PHYSICAL REVIEW E **THIRD SERIES, VOLUME 57, NUMBER 4** **APRIL 1998**

Plasma physics

Effects of a prepulse on γ-ray radiation produced by a femtosecond laser with only 5-mJ energy R3746
P. Zhang, J. T. He, D. B. Chen, Z. H. Li, Y. Zhang, J. G. Bian, L. Wang, Z. L. Li, B. H. Feng, X. L. Zhang, D. X. Zhang, X. W. Tang, and J. Zhang

ARTICLES

General methods of statistical physics

Takens-Bogdanov random walks 3749
E. R. Tracy, X. Z. Tang, and C. Kulp
Survival probability of a mobile particle in a fluctuating field 3757
Satya N. Majumdar and Stephen J. Cornell
Superparamagnetic clustering of data 3767
Shai Wiseman, Marcelo Blatt, and Eytan Domany
Monte Carlo method to calculate the central charge and critical exponents 3784
Paul J. M. Bastiaansen and Hubert J. F. Knops
Coniglio-Klein mapping in the metastable region 3797
Camillo Padoa Schioppa, Francesco Sciortino, and Piero Tartaglia
Generalized hierarchical model of defect development and self-organized criticality 3804
M. G. Shnirman and Y. A. Tyurina
Stochastic model for a vortex depinning in random media 3814
Byungnam Kahng, Kwangho Park, and Jinhee Park
Mechanisms of synchronization and pattern formation in a lattice of pulse-coupled oscillators 3820
Albert Díaz-Guilera, Conrad J. Pérez, and Alex Arenas
Solving the generalized Langevin equation with the algebraically correlated noise 3829
T. Srokowski and M. Płoszajczak
Theory of traffic jam in a one-lane model 3839
Hisao Hayakawa and Ken Nakanishi
Isothermal Maxwell demon as a quantum ''sewing machine'' 3846
V. Čápek
Genetic algorithm dynamics on a rugged landscape 3853
Stefan Bornholdt
Interaction effects in the spectrum of the three-dimensional Ising model 3861
P. Provero
Absorption-desorption phase transition induced by parametric modulation 3866
C. Van den Broeck and R. Kawai
Confined harmonically interacting spin-polarized fermions 3871
F. Brosens, J. T. Devreese, and L. F. Lemmens
Dynamics of fractures in quenched disordered media 3878
Guido Caldarelli, Raffaele Cafiero, and Andrea Gabrielli
Geometry of dynamics and phase transitions in classical lattice φ^4 theories 3886
Lando Caiani, Lapo Casetti, Cecilia Clementi, Giulio Pettini, Marco Pettini, and Raoul Gatto
Partial factorization of wave functions for a quantum dissipative system 3900
C. P. Sun, Y. B. Gao, H. F. Dong, and S. R. Zhao
Wave propagation in heterogeneous excitable media 3905
I. Schebesch and H. Engel
Large-system hydrodynamic limit for color conductivity in two dimensions 3911
Wm. G. Hoover, Kevin Boercker, and Harald A. Posch

(Continued)