Contents

Part I	General Approaches	
On the Principles of Synergetics By A. Wunderlin		3
	of a Synergetics of Evolutionary Processes	42
-	brium Potentials ham and A. Hamm (With 2 Figures)	65
Part II	Lasers and Nonlinear Optics	
Spatio-Temporal Instabilities in Nonlinear Optical Systems By M. Brambilla, M. Cattaneo, L.A. Lugiato, R. Pirovano, C. Pitzen, and F. Prati (With 8 Figures)		83
of Laser In By D. Dan	with a Saturable Absorber: A Paradigm for the Study istabilities goisse, D. Hennequin, M. Lefranc, and P. Glorieux gures)	100
Dislocation	is in Laser Fields Veiss, Chr. Tamm, and K. Staliunas (With 17 Figures)	114
On the Role of Noise in Nonlinear Optics By A. Schenzle (With 6 Figures)		137
Part III	Fluid Dynamics and Solid State Physics	
	mation in Fluids – Variational and Non-Variational Models tehorn (With 20 Figures)	165
	heory of Planetary Magnetism and Laboratory Experiments usse (With 4 Figures)	197
Optical Lin	f Colored Noise on Energy Transport and be Shapes in Dimers	200
By Ch. Wa	rns and P. Reineker (With 4 Figures)	209

Part IV	Biology and Medicine	
Coordination Dynamics of Human Brain and Behavior By J.A.S. Kelso (With 3 Figures)		223
Brain Electric Fields and Brain Functional States By D. Lehmann		235
Petit-Mal E	Analysis of Human Electroencephalograms: pilepsy rich and C. Uhl (With 9 Figures)	249
Synergetics, By E. Başar	Resonance Phenomena and Brain Internal Codes , C. Başar-Eroglu, T. Demiralp, and M. Schürmann ures)	266
Synergetics, By O.G. Me	Self-Simplification, and the Ability to Undo eijer and R. Bongaardt (With 7 Figures)	272
Part V	Artificial Intelligence and Synergetic Computers	
Artificial Li By A. Mikh	fe: An Engineering Perspective ailov	301
Path Finding with a Network of Oscillators By A. Babloyantz and J.A. Sepulchre (With 7 Figures)		313
Artificial Sy	Approach to Phenomena of Perception in Natural and stems nger, A. Fuchs, and H. Haken (With 19 Figures)	321
Part VI	Psychology and Social Sciences	
Application By G. Schie	of Synergetics to Psychology pek (With 20 Figures)	341
Organization By W. Tscha	and Self-Organization acher and E.J. Brunner (With 2 Figures)	382
Part VII	Epistemology	
Schelling's (Concept of Self-Organization	
	euser-Keßler	395
Index of Co	ntributors	417