

# Economic Dynamics from the Physics Point of View

Selected papers from the International Workshop  
*Economic Dynamics from the Physics Point of View*  
(229. WE Heraeus Seminar)  
Physikzentrum Bad Honnef, Germany 27–30 March 2000

*Physica A* · vol. 287 no. 3-4 · 2000 (352+x pp.)  
*Guest Editors:* Frank Schweitzer, Dirk Helbing

<b>Guest Editorial</b>	iv-v
F. Schweitzer, D. Helbing	
<i>I Time Series Analysis of Economic Data</i>	
<b>Quantifying Fluctuations in Economic Systems by Adapting Methods of Statistical Physics</b>	339–361
H. E. Stanley	
<b>Scaling and Correlation in Financial Time Series</b>	362–373
P. Gopikrishnan, V. Plerou, Y. Liu, L. A. N. Amaral, X. Gabaix, H. E. Stanley	
<b>A Random Matrix Theory Approach to Financial Cross-Correlations</b>	374–382
V. Plerou, P. Gopikrishnan, B. Rosenow, L. A. N. Amaral, H. E. Stanley	
<b>Extracting Meaningful Information from Financial Data</b>	383–395
M. Rajkovic	
<b>Empirical Evidence of Long-Range Correlations in Stock Returns</b>	396–404
P. Grau-Carles	
<b>The First 20 Minutes in the Hong Kong Stock Market</b>	405–411
Z.-F. Huang	

<b>Identification of Clusters of Companies in Stock Indices via Potts Super-Paramagnetic Transitions</b> L. Kullmann, J. Kertesz, R. N. Mantegna	412–419
<b>Intraday Patterns and Local Predictability of High Frequency Financial Time Series</b> L. Molgedey, W. Ebeling	420–428
<b>The Entropy as a Tool for Analysing Statistical Dependences in Financial Time Series</b> G. A. Darbellay, D. Wuertz	429–439
<b>Dynamics of Competition between Collectivity and Noise in the Stock Market</b> S. Drozd, F. Grümmer, A. Z. Gorski, F. Ruf, J. Speth	440–449
<i>II Modeling and Simulation of Economic Systems</i>	
<b>Truncated Levy Distribution of SP500 Stock Index Fluctuations. Distribution of One-Share Fluctuations in a Model Space</b> M. Y. Romanovsky	450–460
<b>Derivation of One-Dimensional Hydrodynamic Model for Stock Price Evolution</b> C. Vamos, N. Suciu, W. Blaj	461–467
<b>Fractional Calculus and Continuous-Time Finance II: The Waiting-Time Distribution</b> F. Mainardi, M. Raberto, R. Gorenflo, E. Scalas	468–481
<b>Fractional Market Dynamics</b> N. Laskin	482–492
<b>Speculative Bubbles and Crashes in Stock Markets: An Interacting Agent Model of Speculative Activity</b> T. Kaizoji	493–506
<b>Evolutionary Financial Market Models</b> A. Ponzi, Y. Aizawa	507–523
<b>A Trading Strategy with Variable Investment from Minimizing Risk to Profit Ratio</b> S. Liehr, K. Pawelzik	524–538

<b>Physics of Fashion Fluctuations</b>	539–545
R. Donangelo, A. Hansen, K. Sneppen, S.R. Souza	
<b>Spatial Competition and Price Formation</b>	546–562
K. Nagel, M. Shubik, M. Paczuski, P. Bak	
<b>Hits and Flops Dynamics</b>	563–576
G. Weisbuch, D. Stauffer	
<b>A Probabilistic Framework for Hysteresis</b>	577–586
M. Grinfeld, L. Piscitelli, R. Cross	
<b>Chaos Control in Economical Model by Time-Delayed Feedback Method</b>	587–598
J. A. Hołyst, K. Urbanowicz	
<b>Stochastic Urn Models of Innovation and Search Dynamics</b>	599–612
W. Ebeling, L. Molgedey, A. Reimann	
<i>III Opinion Formation and Decision Making</i>	
<b>Simulating the Coordination of Individual Economic Decisions</b>	613–630
A. Nowak, M. Kuś, J. Urbaniak, T. Zarycki	
<b>Phase Transitions as a Persistent Feature of Groups with Leaders in Models of Opinion Formation</b>	631–643
K. Kacperski, J. A. Hołyst	
<b>From Individual Choice to Group Decision Making</b>	644–659
S. Galam, J.-D. Zucker	
<b>Abstention in Dynamical Models of Spatial Voting</b>	660–668
B. M. R. Stadler	
<b>Decision Dynamics in a Traffic Scenario</b>	669–682
J. Wahle, A. Bazzan, F. Klügl, M. Schreckenberg	
<b>List of Contributors</b>	682
<b>List of Participants</b>	683–687
<b>Index of Authors and Papers to Volume 287</b>	688–691