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Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Preface -- 40 years of the Workshop with Anatol Odziejewicz -- Wigner Medal 2023 -- Part I. Session in memory of Anatol Odziejewicz -- On the geometry of coherent state maps -- Groupoid techniques in operator theory -- Integrable system on partial isometries: a finite dimensional picture -- The restricted Siegel disc as coadjoint orbit -- Geometric quantization (55 years later) -- Deformation of Functions by Star Product -- Part II. Session: Facets of the Yang-Baxter Equation -- Special normalised affine matrices. An example of a Lie affgebra -- Twisted Araki-Woods Algebras, the Yang-Baxter Equation, and quantum field theory -- Skew braces and the braid equation on sets -- Skew braces: a brief survey -- Part III. General contributions on geometric methods in physics -- How birefringence arises from

nonlinear electrodynamics -- Lp-Cuntz algebras and spectrum of
 weighted composition operators -- On Automorphisms of Complex
 bk-Manifolds -- Spherical pedal coordinates and calculus of variations
 -- Higher order curvature corrections in the Raychaudhuri equation --
 Yangians as pre-Lie and tridendriform algebras -- Hermite–Padé
 approximation, multiple orthogonal polynomials, and multidimensional
 Toda equations -- “The six blind men and the elephant”: An
 interdisciplinary selection of measurement features -- Notes on the
 degenerate integrability of reduced systems obtained from the master
 systems of free motion on cotangent bundles of compact Lie groups --
 A quadric of kinetic energy in the role of phase diagrams – application
 to the Belinski-Khalatnikov-Lifshitz scenario -- Hamiltonian structure
 of isomonodromic deformation dynamics in linear systems of PDE's --
 Discrete mechanics in non-uniform time -lattices -- Quantum
 Derivation and Mishchenko-Fomenko Construction -- The Milgromian
 acceleration of MOND and the cosmological constant from precanonical
 quantum gravity -- A note on three collinear point charges --
 Conceptual Problems in Quantum Squeezing -- Lie Symmetry Analysis
 of the Charney- Hasegawa-Mima equation -- Stability Theorem for
 Zn2-Lie supergroups -- The Courant type algebroids, the coadjoint
 orbits and related integrable flows -- Part IV. Abstract of a Lecture at
 “XII School on Geometry and Physics” -- Kronecker webs and nonlinear
 PDEs -- Index.

Sommario/riassunto

This volume collects papers based on lectures given at the XL
 Workshop on Geometric Methods in Physics, held in Biaowiea, Poland
 in July 2023. These chapters provide readers an overview of cutting-
 edge research in infinite-dimensional groups, integrable systems,
 quantum groups, Lie algebras and their generalizations and a wide
 variety of other areas. Specific topics include: Yang-Baxter equation
 The restricted Siegel disc and restricted Grassmannian Geometric and
 deformation quantization Degenerate integrability Lie algebroids and
 groupoids Skew braces Geometric Methods in Physics XL will be a
 valuable resource for mathematicians and physicists interested in
 recent developments at the intersection of these areas.
