PHYSICAL REVIEW E THIRD SERIES, VOLUME 79, NUMBER 6 JUNE 2009

Classical physics

Fundamental relation between phase and group velocity, and application to the failure of perfectly matched layers in backward-wave structures *(4 pages)* . . . . . 065601(R)
Po-Ru Loh, Ardavan F. Oskooi, Mihai Ibanescu, Maksim Skorobogatiy, and Steven G. Johnson

Computational physics

Quantum-thermal annealing with a cluster-flip algorithm *(4 pages)* . . . . . 065701(R)
Satoshi Morita, Sei Suzuki, and Tota Nakamura

ARTICLES

Interdisciplinary physics

Eliminating finite-size effects and detecting the amount of white noise in short records with long-term memory *(6 pages)* 066101
Sabine Lennartz and Armin Bunde

Stochastic calculus for uncoupled continuous-time random walks *(12 pages)* 066102
Guido Germano, Mauro Politi, Enrico Scalas, and René L. Schilling

Phase-space analysis for hydrodynamic traffic models *(10 pages)* 066103
P. Saavedra and R. M. Velasco

Variability trend in the scale-free fluctuation of economic and market data *(8 pages)* 066104
D. C. Lin

Mean-field theory of a recurrent epidemiological model *(10 pages)* 066105
Viktor Nagy

Percolation in insect nest networks: Evidence for optimal wiring *(8 pages)* 066106
Sergi Valverde, Bernat Corominas-Murtra, Andrea Perna, Pascale Kuntz, Guy Theraulaz, and Ricard V. Solé

Towards real-time community detection in large networks *(10 pages)* 066107
Ian X. Y. Leung, Pan Hui, Pietro Liò, and Jon Crowcroft

Stress and displacement around a crack in layered network systems mimicking nacre *(5 pages)* 066108
Yuko Aoyanagi and Ko Okumura

Locality and nonlocality in elastoplastic responses of amorphous solids *(10 pages)* 066109
Edan Lerner and Itamar Procaccia

Effect of desired speed variability on highway traffic flow *(5 pages)* 066110
Azi Lipshtat

Alternative approach to community detection in networks *(7 pages)* 066111
A. D. Medus and C. O. Dorso

Unusual percolation in simple small-world networks *(10 pages)* 066112
Reuven Cohen, Daryush Jonathan Dawid, Mehran Kardar, and Yaneer Bar-Yam

Dynamic continuum pedestrian flow model with memory effect *(8 pages)* 066113
Yinhua Xia, S. C. Wong, and Chi-Wang Shu

Reentrant phase transition in a predator-prey model *(9 pages)* 066114
Sung-Guk Han, Su-Chan Park, and Beom Jun Kim

(Continued)