

TABLE OF CONTENTS

FOREWORD	vii
BIOGRAPHICAL SKETCH	xi
LIST OF SELECTED SCIENTIFIC PUBLICATIONS	xix

PART ONE: FIELD THEORY AND QUANTIZATION

C. BECCHI, A. ROUET and R. STORA/Renormalizable Theories with Symmetry Breaking	3
J. CALMET and A. VISCONTI/Computing Methods in Quantum Electrodynamics	33
GERARD CLEMENT/Classical Mechanics of Autocomposite Particles	59
S. DESER/Exclusion of Static Solutions in Gravity-Matter Coupling	77
D. ARNAL, J. C. CORTET, M. FLATO and D. STERNHEIMER/ Star-Products: Quantization and Representations without Operators	85
R. GASTMANS/High Energy Tests of Quantum Electrodynamics	113
L. GOMBEROFF and E. K. MASCHKE/Non-Ideal Effects on the Stability of a Cylindrical Current-Carrying Plasma	123
LEOPOLD HALPERN/Broken Symmetry of Lie Groups of Trans- formation Generating General Relativistic Theories of Gravitation	147
J. C. HOUARD and M. IRAC-ASTAUD/Ward-Takahashi Identities and Gauge Invariance	161
A. PETERMAN/Towards the Early Stages of the Universe	183
G. RIDEAU/Covariant Quantizations of the Maxwell Field	201
F. STROCCHI/Gauss' Law in Local Quantum Field Theory	227
E. C. G. SUDARSHAN/Discrete States Buried in the Continuum	237

PART TWO: STATISTICAL PHYSICS

P. COULLET and C. TRESSER/Some Universal Aspects of the Transition to Stochasticity for Non-Conservative Dynamical Systems	249
CHARLES P. ENZ/Hydrodynamic Models with Random Forces	263
ARNO HOLZ/High-Temperature Study of Planar Rotator- and XY -Models for Dimensions $D \geq 2$	277
F. LANGOUCHE, D. ROEKAERTS and E. TIRAPEGUI/General Langevin Equations and Functional Integration	295
INDEX	319