

## TABLE OF CONTENTS

Preface	v
<b>I. Kac-Moody Groups, Algebras and Applications</b>	
Highest Weight Representations of Conformal Current Algebras	3
<i>V. Kac</i>	
Towards a Classification of Integrable Representations of Affine Lie Algebras	17
<i>V. Chari and A. Pressley</i>	
The Vertex Operator Construction for Non-Simply-Laced Kac-Moody Algebras I	29
<i>D. Olive</i>	
The Vertex Operator Construction for Non-Simply-Laced Kac-Moody Algebras II	37
<i>P. Goddard</i>	
A Supersymmetric Extension of Nonlinear Integrable Systems	59
<i>K. Ueno and H. Yamada</i>	
YBZF-Algebras, Kac-Moody Algebras and Integrable Theories	73
<i>H. de Vega</i>	
Multiplets of Verma Modules Over the $osp(2, 2)^{(1)}$ Super Kac-Moody Algebra	93
<i>V. Dobrev</i>	
On the Range of Unitarity for Highest Weight Representations of Classical Lie Superalgebras	103
<i>H. Jakobsen</i>	
Fibrés en droite sur les variétés de Schubert associées aux algèbres de Kac-Moody	111
<i>O. Mathieu</i>	
Kac-Moody Groups and the Dirac Determinant Line Bundle	117
<i>J. Mickelsson</i>	
$N = 2$ Superconformal Theories	133
<i>J. L. Petersen</i>	

Constructions of Fundamental Representations of Symplectic Affine Lie Algebras <i>K. Misra</i>	147
<b>II. String Theories and Conformal Field Theory</b>	
The Integrable Analytic Geometry of String Theory and Two Dimensional Conformal Field Theory <i>D. Friedan</i>	173
Strings and Conformal Geometry <i>E. Martinec</i>	177
Higher Symmetries in Conformal QFT Models <i>G. Sotkov, I. Todorov, M. Stanishkov and V. Trifonov</i>	195
Conformal Invariant Theories on a Torus and Their Modular Invariance <i>J. Zuber</i>	219
Hyperkähler Metrics and Supersymmetry <i>U. Lindström</i>	229
Conformal Invariance on Calabi-Yau Spaces <i>D. Nemeschansky</i>	247
<b>III. Anomalies and Other Applications</b>	
Anomalies and the Evaluation Map <i>L. Bonora, P. Cotta-Ramusino, M. Rinaldi and J. Stasheff</i>	255
Singlets: Fundamental Gauge Theory <i>M. Flato and C. Fronsdal</i>	273
BRST Current Algebra and Anomalies <i>L. Baulieu and B. Grossman</i>	291
Continuum Regularization of Quantum Field Theory <i>M. Halpern</i>	307
Quantum Hall Effect <i>K. Ishikawa</i>	315
Cohomologies and Deformations of “Gauge” Symmetries <i>B. Julia</i>	325

Algebraic and Hamiltonian Methods in the Theory of Non-Abelian Anomalies <i>P. Kulish</i>	341
Dynamics of Monopoles <i>N. Manton</i>	343
Contemporary Gravitational and Yang-Mills Theories – From Anomalies to Non-Commutative Geometry <i>C. Nash</i>	355
From Twistors to Supertwistors <i>J. Niederle</i>	373
Non-Abelian Chiral Anomaly in Superspace <i>N. K. Nielsen</i>	391
On the Topological Structure of SU(2) Gauge Theory: A Lattice Investigation <i>G. Schierholz</i>	407
Quantum Adiabatic Phases, Effective Actions and Anomalies <i>G. Semenoff</i>	433
<b>List of Participants</b>	<b>445</b>