

CONTENTS

Preface	v
Modelling, analysis and computation in phenomenological theories <i>C. Lo Surdo</i>	1
In quest of the biological soliton: the acetanilide case <i>A. Tenenbaum</i>	19
Molecular dynamics and material science <i>V. Rosato & A. Ventura</i>	39
Electron dynamics and transport simulations in the linear and nonlinear response domain <i>F. Cleri</i>	53
Numerical simulations of high dimensional hamiltonian dynamics <i>M. Pettini & M. Cerruti-Sola</i>	73
N-body simulations of collisionless gravitating systems <i>A. Messina</i>	88
Numerical simulation of compressible MHD turbulence <i>P. Londrillo</i>	101
Numerical techniques for semi-implicit MHD spectral codes <i>F. Rubini & F. Malara</i>	115
Microscopic and mesoscopic simulations of complex flows with cellular automata and related techniques <i>S. Succi, R. Benzi & M. Vergassola</i>	124
Nonlinear systems and climate dynamics <i>R. Legnani</i>	148
Synergetic applications of complex ordered processes <i>I. Purica</i>	163
Classifier systems as dynamical systems <i>R. Serra</i>	175

Stochastic processes and analog simulation	190
<i>L. Fronzoni & F. Cappello</i>	
Parallel architectures for simulation of complex systems	204
<i>A. Mathis</i>	
List of participants	217
Author index	228

