

TABLE OF CONTENTS

Page

I. Superalgebras and supermanifolds

O. Sánchez-Valenzuela and S. Sternberg; The automorphism group of a Hermitian superalgebra	1
A. Crumeyrolle; Le principe de trialité, le principe d'interaction et les algèbres de Lie graduées orthosymplectiques	49
M. Batchelor; Graded manifolds and pairs	65

II. Superfield Theory

Y. Choquet-Bruhat; Mathematics for classical supergravities	73
U. Bruzzo; Lagrangian Gauge Theories on supermanifolds	91
A. López Almorox; Supergauge theories in graded manifolds	114
J. Muñoz Masqué and D.H. Ruipérez; Variational berezinian problems and their relationship with graded variational problems	137

III. Classical and quantized field theory

R. Kerner; Cosmology and Kaluza-Klein Theories	150
Y. Ne'eman; Strings: from hadron dual models to gravity, unification and the structure of space-time	175
C. Duval; The Dirac and Levy-Leblond equations and geometric quantization	205
J.D. Mc Crea; Poincaré gauge theory of gravitation: foundations, exact solutions and applications of computer algebra	222

IV. Differential Geometric Techniques

M. Modugno; Systems of vector valued forms on a fibred manifold and applications to gauge theories	238
J.A. Pereira da Silva; Essential extensions of some infinite dimensional Lie algebras	265
J. Gómez and F. Varela; Sur certaines expressions globales d'une forme volume .	284