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; An Anomaly Formula for L2-Analytic Torsions on Manifolds with  
Boundary ; Conformal  
Anomalies via Canonical Traces  
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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  
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; T-DUALITY FOR NON-FREE CIRCLE ACTIONS  
A New Spectral Cancellation in Quantum Gravity

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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.

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