equation for the Mathews-Lakshmanan oscillator, Few-Body Syst. 55 (2014), 1223-1232


(with J. Garcia-Ravelo, A Menendez and J. Garcia-Martinez) Effective Kratzer and Coulomb potentials as limit cases of a multiparameter exponential-type potential, Phys. Lett. A 378 (2014), 2038–2042

(with B. Roy) Rational extension and Jacobi-type Xm solutions of a quantum nonlinear oscillator, J. Math. Phys. 54 (2013), 122104 (12pp)


Comment on "Nonsingular parametric oscillators Darboux-related to the classical harmonic oscillator" by H.C. Rosu et al., Europhys. Lett. 101 (2013), 30001 (2pp)


Explicit higher-dimensional Darboux transformations for the time-dependent Schrödinger equation, Algebraic Aspects of Darboux Transformations, Quantum Integrable Systems and Supersymmetric Quantum Mechanics, AMS Contemporary Mathematics series 563 (2012)


(with H. Cobian), Time-dependent Schrödinger equations with effective mass in (2+1) dimensions: intertwining relations and Darboux operators, J. Phys. A 44 (2011), 285301 (14pp)


Exact quantization formula for affine linearly energy-dependent potentials, Cent. Eur. J. Phys. 9 (2010), 57-64


Intertwining relations and Darboux transformations for Schrödinger equations in (n+1) dimensions, J. Math. Phys. 51 (2010), 033521 (11 pp)


(with J. Carballo Jimenez). Darboux transformations for the time-dependent nonhomogeneous Burgers equation in (1+1) dimensions, Phys. Scripta 80 (2009), 065014 (8pp)


"A simple method for constructing non-liouvillian integrals of autonomous planar systems." 


"Darboux transformations for time-dependent Schrödinger equations with effective mass."

"Quantum systems with effective and time-dependent masses: form-preserving transformations and reality conditions."

"Comment on: D.-Y. Song and J.R. Klauder, 'Generalization of the Darboux transformation and generalized harmonic oscillators.'"


"On quasi-exact solvability of the Schrödinger equation for a free particle on the surface of a spindle torus."

"Form-preserving transformations of the time-dependent Schrödinger equation with time and position-dependent mass."

"Orbitally asymptotically stable periodic solutions of delay equations with positive feedback."

"Exact wavefunctions and energies of a non-relativistic free quantum particle on the surface of a degenerate torus."

"Non-existence of liouvillian solutions for a free quantum particle on a torus surface, part 1: polar states."


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