

CONTENTS - *Continued*

PHYSICAL REVIEW E

THIRD SERIES, VOLUME 59, NUMBER 1

JANUARY 1999

Physics of beams

- Nontrivial linear effects of dispersion at the interaction point R40
Stefania Petracca and Kohji Hirata

Computational physics

- Molecular dynamics simulation with reversible heat addition R44
Nicolas G. Hadjiconstantinou

ARTICLES

General methods of statistical physics

- Exponential multiplicity of inherent structures 48
Frank H. Stillinger
- Symmetry breaking in ionization wave turbulence 52
S. Niedner, H.-G. Schuster, T. Klinger, and G. Bonhomme
- Percolation transition and the onset of nonexponential relaxation in fully frustrated models 60
Annalisa Fierro, Giancarlo Franzese, Antonio de Candia, and Antonio Coniglio
- Quantum vortex sheets 67
M. H. Chang, T. Chiueh, and C. R. Lo
- Persistence of collective fluctuations in N -body metaequilibrium gravitating and plasma systems 73
J. L. Rouet and M. R. Feix
- Scaling of stiffness energy for three-dimensional $\pm J$ Ising spin glasses 84
Alexander K. Hartmann
- Maxwell model of traffic flows 88
E. Ben-Naim and P. L. Krapivsky
- Noise-induced fronts 98
Miguel A. Santos and J. M. Sancho
- Resonant diffusion in a linear network of fluctuating obstacles 103
Olivier Benichou, Bernard Gaveau, and Michel Moreau
- Stochastic theory of freeway traffic 117
R. Mahnke and J. Kaupužs
- Kinetics of ballistic annihilation and branching 126
Pierre-Antoine Rey, Michel Droz, and Jarosław Piasecki
- Lobe dynamics and space charge distribution in nonsteady electroconvection 135
A. T. Pérez, R. Chicón, and A. Castellanos
- Effect of Landauer's blow torch on the equilibration rate in a bistable potential 143
Mulugeta Bekele, S. Rajesh, G. Ananthakrishna, and N. Kumar
- Thermodynamical behavior of aperiodic Ising models on hierarchical lattices 150
R. F. S. Andrade
- Bose-Einstein condensation in arbitrarily shaped cavities 158
Klaus Kirsten and David J. Toms
- Quantum gas in an external field: Exact grand canonical expressions and numerical treatment 168
P. N. Vorontsov-Velyaminov, S. D. Ivanov, and R. I. Gorbunov
- Numerical analysis of the noisy Kuramoto-Sivashinsky equation in 2+1 dimensions 177
Jason T. Drotar, Y.-P. Zhao, T.-M. Lu, and G.-C. Wang

(Continued)