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Nota di contenuto	Contents ; Preface ; Part I. On the Mathematical Work of Krzysztof P. ; Selected Aspects of the Mathematical Work of Krzysztof P. Wojciechowski ; Gluing Formulae of Spectral Invariants and Cauchy Data Spaces ; Part II. Topological Theories The Behavior of the Analytic Index under Nontrivial Embedding Critical Points of Polynomials in Three Complex Variables ; Chern-Weil Forms Associated with Superconnections ; Part III. Heat Kernel Calculations and Surgery ; Non-Laplace Type Operators on Manifolds with Boundary Eta Invariants for Manifold with Boundary Heat Kernels of the Sub-Laplacian and the Laplacian on Nilpotent Lie Groups ; Remarks on Nonlocal Trace Expansion Coefficients ; An Anomaly Formula for L2-Analytic Torsions on Manifolds with

Boundary ; Conformal
Anomalies via Canonical Traces
Part IV. Noncommutative Geometry An Analytic
Approach to Spectral Flow in von Neumann Algebras
; Elliptic Operators on Infinite Graphs ; A
New Kind of Index Theorem ; A Note on
Noncommutative Holomorphic and Harmonic Functions on the Unit
Disk ; Star
Products and Central Extensions
An Elementary Proof of the Homotopy Equivalence between the
Restricted General Linear Group and the Space of Fredholm Operators
Part V. Theoretical Particle String and Membrane Physics and
Hamiltonian Dynamics
; T-DUALITY FOR NON-FREE CIRCLE ACTIONS
A New Spectral Cancellation in Quantum Gravity

Sommario/riassunto

Modern theory of elliptic operators, or simply elliptic theory, has been shaped by the Atiyah-Singer Index Theorem created 40 years ago. Reviewing elliptic theory over a broad range, 32 leading scientists from 14 different countries present recent developments in topology; heat kernel techniques; spectral invariants and cutting and pasting; noncommutative geometry; and theoretical particle, string and membrane physics, and Hamiltonian dynamics. The first of its kind, this volume is ideally suited to graduate students and researchers interested in careful expositions of newly-evolved achievements.
