

TABLE OF CONTENTS

Foreword		vii
Editor's Preface		xi
W. M. TULCZYJEW	Hamiltonian, canonical and symplectic formulations of dynamics	1
J. E. WHITE	Iterated tangents and Lagrangian dynamics	13
C.-M. MARLE	Poisson manifolds in mechanics	47
M. CAHEN and S. GUTT	Theory of deformations and group representations	77
J. LERAY	Application to the Schrödinger atomic equation of an extension of Fuchs Theorem	99
W. H. SHIH	On the Cauchy problem for the equation of a general fluid	109
J. LERAY	The meaning of W. H. Shih's result	139
J. F. POMMARET	The genesis of Galois Theory for systems of partial differential equations	141
S. GUIASU	Information theory and a stochastic model for evolution	149
L. NIRENBERG	On some variational methods	169
H. W. BROER	Quasi periodicity in local bifurcation theory	177
J. RAPPAZ	Numerical analysis of bifurcation problems for partial differential equations	209

M. GOLUBITSKY	The Bénard problem, symmetry and the lattice of isotropy subgroups	225
S. FAUVE and A. LIBCHABER	Rayleigh-Bénard experiments and dynamical systems	257
C. LOBRY and C. REDER	Micro compartmental systems	277
P. DOUSSON	Some mathematical problems arising from chemical kinetics and thermodynamics	299
F. A. GRÜNBAUM	The limited angle problem in tomography and some related mathematical problems	317
M. KLEMAN	Geometrical aspects in the physics of defects	331
Y. BOULIGAND	Some geometrical and topological problems in liquid crystals	357
INDEX		383
LIST OF PARTICIPANTS		387