PHYSICAL REVIEW E **THIRD SERIES, VOLUME 110, NUMBER 4** **OCTOBER 2024**

Highly efficient ferroelectric capacitor reservoir computing through the study of its nonlinear polarization dynamics *(10 pages)* 045307
Leisheng Jin, Yiming Cao, Zhuo Liu, Tao Liu, and Lijie Li

Energy landscapes of combinatorial optimization in Ising machines *(19 pages)* 045308
Dmitrii Dobrynin, Adrien Renaudineau, Mohammad Hizzani, Dmitri Strukov, Masoud Mohseni, and John Paul Strachan

Level-set lattice Boltzmann method for interface-resolved simulations of immiscible two-phase flow *(17 pages)* 045309
Shaotong Fu, Zikang Hao, Weite Su, Huahai Zhang, and Limin Wang

Pipelined information flow in molecular mechanical circuits leads to increased error and irreversibility *(14 pages)* 045310
Ian Seet, Thomas E. Ouldridge, and Jonathan P. K. Doye

Solving initial-terminal value problem of time evolutions by a deep least action method: Newtonian dynamics and wave equations *(13 pages)* 045311
Zhipeng Chang, Jerry Zhijian Yang, and Xiaofei Zhao

Amoeba Monte Carlo algorithms for random trees with controlled branching activity: Efficient trial move generation and universal dynamics *(16 pages)* 045312
Pieter H. W. van der Hoek, Angelo Rosa, and Ralf Everaers

Probing double-distribution-function models in discrete-velocity Boltzmann methods for highly compressible flows: Particles-on-demand realization *(11 pages)* 045313
S. A. Hosseini, A. Bhadauria, and I. V. Karlin

ERRATA

Erratum: Rough neutron fields and nuclear reactor noise [Phys. Rev. E **110**, 014119 (2024)] *(1 page)* . . . . . 049901(E)
Eric Dumonteil

This paper was highlighted in the APS publication *Physics* (physics.aps.org).

The editors and referees of PRE find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. E 89, 010001 (2014).

PHYSICAL REVIEW E **THIRD SERIES, VOLUME 110, NUMBER 4** **OCTOBER 2024**

Plasma Physics

Theory of stability of self-sustaining dc discharges at inception with application to negative corona *(10 pages)* . . . 045201
P. G. C. Almeida, G. V. Naidis, and M. S. Benilov

Pump depletion and the Raman gap in ignition-scale plasmas *(5 pages)* 045202
S. H. Cao, M. J. Rosenberg, A. A. Solodov, H. Wen, and C. Ren

Applications of a Rayleigh-Taylor model to direct-drive laser fusion *(7 pages)* 045203
C. A. Thomas *et al.*

Relaxation of weakly collisional plasma: Continuous spectra, discrete eigenmodes, and the decay of echoes *(22 pages)* 045204
Uddipan Banik and Amitava Bhattacharjee

Sideband growth rates for differentiable and discontinuous distribution functions *(17 pages)* 045205
Mikael Tacu and Didier Bénisti

Electrostatic energy of solid binary ionic mixtures *(7 pages)* 045206
A. A. Kozhberov

P Point-cloud clustering and tracking algorithm for radar interferometry *(12 pages)* 045207
Magnus F. Ivarsen, Jean-Pierre St-Maurice, Glenn C. Hussey, Devin R. Huyghebaert, and Megan D. Gillies

Dense plasma opacity from excited states method *(8 pages)* 045208
C. E. Starrett, C. J. Fontes, H. B. Tran Tan, J. M. Kasper, and J. R. White

Nonperturbative theory of the low-to-high confinement transition through stochastic simulations and information geometry: Correlation and causal analyses *(17 pages)* 045209
Eun-Jin Kim and Abhiram Anand Thiruthummal

Computational Physics

Comparison of the microcanonical population annealing algorithm with the Wang-Landau algorithm *(12 pages)* 045301
Vyacheslav Mozolenko, Marina Fadeeva, and Lev Shchur

Explicit time marching method with enhanced stability *(17 pages)* 045302
Nishant Soni, Akshaysingh Shekawat, Santosh Ansumali, and S. V. Diwakar

Identification of plagioclase extinction-angle features from polarized images using deep neural network *(15 pages)* 045303
Jun Shu, Xiaohai He, Guifen Su, Haibo He, Fengyun Yue, and Qizhi Teng

Finding discrete symmetry groups via machine learning *(13 pages)* 045304
Pablo Calvo-Barlés, Sergio G. Rodrigo, Eduardo Sánchez-Burillo, and Luis Martín-Moreno

Subgrid-scale model for large eddy simulations of incompressible turbulent flows within the lattice Boltzmann framework *(11 pages)* 045305
Heng Zhang, Haibao Hu, Fan Zhang, and Xiaopeng Chen

Evaluation of three-point correlation functions from structural images on CPU and GPU architectures: Accounting for anisotropy effects *(20 pages)* 045306
Vasily Postnicov, Marina V. Karsanina, Aleksey Khlyupin, and Kirill M. Gerke

(Continued)

P This paper was highlighted in the APS publication *Physics* (physics.aps.org).

The editors and referees of PRE find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. E 89, 010001 (2014).

PHYSICAL REVIEW E **THIRD SERIES, VOLUME 110, NUMBER 4** **OCTOBER 2024**

Potential effects on effective attraction between probes diffusing in colloidal crystal *(6 pages)* 044607
Luhui Ning, Xiaoting Yu, Xue Zhang, Wei Liu, Ke Chen, Ning Zheng, Mingcheng Yang, and Peng Liu

Comparison of integral equation theories of the liquid state *(18 pages)* 044608
Ilian Pihlajamaa and Liesbeth M. C. Janssen

Anomalous diffusion of active Brownian particles in responsive elastic gels: Nonergodicity, non-Gaussianity, and distributions of trapping times *(31 pages)* 044609
Koushik Goswami, Andrey G. Cherstvy, Aljaz Godec, and Ralf Metzler

Liquid Crystals

Non-nematicity of the filamentary phase in systems of hard minor circular arcs *(14 pages)* 044701
Juan Pedro Ramírez González and Giorgio Cinacchi

Order-disorder behavior in the ferroelectric nematic phase investigated via Raman spectroscopy *(9 pages)* 044702
Thomas Raistrick, Richard J. Mandle, Zhaopeng Zhang, Peter J. Tipping, and Helen F. Gleeson

Granular Materials

Avalanching behavior of magnetic granular mixtures *(9 pages)* 044901
Cecily Sunday, Charles T. Pett, Adam Ben Youssef, Daisy Achiriloaie, Connor Churko, Daniel P. Lathrop, and Christine M. Hartzell

Effects of particle elongation on dense granular flows down a rough inclined plane *(13 pages)* 044902
Jixiong Liu, Lu Jing, Thomas Pähtz, Yifei Cui, Gordon G. D. Zhou, and Xudong Fu

Solid Mechanics

Fracture process of composite materials in a spring network model *(7 pages)* 045001
Haruka Noguchi and Satoshi Yukawa

Ductile and brittle yielding of athermal amorphous solids: A mean-field paradigm beyond the random-field Ising model *(37 pages)* 045002
Jack T. Parley and Peter Sollich

Magnetic levitation in the field of a rotating dipole *(8 pages)* 045003
Grégoire Le Lay, Sarah Layani, Adrian Daerr, Michael Berhanu, Rémy Dolbeault, Till Person, Hugo Roussille, and Nicolas Taberlet

Fluid Dynamics

Enhanced speed of microswimmers adjacent to a rough surface *(11 pages)* 045101
Deming Nie, Kai Zhang, and Jianzhong Lin

Anomalous mass diffusion in a binary mixture and Rayleigh-Bénard instability *(8 pages)* 045102
A. Barletta and B. Straughan

Inertia onset in disordered porous media flow *(5 pages)* 045103
Damian Śnieżek, Sahrish B. Naqvi, and Maciej Matyka

Hydrodynamic fluctuations near a Hopf bifurcation: Stochastic onset of vortex shedding behind a circular cylinder *(14 pages)* 045104
Ryan M. McMullen and Michael A. Gallis

(Continued)

This paper was highlighted in the APS publication *Physics* (physics.aps.org).

The editors and referees of PRE find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. E 89, 010001 (2014).

PHYSICAL REVIEW E **THIRD SERIES, VOLUME 110, NUMBER 4** **OCTOBER 2024**

Multiphase field model of cells on a substrate: From three dimensional to two dimensional *(15 pages)* 044403
Michael Chiang, Austin Hopkins, Benjamin Loewe, Davide Marenduzzo, and M. Cristina Marchetti

Accumulating waves of random mutations before fixation *(9 pages)* 044404
Marius Moeller, Benjamin Werner, and Weini Huang

Likelihood-based inference, identifiability, and prediction using count data from lattice-based random walk models *(14 pages)* 044405
Yihan Liu, David J. Warne, and Matthew J. Simpson

Hippocampal synchronization in a realistic CA1 neuron model *(9 pages)* 044406
Alessandro Fiasconaro and Michele Migliore

Network modulation at stable states *(11 pages)* 044407
Ben Collins, Jason Shulman, Ethan Speakman, Hailey Martin, Jennifer Reiss, Jennifer Myers, Gregg Roman, and Gemunu H. Gunaratne

Density estimation for ordinal biological sequences and its applications *(15 pages)* 044408
Wei-Chia Chen, Juannan Zhou, and David M. McCandlish

Polymers

Free-energy landscape of a polymer in the presence of two nanofluidic entropic traps *(13 pages)* 044501
James M. Polson and Matthew D. Kozma

Predicting protracted binding kinetics of polymers: Integral of first-passage times *(8 pages)* 044502
Qiyun Tang, Yifan Huang, and Marcus Müller

Critical dynamics of the sol-gel transition studied using particle-tracking microrheology *(6 pages)* 044503
Amane Endo, Yasuyuki Maki, and Masahiko Annaka

Colloids, Complex Fluids, and Active Matter

Low efficiency of Janus microswimmers as hydrodynamic mixers *(8 pages)* 044601
Maximilian R. Bailey, Dmitry A. Fedosov, Federico Paratore, Fabio Grillo, Gerhard Gompper, and Lucio Isa

Deformation dynamics of an oil droplet into a crescent shape during intermittent motion *(10 pages)* 044602
Sayaka Otani, Hiroaki Ito, Tomonori Nomoto, Masanori Fujinami, Jerzy Górecki, and Hiroyuki Kitahata

Time-correlation functions of stochastic three-sphere micromachines *(12 pages)* 044603
Jun Li, Ziluo Zhang, Zhanglin Hou, Kento Yasuda, Linli He, and Shigeyuki Komura

Isotropic tensor fields in amorphous solids: Correlation functions of displacement and strain tensor fields *(21 pages)* 044604
J. P. Wittmer and J. Baschnagel

Molecular modeling of odd viscoelastic fluids *(14 pages)* 044605
Paweł Matus, Ruben Lier, and Piotr Surówka

Hybrid particle-phase field model and renormalized surface tension in dilute suspensions of nanoparticles *(11 pages)* 044606
Alexandra J. Hardy, Abdallah Daddi-Moussa-Ider, and Elsen Tjhung

(Continued)

This paper was highlighted in the APS publication *Physics* (physics.aps.org).

The editors and referees of PRE find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. E 89, 010001 (2014).

PHYSICAL REVIEW E **THIRD SERIES, VOLUME 110, NUMBER 4** **OCTOBER 2024**

Complex network-based multistep forecasting model for hyperchaotic time series *(8 pages)* 044302
Reshmi L. B., Drisya Alex Thumba, K. Asokan, T. K. Manoj Kumar, T. R. Ramamohan, and K. Satheesh Kumar

Emergence of social phases in human movement *(9 pages)* 044303
Yi Zhang, Debasish Sarker, Samantha Mitsven, Lynn Perry, Daniel Messinger, Udo Rudolph, Michael Siller, and Chaoming Song

Countering adversarial perturbations in graphs using error correcting codes *(10 pages)* 044304
Saif Eddin Jabari

Vulnerability of transport through evolving spatial networks *(6 pages)* 044305
Ali Molavi, Hossein Hamzehpour, and Reza Shaebani

Critical short-time behavior of majority-vote model on scale-free networks *(8 pages)* 044306
D. S. M. Alencar, J. F. S. Neto, T. F. A. Alves, F. W. S. Lima, R. S. Ferreira, G. A. Alves, and A. Macedo-Filho

Analytical solution of susceptible-infected-recovered models on homogeneous networks *(9 pages)* 044307
Louis Bremaud, Olivier Giraud, and Denis Ullmo

Finding patient zero in susceptible-infectious-susceptible epidemic processes *(10 pages)* 044308
Robin Persoons and Piet Van Mieghem

Antifragility of stochastic transport on networks with damage *(11 pages)* 044309
L. K. Eraso-Hernandez and A. P. Riascos

Self-organized transport in noisy dynamic networks *(10 pages)* 044310
Frederic Folz, Kurt Mehlhorn, and Giovanna Morigi

Theoretical framework for learning through structural plasticity *(25 pages)* 044311
Gianmarco Tiddia, Luca Sergi, and Bruno Golosio

Thermodynamics of the Fredrickson-Andersen model on the Bethe lattice *(22 pages)* 044312
Gianmarco Perrupato and Tommaso Rizzo

Threshold crossing time theory for quasicycles with application to brain rhythms *(13 pages)* 044313
Mathias Roman, Ivan L'Heureux, Arthur Powanwe, and André Longtin

Modeling urbanization dynamics by labor force migration *(13 pages)* 044314
Hirotaka Goto

Bayan algorithm: Detecting communities in networks through exact and approximate optimization of modularity *(23 pages)* 044315
Samin Aref, Mahdi Mostajabdaveh, and Hriday Chheda

Biological Physics

Neuromodulatory effects on synchrony and network reorganization in networks of coupled Kuramoto oscillators *(9 pages)* 044401
Sinan Aktay, Leonard M. Sander, and Michal Zochowski

Nonequilibrium microbial dynamics unveil a new macroecological pattern beyond Taylor's law *(12 pages)* 044402
José Camacho-Mateu, Aniello Lampo, Saúl Ares, and José A. Cuesta

(Continued)

This paper was highlighted in the APS publication *Physics* (physics.aps.org).

The editors and referees of PRE find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. E 89, 010001 (2014).

PHYSICAL REVIEW E **THIRD SERIES, VOLUME 110, NUMBER 4** **OCTOBER 2024**

Fokker-Planck dynamics of two coupled van der Pol oscillators subjected to stochastic forcing *(12 pages)* 044202
Minwoo Lee, Vikrant Gupta, and Larry K. B. Li

Energy-based theory of autoresonance in chains of coupled damped-driven generic oscillators *(9 pages)* 044203
Ricardo Chacón, Faustino Palmero, Pedro J. Martínez, and Somnath Roy

Chimera-inspired dynamics: When higher-order interactions are expressed differently *(10 pages)* 044204
Xinrui Ji and Xiang Li

Separable Hamiltonian neural networks *(13 pages)* 044205
Zi-Yu Khoo, Dawen Wu, Jonathan Sze Choong Low, and Stéphane Bressan

Aubry transition with small distortions *(9 pages)* 044206
O. Cépas and P. Quémerais

Influence of conduction heterogeneities on transient spatiotemporal chaos in cardiac excitable media *(10 pages)* 044207
Melvin Dix, Thomas Lilienkamp, Stefan Luther, and Ulrich Parlitz

Sensitivity-analysis-guided Bayesian parameter estimation for neural mass models: Applications in epilepsy *(16 pages)* 044208
Narayan Puthanmadam Subramaniyam and Jari Hyttinen

Rhythmic states and first-order phase transitions in adaptive coupled three-dimensional limit-cycle oscillators *(6 pages)* 044209
Jiangsheng Wang, Changgui Gu, and Wei Zou

Classification of beating solitons, their physical spectra, and second-order nonlinear superpositions *(14 pages)* . . . 044210
Chong Liu, Wen-Juan Che, and Nail Akhmediev

Tipping in Stuart-Landau oscillators induced by higher-order repulsive interactions *(7 pages)* 044211
Umesh Kumar Verma, Subhasanket Dutta, Richita Ghosh, Manish Dev Shrimali, and Sarika Jalan

Stochastic response analysis of a birhythmic oscillator under Poisson white noise excitation via path integration method *(16 pages)* 044212
Wenting Zhang, Wei Xu, Yuanyuan Bai, Yaning Tang, and Jürgen Kurths

Wave dispersion in a damped beam supported by cubic nonlinear springs: A multiscale freewave approach *(12 pages)* 044213
Abhigna Bhatt, Kamal K. Bera, and Arnab Banerjee

Bifurcation control and analysis of traffic flow model based on driver prediction effect *(32 pages)* 044214
Wen-Huan Ai, Yi-Fan Zhang, Dan-Dan Xing, and Da-Wei Liu

Elastic and inelastic scattering of flat-top solitons *(18 pages)* 044215
U. Al Khawaja, M. O. D. Alotaibi, and L. Al Sakkaf

PART B

Networks and Complex Systems

Multivariate opinion evolution analysis on individual opinion differences: An agent-based model *(14 pages)* 044301
Shan Liu and Hanfei Zhao

(Continued)

This paper was highlighted in the APS publication *Physics* (physics.aps.org).

The editors and referees of PRE find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. E 89, 010001 (2014).

PHYSICAL REVIEW E **THIRD SERIES, VOLUME 110, NUMBER 4** **OCTOBER 2024**

Numerical simulation of a two-dimensional Blume-Capel ferromagnet in an oscillating magnetic field with a constant bias *(14 pages)* 044133
Celeste Mendes, Gloria M. Buendía, and Per Arne Rikvold

Dynamical signatures of discontinuous phase transitions: How phase coexistence determines exponential versus power-law scaling *(18 pages)* 044134
Krzysztof Ptaszyński and Massimiliano Esposito

Effects of magnetic anisotropy on three-qubit antiferromagnetic thermal machines *(12 pages)* 044135
Bastian Castorene, Francisco J. Peña, Ariel Norambuena, Sergio E. Ulloa, Cristobal Araya, and Patricio Vargas

Generalized Langevin dynamics for single beads in linear elastic networks *(15 pages)* 044136
Soya Shinkai, Shuichi Onami, and Tomoshige Miyaguchi

Mean back relaxation for position and densities *(10 pages)* 044137
Gabriel Knotz and Matthias Krüger

Unified approach to reset processes and application to coupling between process and reset *(13 pages)* 044138
G. John Lapeyre, Jr., Tomás Aquino, and Marco Dentz

Generalized XY model with competing antiferromagnetic and antinematic interactions *(13 pages)* 044139
Milan Žukovič

Interplay of the complete-graph and Gaussian fixed-point asymptotics in finite-size scaling of percolation above the upper critical dimension *(11 pages)* 044140
Mingzhong Lu, Sheng Fang, Zongzheng Zhou, and Youjin Deng

Dynamics of a small quantum system open to a bath with thermostat *(15 pages)* 044141
Chulan Kwon and Ju-Yeon Gyhm

Resetting by rescaling: Exact results for a diffusing particle in one dimension *(14 pages)* 044142
Marco Biroli, Yannick Feld, Alexander K. Hartmann, Satya N. Majumdar, and Grégory Schehr

Exploring noisy Jeffery orbits: A combined Fokker-Planck and Langevin analysis in two and three dimensions *(16 pages)* 044143
J. Talbot, C. Antoine, P. Claudin, E. Somfai, and T. Börzsönyi

Absolute negative mobility of an inertial Brownian particle in an oscillating potential *(6 pages)* 044144
Jian-Chun Wu, Feng Yang, Tian-Wen Dong, and Meng An

Fractional differentiation method: Some applications to the theory of subdiffusion-controlled reactions *(15 pages)* 044145
Sergey D. Traytak

Size effect of accelerated seismic release from failures under compression in naturally fractured media *(13 pages)* 044146
Rui Wu, Fuqiang Gao, Xiangyuan Peng, Shuangyong Dong, Shuwen Cao, and Bing Qiuyi Li

Nonlinear Dynamics and Chaos

Shearless effective barriers to chaotic transport induced by even twin islands in nontwist systems *(9 pages)* 044201
M. Mugnaine, I. L. Caldas, J. D. Szezech, Jr., R. L. Viana, and P. J. Morrison

(Continued)

This paper was highlighted in the APS publication *Physics* (physics.aps.org).

The editors and referees of PRE find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. E 89, 010001 (2014).

PHYSICAL REVIEW E **THIRD SERIES, VOLUME 110, NUMBER 4** **OCTOBER 2024**

Lattice model for percolation on a plane of partially aligned sticks with length dispersity *(7 pages)* 044115
Avik P. Chatterjee and Yuri Yu. Tarasevich

Rényi entanglement entropy of a spin chain with generative neural networks *(9 pages)* 044116
Piotr Białas, Piotr Korcyl, Tomasz Stebel, and Dawid Zapolski

Collapses and revivals of spin polarization quantum oscillations in two-dimensional systems of spin 1/2 charged particles with spin-orbit interaction *(11 pages)* 044117
N. S. Maslova, V. N. Mantsevich, I. M. Sokolov, and P. I. Arseyev

Pseudotransitions in a dilute Ising chain *(13 pages)* 044118
Darya Yasinskaya and Yury Panov

Sensitivity analysis of colored-noise-driven interacting particle systems *(21 pages)* 044119
Josselin Garnier, Harry L. F. Ip, and Laurent Mertz

Catalytic enhancement in the performance of the microscopic two-stroke heat engine *(27 pages)* 044120
Tanmoy Biswas, Marcin Łobejko, Paweł Mazurek, and Michał Horodecki

Universality in long-range interacting systems: The effective dimension approach *(6 pages)* 044121
Andrea Solfanelli and Nicolò Defenu

Phase transitions in the Ziff-Gulari-Barshad model operating on periodic conditions *(9 pages)* 044122
M. Santos and Fernando A. Oliveira

Effective diffusion constant of stochastic processes with spatially periodic noise *(17 pages)* 044123
Stefano Giordano and Ralf Blossey

Non-Hermitian diluted banded random matrices: Scaling of eigenfunction and spectral properties *(10 pages)* 044124
M. Hernández-Sánchez, G. Tapia-Labra, and J. A. Méndez-Bermúdez

Hypergraph animals *(9 pages)* 044125
Michael P. H. Stumpf

Dynamical properties of two coupled quantum cavities with single-mode amplification *(11 pages)* 044126
V. Penna and F. A. Raffa

Onset of quantum thermalization in the Jahn-Teller model *(11 pages)* 044127
Yoana R. Chorbadzhiyska and Peter A. Ivanov

Charged aggregation *(7 pages)* 044128
P. L. Krapivsky and S. Redner

Image charge effects under metal and dielectric boundary conditions *(16 pages)* 044129
Tingtao Zhou, Dorian Bruch, and Zhen-Gang Wang

Spectral energy transfers in domain growth problems *(11 pages)* 044130
Pradeep Kumar Yadav, Mahendra Kumar Verma, and Sanjay Puri

Unified hierarchical relationship between thermodynamic tradeoff relations *(20 pages)* 044131
Euijoon Kwon, Jong-Min Park, Jae Sung Lee, and Yongjoo Baek

Escape from a metastable state in non-Markovian population dynamics *(8 pages)* 044132
Ohad Vilk and Michael Assaf

(Continued)

This paper was highlighted in the APS publication *Physics* (physics.aps.org).

The editors and referees of PRE find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. E 89, 010001 (2014).

PHYSICAL REVIEW E **THIRD SERIES, VOLUME 110, NUMBER 4** **OCTOBER 2024**

Fluid Dynamics

Turbulent cascade arrests and the formation of intermediate-scale condensates *(6 pages)* L043101
Kolluru Venkata Kiran, Dario Vincenzi, and Rahul Pandit

Computational Physics

SWAP algorithm for lattice spin models *(6 pages)* L043301
Greivin Alfaro Miranda, Leticia F. Cugliandolo, and Marco Tarzia

ARTICLES

Statistical Physics

Model for random internalization of nanoparticles by cells *(7 pages)* 044101
Sergei Fedotov and Dmitri V. Alexandrov

Geometric thermodynamics of collapse of gels *(12 pages)* 044102
Asif Raza, Sanhita Das, and Debasish Roy

Network analysis for the steady-state thermodynamic uncertainty relation *(9 pages)* 044103
Yasuhiro Utsumi

Statistical formulation of the Onsager-Machlup variational principle *(9 pages)* 044104
Kento Yasuda, Kenta Ishimoto, and Shigeyuki Komura

Fate of Boltzmann's breathers: Kinetic theory perspective *(17 pages)* 044105
P. Maynar, M. I. García de Soria, David Guéry-Odelin, and Emmanuel Trizac

Herd behavior in public goods games *(8 pages)* 044106
María Pereda

Harmonically trapped inertial run-and-tumble particle in one dimension *(18 pages)* 044107
Debraj Dutta, Anupam Kundu, Sanjib Sabhapandit, and Urna Basu

Stochastic thermodynamics of Brownian motion in a flowing fluid *(16 pages)* 044108
Jun Wu, Mingnan Ding, and Xiangjun Xing

Power dissipation and entropy production rate of high-dimensional optical matter systems *(13 pages)* 044109
Shiqi Chen, Emmanuel Valenton, Grant M. Rotskoff, Andrew L. Ferguson,
Stuart A. Rice, and Norbert F. Scherer

Nonequilibrium spin transport in integrable and nonintegrable classical spin chains *(13 pages)* 044110
Dipankar Roy, Abhishek Dhar, Herbert Spohn, and Manas Kulkarni

Decorrelation of a leader by an increasing number of followers *(11 pages)* 044111
Satya N. Majumdar and Grégory Schehr

Parameter estimation from an Ornstein-Uhlenbeck process with measurement noise *(11 pages)* 044112
Simon Carter, Lilianne R. Mujica-Parodi, and Helmut H. Strey

Small-amplitude synchronization in driven Potts models *(24 pages)* 044114
Jan Meibohm and Massimiliano Esposito

(Continued)

This paper was highlighted in the APS publication *Physics* (physics.aps.org).

The editors and referees of PRE find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. E 89, 010001 (2014).

PHYSICAL REVIEW E™

For editorial and subscription correspondence,
please see inside front cover
(ISSN: 2470-0045)

PERIODICALS
Postmaster send address changes to:

APS Subscription Services
P.O. Box 41
Annapolis Junction, MD 20701

THIRD SERIES, VOLUME 110, NUMBER 4
PARTS A AND B

CONTENTS

OCTOBER 2024

The Table of Contents is a total listing of Parts A and B.
Part A consists of pages 041001–044215, and Part B pages 044301–049901(E).

PART A

Perspectives

Statistical physics and dynamical systems perspectives on geophysical extreme events *(33 pages)* 041001
D. Faranda, G. Messori, T. Alberti, C. Alvarez-Castro, T. Caby, L. Cavicchia, E. Coppola, R. V. Donner, B. Dubrulle, V. M. Galfi, E. Holmberg, V. Lembo, R. Noyelle, P. Yiou, B. Spagnolo, D. Valenti, S. Vaienti, and C. Wormell

LETTERS

Statistical Physics

Search with stochastic home returns can expedite classical first passage under resetting *(6 pages)* L042101
Arup Biswas, Anupam Kundu, and Arnab Pal

Minimum-dissipation principle for synchronized stochastic oscillators far from equilibrium *(6 pages)* L042102
Jan Meibohm and Massimiliano Esposito

Statistical properties of microphase and bubbly phase-separated active fluids *(6 pages)* L042103
Giordano Fausti, Michael E. Cates, and Cesare Nardini

Relation between critical exponent of the conductivity and the morphological exponents of percolation theory *(6 pages)* L042104
Carl Fredrik Berg and Muhammad Sahimi

Optimal control theory for maximum power of Brownian heat engines *(7 pages)* L042105
Jin-Fu Chen and H. T. Quan

Networks and Complex Systems

Reconstructing networks from simple and complex contagions *(6 pages)* L042301
Nicholas W. Landry, William Thompson, Laurent Hébert-Dufresne, and Jean-Gabriel Young

Colloids, Complex Fluids, and Active Matter

Skyrmion flow in periodically modulated channels *(7 pages)* L042601
Klaus Raab, Maurice Schmitt, Maarten A. Brems, Jan Rothörl, Fabian Kammerbauer, Sachin Krishnia, Mathias Kläui, and Peter Virnau

(Continued)

2470-0045(202410)110:4:B;1-4

This paper was highlighted in the APS publication *Physics* (physics.aps.org).

The editors and referees of PRE find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. E 89, 010001 (2014).