



## TABLE OF CONTENTS

<b>Preface</b>		<b>v</b>
<b>Acknowledgements</b>		<b>vii</b>
<b>I. Yang-Baxter Algebra and Quantum Groups</b>		
<b>H. J. De Vega</b>	<b>Yang-Baxter Algebras, Integrable QFT and Conformal Models</b>	<b>3</b>
<b>Y. Kosmann-Schwarzbach</b>	<b>The Modified Yang-Baxter Equation and Bihamiltonian Structures</b>	<b>12</b>
<b>T. G. Pantev V. V. Tsanov</b>	<b>The Classical Yang-Baxter Equation and Triple Manin Systems</b>	<b>26</b>
<b>M. Forger</b>	<b>Solutions of the Yang-Baxter Equations from Field Theory</b>	<b>36</b>
<b>I. Cherednik</b>	<b>Quantum Groups as Hidden Symmetries of Classic Representation Theory</b>	<b>47</b>
<b>R. J. Lawrence</b>	<b>A Universal Link Invariant Using Quantum Groups</b>	<b>55</b>
<b>T. Kohno</b>	<b>Monodromy of Braid Groups in Conformal Field Theory and Positive Markov Traces</b>	<b>64</b>
<b>II. Quantum Field Theory</b>		
<b>B. Schroer</b>	<b>New Concepts and Results in Nonperturbative Quantum Field Theory</b>	<b>77</b>

<b>B. Grossman</b>	<b>Topological Quantum Field Theories</b>	<b>93</b>
<b>III. Gauge Theories and Strings</b>		
<b>K. Bleuler</b>	<b>Various Aspects of Gauge Theory</b>	<b>109</b>
<b>J. Kijowski</b> <b>G. Rudolph</b>	<b>Gauge-Invariant Path-Integral and Topological Degrees of Freedom for a Non-Abelian Higgs Model</b>	<b>116</b>
<b>L. Fehér</b> <b>P. A. Horváthy</b>	<b>Particle in a Self-Dual Monopole Field</b>	<b>130</b>
<b>J. Balog</b> <b>L. O'Raifeartaigh</b>	<b>Critical String Dimensions as Zero Curvature Conditions</b>	<b>138</b>
<b>F. Hegenbarth</b> <b>A. C. Hirshfeld</b>	<b>The Geometric Origin of BRS Symmetry</b>	<b>150</b>
<b>J. A. Dixon</b>	<b>Computing BRST Cohomology Using Spectral Sequences</b>	<b>159</b>
<b>C. J. Isham</b>	<b>Square Root of the Euler Class: Nowhere-Vanishing Spinors and Spacetime Topology</b>	<b>172</b>
<b>IV. Supermanifolds</b>		
<b>C. Bartocci, U. Bruzzo</b> <b>G. Landi</b>	<b>Cohomology of Supermanifolds, Standard Constraints and Quantum Anomalies</b>	<b>185</b>
<b>U. Bruzzo</b> <b>D. H. Ruipérez</b>	<b>A Theory of Chern Classes for Super Vector Bundles</b>	<b>197</b>
<b>A. Rogers</b>	<b>Path Integration on Supermanifolds</b>	<b>208</b>

<b>P. Bryant</b>	<b>Structure of Super Moduli Space: A Splitting Theorem for <math>ST(\Gamma)</math></b>	<b>219</b>
<b>J. M. Rabin</b>	<b>The Algebraic Geometry of Super Riemann Surfaces</b>	<b>230</b>
<b>V Mathematical Techniques</b>		
<b>J. Madore</b>	<b>Kaluza-Klein Aspects of Noncommutative Geometry</b>	<b>243</b>
<b>M. Batchelor</b>	<b>The Graded Manifold of Smooth Maps and the Virasoro Algebras</b>	<b>253</b>
<b>V. K. Dobrev</b>	<b>Extended Weyl Group for Kac-Moody Algebras</b>	<b>269</b>
<b>J. Ryan</b>	<b>Domains of Holomorphy as Initial Data for Dirac Equations in <math>\mathbb{C}^n</math></b>	<b>281</b>
<b>VI Specific Physical Problems</b>		
<b>R. K. Bullough S. Olafsson</b>	<b>Algebra of Riemann-Hilbert Problems and the Integrable Models — A Sketch</b>	<b>295</b>
<b>H. Römer</b>	<b>Spectral Asymmetry and Strong External Coulomb Fields</b>	<b>310</b>
<b>S. Catto</b>	<b>Hadronic Origins of Supersymmetry and the Role of Diquarks</b>	<b>320</b>
<b>W. F. Shadwick</b>	<b>On Geometric Formulations of Higher Order Mechanics</b>	<b>330</b>
<b>R. L. Hudson P. Robinson</b>	<b>Quantum Diffusions on the Noncommutative Torus and Solid State Physics</b>	<b>338</b>

<b>J. Masoliver, L. Garrido J. Llosa</b>	<b>Stationary Distributions for Singular Diffusion Processes</b>	<b>346</b>
<b>D. W. Wood</b>	<b>Classical Algebraic Geometry in Statistical Mechanics</b>	<b>355</b>
<b>List of Participants</b>		<b>365</b>
<b>List of Conferences in the Differential Geometric Methods in Theoretical Physics Series</b>		<b>367</b>

