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Nota di contenuto	Preface -- Gérard Emch in memoriam -- The Gérard I knew for 60 years! -- Pseudo-bosons and Riesz bi-coherent states -- Entropy of completely positive maps and applications to quantum information theory -- Some comments on indistinguishable particles and interpretation of the quantum mechanical wave function -- Hyperbolic Flows and the Question of Quantum Chaos -- A New Proof of the Helton-Howe-Carey-Pincus Trace Formula -- Quasi-Classical Calculation of Eigenvalues – Examples and a Question -- Supergroup actions and harmonic analysis -- Representations of nilpotent Lie groups via measurable dynamical systems -- Symbolic interpretation of the Molien function: free and non-free modules of covariants -- Momentum Maps for Smooth Projective Unitary Representations -- Canonical representations for hyperboloids: an interaction with an overalgebra -- On p-adic colligations and `rational maps' of Bruhat-

Tits trees -- Resonances for the Laplacian: the cases BC2 and C2 (except SO<0(p,2) with p>2 odd) -- Howe's Correspondence and Characters -- Local inverse scattering -- Painlevé equations and supersymmetric quantum mechanics -- Change in energy eigenvalues against parameters -- Time dependent Pais-Uhlenbeck oscillator and its decomposition -- Quantum walks in low dimension -- Center-symmetric algebras and bialgebras: relevant properties and consequences -- N-point Virasoro algebras considered as Krichever-Novikov type algebras -- Star products on graded manifolds and '-corrections to double field theory -- Adiabatic limit in Ginzburg-Landau and Seiberg-Witten equations -- Variational tricomplex and BRST theory -- Quantisation of Hitchin's moduli space of a non-orientable surface -- Ramadanov theorem for weighted Bergman kernels on complex manifolds -- A characterization of domains of holomorphy by means of their weighted Skwarczyski distance -- Science and its Constraints (an unfinished story).

Sommario/riassunto

This book features a selection of articles based on the XXXIV Biaowiea Workshop on Geometric Methods in Physics, 2015. The articles presented are mathematically rigorous, include important physical implications and address the application of geometry in classical and quantum physics. Special attention deserves the session devoted to discussions of Gerard Emch's most important and lasting achievements in mathematical physics. The Biaowiea workshops are among the most important meetings in the field and gather participants from mathematics and physics alike. Despite their long tradition, the Workshops remain at the cutting edge of ongoing research. For the past several years, the Biaowiea Workshop has been followed by a School on Geometry and Physics, where advanced lectures for graduate students and young researchers are presented. The unique atmosphere of the Workshop and School is enhanced by the venue, framed by the natural beauty of the Biaowiea forest in eastern Poland.