

1. Record Nr.	UNINA9910451338603321
Titolo	Symmetry and perturbation theory [[electronic resource]] : proceedings of the International Conference SPT 2007, Otranto Italy, 2-9 June 2007 / / edited by Giuseppe Gaeta, Raffaele Vitolo, Sebastian Walcher
Pubbl/distr/stampa	Singapore, : World Scientific, c2007
ISBN	1-281-92901-8 9786611929015 981-277-617-6
Descrizione fisica	1 online resource (xiii, 295 p.) : ill
Altri autori (Persone)	GaetaGiuseppe <1959-> VitoloRaffaele WalcherSebastian
Disciplina	539.725
Soggetti	Symmetry (Physics) Perturbation (Mathematics) Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Homogeneous bi-lagrangian manifolds and invariant Monge-Ampere equations / D. Alekseevsky & A. Spiro -- On Darboux integrability / I. M. Anderson, M.E. Fels & P.J. Vassiliou -- Integrable systems in symplectic geometry / E. Asadi & J.A. Sanders -- Singularities and collisions in N-body type problems / V. Barutello & S. Terracini -- Computing curvature without Christoffel symbols / S. Benenti -- Survey of strong nonlocal-integral k : resonances in quasi-periodically driven oscillators for l = 1,2,3 / H. Broer, R. van Dijk & R. Vitolo -- Quasi-periodic attractors and spin-orbit resonances / A. Celletti & L. Chierchia -- Darboux construction of solutions of integrable PDEs with nonvanishing boundary values / A. Degasperis & S. Lombardo -- Transitive decomposition of n-body symmetry groups / D. Ferrario -- Normal forms for commuting vector fields near a common fixed point / T. Gramchev & M. Yoshino -- A monkey saddle in rigid body dynamics / H. Hanssmann -- Nonlocal geometry of PDEs and integrability / J. Krashil'shchik -- Anomaly of linearization and auxiliary integrals / B.

Kruglikov -- Natural variational principles / D. Krupka -- Variational exterior differential systems / O. Krupkova -- On the relation between formal groups, Appell polynomials and hyperfunctions / S. Marmi & P. Tempesta -- Variational [symbol]- symmetries and deformed Lie derivatives / P. Morando -- Maurer-Cartan forms for symmetry pseudo-groups and coverings of differential equations / O.I. Morozov -- Fuzzy fractional monodromy / N.N. Nekhoroshev -- On the correspondence between differential equations and symmetry algebras / F. Oliveri, G. Manno & R. Vitolo -- Moving frames and differential invariants for Lie pseudo-groups / P.J. Olver & J. Pohjanpelto -- Periodic solutions for a class of non-linear Schroedinger equations in  $D > 1$  spatial dimensions / M. Procesi -- Singular perturbation for discontinuous ordinary differential equations / M.A. Teixeira & P.R. Da Silva -- Continuation of periodic solutions in conservative and reversible systems / A. Vanderbauwhede -- Emergence of slow manifolds in nonlinear wave equations / F. Verhulst -- Superintegrable systems with spin in two- and three-dimensional euclidean spaces / P. Winternitz & . Yurduen -- Generalization of Hamiltonian monodromy. Quantum manifestations / B. Zhilinskii -- Internal flow through a conducting thin duct via symmetry analysis / M.B. Abd-el-Malek & H.S. Hassan -- Contact geometry of parabolic Monge-Ampère equations / R. Alonso Blanco, G. Manno & F. Pugliese -- Complete symmetry groups and Lie remarkable / K. Andriopoulos -- Quantum wave equations in curved space-time wave mechanics / M. Arminjon -- Nonlocal interpretation of [symbol]-symmetries / D. Catalano Ferraioli -- R-separation for the conformal Laplacian / C. Chanu, M. Chanachowicz & R.G. McLenaghan -- Asymptotic behavior of a bouncing ball / A.M. Cherubini, G. Metafune & F. Paparella -- Discontinuous solutions for the Degasperis-Procesi equation / G.M. Coclite & K.H. Karlsen -- Variational Poisson-Nijenhuis structures for evolution PDEs / V. Golovko -- Analytic approximations of geometric maps and applications to KAM theory / A. Gonzalez-Enríquez & R. de la Llave -- A method to construct asymptotic solutions invariant under the renormalization group / M. Iwasa -- Utiyama's reduction method and infinitesimal symmetries of invariant Lagrangians / J. Janyška -- Stability of the tethered satellite system relative equilibria. Unrestricted problem / I.I. Kosenko & S.Ya. Stepanov -- Globally minimizing parabolic motions in the Newtonian N-body problem / E. Maderna & A. Venturelli -- Geodesically equivalent flat bi-cofactor systems / K. Marciniak -- Symmetry group and symplectic structure for exotic particles in the plane / L. Martina -- Some properties of the dynamics of two interacting particles in a uniform magnetic field / D. Pinheiro & R.S. Mackay -- On the dihedral n-body problem / A. Portaluri -- Lax representation for integrable OEs / O. Rojas, P. van der Kamp & G.R. W. Quispel -- Pseudorotational spectra of molecules and isoparametric geometry / A.R. Rutherford -- Darboux integrable hyperbolic PDE in the plane of generic type: a classification by means of Cartan tensor and Maple / F. Strazzullo -- Towards global classifications: a diophantine approach / P. van der Kamp -- The Hopf-saddle-node bifurcation for fixed points of 3D-diffeomorphisms / R. Vitolo, H. Broer & C. Simó -- Relative invariants for Lie algebras: construction and applications / I. Yehorchenko.

---

## Sommario/riassunto

"This proceedings volume is devoted to the interplay of symmetry and perturbation theory, as well as to cognate fields such as integrable systems, normal forms, n-body dynamics and choreographies, geometry and symmetry of differential equations, and finite and infinite dimensional dynamical systems. The papers collected here provide an up-to-date overview of the research in the field, and have many

leading scientists in the field among their authors, including: D Alekseevsky, S Benenti, H Broer, A Degasperis, M E Fels, T Gramchev, H Hanssmann, J Krashil'shchik, B Kruglikov, D Krupka, O Krupkova, S Lombardo, P Morando, O Morozov, N N Nekhoroshev, F Oliveri, P J Olver, J A Sanders, M A Teixeira, S Terracini, F Verhulst, P Winternitz, B Zhilinskii."

---