PHYSICAL REVIEW E **THIRD SERIES, VOLUME 103, NUMBER 2** **FEBRUARY 2021**

ERRATA

Erratum: Molecular-dynamics approach for studying the nonequilibrium behavior of x-ray-heated solid-density matter [Phys. Rev. E **96**, 023205 (2017)] *(1 page)* . . . . . 029901(E)
Malik Muhammad Abdullah, Anurag, Zoltan Jurek, Sang-Kil Son, and Robin Santra

Erratum: Fluctuation relations for systems in a constant magnetic field [Phys. Rev. E **102**, 030101(R) (2020)] *(1 page)* . . . . . 029902(E)
Alessandro Coretti, Lamberto Rondoni, and Sara Bonella

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 103, NUMBER 2** **FEBRUARY 2021**

Stability of ablation flows in inertial confinement fusion: Nonmodal effects *(10 pages)* 023211
G. Varillon, J.-M. Clarisse, and A. Couairon

Study of inertial electrostatic confinement fusion using a finite-volume scheme for the one-dimensional Vlasov equation *(12 pages)* 023212
Jeffrey Black, Mitikorn Wood-Thanan, Aaron Maroni, and Erik Sánchez

Full particle-in-cell simulation of the formation and structure of a collisional plasma shock wave *(6 pages)* 023213
Wen-shuai Zhang, Hong-bo Cai, Bao Du, Dong-guo Kang, Shi-yang Zou, and Shao-ping Zhu

Computational Physics

Assessing the information content of complex flows *(6 pages)* 023301
Lei Fang and Nicholas T. Ouellette

Lattice gas study of thin-film growth scenarios and transitions between them: Role of substrate *(18 pages)* 023302
E. Empting, M. Klopotek, A. Hinderhofer, F. Schreiber, and M. Oettel

Determination of the throat size distribution of a porous medium as an inverse optimization problem combining pore network modeling and genetic and hill climbing algorithms *(19 pages)* 023303
Otman Maalal, Marc Prat, René Peinador, and Didier Lasseux

Statistical-learning method for predicting hydrodynamic drag, lift, and pitching torque on spheroidal particles *(17 pages)* 023304
S. Tajfirooz, J. G. Meijer, J. G. M. Kuerten, M. Hausmann, J. Fröhlich, and J. C. H. Zeegers

Systematic formulation of thermodynamic properties in the NpT ensemble *(9 pages)* 023305
Philipp Ströker, Robert Hellmann, and Karsten Meier

Parallel finite-volume discrete Boltzmann method for inviscid compressible flows on unstructured grids *(14 pages)* 023306
Lei Xu, Rongliang Chen, and Xiao-Chuan Cai

Diverse densest binary sphere packings and phase diagram *(23 pages)* 023307
Ryotaro Koshoji, Mitsuaki Kawamura, Masahiro Fukuda, and Taisuke Ozaki

Phase-field-simplified lattice Boltzmann method for modeling solid-liquid phase change *(15 pages)* 023308
Z. Chen, C. Shu, L. M. Yang, X. Zhao, and N. Y. Liu

Numerical simulations of capsule deformation using a dual time-stepping lattice Boltzmann method *(17 pages)* 023309
Charles Armstrong and Yan Peng

Automatic learning of topological phase boundaries *(8 pages)* 023310
Alexander Kerr, Geo Jose, Colin Riggert, and Kieran Mullen

Lattice Boltzmann modeling of heat conduction enhancement by colloidal nanoparticle deposition in microporous structures *(15 pages)* 023311
Feifei Qin, Jianlin Zhao, Qinjun Kang, Thomas Brunschwiler, Dominique Derome, and Jan Carmeliet

(Continued)

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 103, NUMBER 2** **FEBRUARY 2021**

Theoretical analysis of quantum turbulence using the Onsager ideal turbulence theory *(17 pages)* 023106
Tomohiro Tanogami

Stability analysis of a thinning electrified jet under nonisothermal conditions *(14 pages)* 023107
Dharmansh Deshawar and Paresh Chokshi

Dynamics of bubbles under stochastic pressure forcing *(15 pages)* 023108
Riccardo Vesipa, Eleonora Paissoni, Costantino Manes, and Luca Ridolfi

Base flow decomposition for complex moving objects in linear hydrodynamics: Application to helix-shaped flagellated microswimmers *(11 pages)* 023109
Ji Zhang, Mauro Chinappi, and Luca Biferale

Nanostructured jumping-droplet thermal rectifier *(14 pages)* 023110
Ji-Xiang Wang, Patrick Birbarah, Donald Docimo, Tianyu Yang, Andrew G. Alleyne, and Nenad Miljkovic

Plasma Physics

Observations of anomalous x-ray emission at early stages of hot-spot formation in deuterium-tritium cryogenic implosions *(5 pages)* 023201
R. C. Shah, S. X. Hu, I. V. Igumenshchev, J. Baltazar, D. Cao, C. J. Forrest, V. N. Goncharov, V. Gopalaswamy, D. Patel, F. Philippe, W. Theobald, and S. P. Regan

Longitudinal crossover and the dynamics of uniform electron ellipsoids focused by a linear chirp *(17 pages)* 023202
X. Xiang, P. M. Duxbury, and B. Zerbe

Transient ionization potential depression in nonthermal dense plasmas at high x-ray intensity *(11 pages)* 023203
Rui Jin, Malik Muhammad Abdullah, Zoltan Jurek, Robin Santra, and Sang-Kil Son

Vortex laser beam generation from laser interaction with azimuthal plasma phase slab at relativistic intensities *(5 pages)* 023204
Tianyun Long, Cangtao Zhou, Sizhong Wu, Libao Ju, Ke Jiang, Ruixue Bai, Taiwu Huang, Hua Zhang, Mingyang Yu, Shuangchen Ruan, and Xiantu He

Homoclinic chaos in strongly dissipative strongly coupled complex dusty plasmas *(7 pages)* 023205
Samiran Ghosh

Analytical solutions for the hydrogen atom in plasmas with electric, magnetic, and Aharonov-Bohm flux fields *(19 pages)* 023206
Ling Liu, Jyotirmoy Rana, and Shijun Liao

Simulations of argon plasma decay in a thermionic converter *(7 pages)* 023207
R. E. Groenewald, S. Clark, A. Kannan, and P. Scherpelz

Transition from linear Landau damping to nonlinear Bernstein-Greene-Kruskal modes via phase synchronization *(11 pages)* 023208
Shaokang Xu, Z. B. Guo, and Ö. D. Gürcan

Emission of electromagnetic waves as a stopping mechanism for nonlinear collisionless ionization waves in a high-β regime *(11 pages)* 023209
Haotian Mao, Kathleen Weichman, Zheng Gong, Todd Ditmire, Hernan Quevedo, and Alexey Arefiev

Rotation of a strongly coupled dust cluster in plasma by the torque of an electron beam *(8 pages)* 023210
D. Ticoş, A. Scurtu, J. D. Williams, L. Scott, E. Thomas Jr., D. Sanford, and C. M. Ticoş

(Continued)

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 103, NUMBER 2** **FEBRUARY 2021**

Graphene as an alignment agent, an electrode, and a source of surface chirality in a smectic-*A* liquid crystal *(6 pages)* 022710
Rajratan Basu

Films and Interfaces

Glassy dynamics and equilibrium state on the honeycomb lattice: Role of surface diffusion and desorption on surface crowding *(10 pages)* 022801
Shaghayegh Darjani, Joel Koplik, Vincent Pauchard, and Sanjoy Banerjee

Numerical study of pattern formation in compliant surfaces scraped by a rigid tip *(7 pages)* 022802
Pedro J. Martínez, Enrico Gnecco, and Juan J. Mazo

Electric-field-based Poisson-Boltzmann theory: Treating mobile charge as polarization *(11 pages)* 022803
Michiel Sprik

Nanoscale pattern formation on solid surfaces bombarded by two broad ion beams in the regime in which sputtering is negligible *(11 pages)* 022804
R. Mark Bradley and Tejas Sharath

Granular Materials

Particle size segregation in two-dimensional circular granular aggregates *(8 pages)* 022901
Jérémy Sautel, Charles-Édouard Lecomte, and Nicolas Taberlet

Shear response of granular packings compressed above jamming onset *(15 pages)* 022902
Philip Wang, Shiyun Zhang, Philip Tuckman, Nicholas T. Ouellette, Mark D. Shattuck, and Corey S. O'Hern

Solid Mechanics

Transformation toughness induced by surface tension of the crack-tip process zone interface: A field-theoretical approach *(23 pages)* 023001
Alexei Boulbitch and Alexander L. Korzhenevskii

Dry ice hoverboard: Friction reduction by the Leidenfrost effect *(7 pages)* 023002
Antoine Parrenin, Rinse W. Liefferink, and Daniel Bonn

Fluid Dynamics

Squirt flow in porous media saturated by Maxwell-type non-Newtonian fluids *(6 pages)* 023101
Santiago G. Solazzi, Beatriz Quintal, and Klaus Holliger

How *Euglena gracilis* swims: Flow field reconstruction and analysis *(13 pages)* 023102
Nicola Giuliani, Massimiliano Rossi, Giovanni Noselli, and Antonio DeSimone

Mechanism of hysteresis in shock wave reflection *(11 pages)* 023103
Yan-Chao Hu (胡延超), Wen-Feng Zhou (周文丰), Zhi-Gong Tang (唐志共), Yan-Guang Yang (杨彦广), and Zhao-Hu Qin (秦兆虎)

Characterizing pore-scale structure-flow correlations in sedimentary rocks using magnetic resonance imaging *(14 pages)* 023104
K. Karlsons, D. W. de Kort, A. J. Sederman, M. D. Mantle, J. J. Freeman, M. Appel, and L. F. Gladden

Rayleigh-Taylor instability in elastic-plastic solid slabs bounded by a rigid wall *(12 pages)* 023105
S. A. Piriz, A. R. Piriz, N. A. Tahir, S. Richter, and M. Bestehorn

(Continued)

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 103, NUMBER 2** **FEBRUARY 2021**

Diffusion of colloidal particles in model porous media *(6 pages)* 022608
Luhui Ning, Peng Liu, Fangfu Ye, Mingcheng Yang, and Ke Chen

Spatiotemporal mapping of mesoscopic liquid dynamics *(15 pages)* 022609
Zhiqiang Shen, Jihong Ma, Jan-Michael Y. Carrillo, Wei-Ren Chen, Bobby G. Sumpter, and Yangyang Wang

Spatial distributions of nonconservatively interacting particles *(20 pages)* 022610
Dino Osmanović

Role of the attractive forces in a supercooled liquid *(4 pages)* 022611
Søren Toxvaerd

Absence of crystals in the phase behavior of hollow microgels *(20 pages)* 022612
A. Scotti, A. R. Denton, M. Brugnoni, R. Schweins, and W. Richtering

Multiple glass transitions and higher-order replica symmetry breaking of binary mixtures *(8 pages)* 022613
Harukuni Ikeda, Kunimasa Miyazaki, Hajime Yoshino, and Atushi Ikeda

Internal structure of ultralow-crosslinked microgels: From uniform deswelling to phase separation *(9 pages)* 022614
Michael Tennenbaum, Caleb Anderson, John S. Hyatt, Changwoo Do, and Alberto Fernandez-Nieves

Liquid Crystals

Experimental focusing shocklike dynamics in a nonlocal optical stochastic Kerr medium *(6 pages)* 022701
A. Aleksanyan, H. Louis, J. F. Henninot, and E. Louvergneaux

From *n*-layer planar ordering to the monolayer homeotropic structure of confined hard rods:
The effect of shape anisotropy and wall-to-wall separation *(13 pages)* 022702
Fahimeh Behzadi, Seyed Mohammad Ghazi, and Roohollah Aliabadi

Alignment of a topological defect by an activity gradient *(6 pages)* 022703
Xingzhou Tang and Jonathan V. Selinger

Some geometrical aspects of packing of bent-core molecules in the triclinic smectic-C_g liquid crystals
and simple models of the modulated SmC_{gmod} phase *(14 pages)* 022704
N. V. Madhusudana

Osmotic-pressure-induced phase transition of a surfactant-DNA complex *(7 pages)* 022705
S. Madhukar, A. V. Radhakrishnan, and V. A. Raghunathan

Phase-field model for elastocapillary flows of liquid crystals *(14 pages)* 022706
Mingfeng Qiu, James J. Feng, and Jean-Christophe Loudet

Nematic tactoid population *(18 pages)* 022707
Silvia Paparini and Epifanio G. Virga

Nanoparticle surface energy transfer (NSET) in ferroelectric liquid crystal–metallic-silver nanoparticle
composites: Effect of dopant concentration on NSET parameters *(8 pages)* 022708
T. Vimal, G. H. Pujar, K Agrahari, Sanjeev R. Inamdar, and R. Manohar

Molecular origin of the heterogeneity in the nematic and smectic liquid crystals: Elastic constants, gradients
of order parameters, and visualization of small objects *(19 pages)* 022709
A. V. Emelyanenko, E. S. Filimonova, and A. R. Khokhlov

(Continued)

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 103, NUMBER 2** **FEBRUARY 2021**

Channel current fluctuations conclusively explain neuronal encoding of internal potential into spike trains *(6 pages)* 022407
Martin N. P. Nilsson and Henrik Jörntell

Regular spiking in high-conductance states: The essential role of inhibition *(13 pages)* 022408
Tomas Barta and Lubomir Kostal

Optimal transition paths of phenotypic switching in a non-Markovian self-regulation gene expression *(11 pages)* 022409
Hongwei Yin, Shuqin Liu, and Xiaoqing Wen

Estimating integrated information in bidirectional neuron-astrocyte communication *(10 pages)* 022410
Luis Abrego, Susanna Gordleeva, Oleg Kanakov, Mikhail Krivonosov, and Alexey Zaikin

Morphoelasticity of large bending deformations of cell sheets during development *(29 pages)* 022411
Pierre A. Haas and Raymond E. Goldstein

Physical principles of morphogenesis in mushrooms *(10 pages)* 022412
X. Chen, P. Ciarletta, and H.-H. Dai

Effects of isolated nonspecific binders upon the search for specific targets: Absolute rates versus competition between the targets *(20 pages)* 022413
Boris P. Belotserkovskii

Polymers

Thermodynamically consistent incorporation of entanglement spatial fluctuations in the slip-link model *(19 pages)* 022501
Rudi J. A. Steenbakkers, Marat Andreev, and Jay D. Schieber

Strength evolution laws in curing of solvent-welded polymers *(10 pages)* 022502
Tousif Ahmed, Bing Han, Michael Sulecki, Marigrace Ferrill, and Zubaer M. Hossain

Colloids, Complex Fluids, and Active Matter

Active particles with polar alignment in ring-shaped confinement *(12 pages)* 022601
Zahra Fazli and Ali Naji

Active matter commensuration and frustration effects on periodic substrates *(6 pages)* 022602
C. Reichhardt and C. J. O. Reichhardt

Collective motion in large deviations of active particles *(26 pages)* 022603
Yann-Edwin Keta, Étienne Fodor, Frédéric van Wijland, Michael E. Cates, and Robert L. Jack

Tunable depletion force in active and crowded environments *(14 pages)* 022604
Fane Feng, Ting Lei, and Nanrong Zhao

Mechanical disorder of sticky-sphere glasses. I. Effect of attractive interactions *(21 pages)* 022605
Karina González-López, Mahajan Shivam, Yuanjian Zheng, Massimo Pica Ciamarra, and Edan Lerner

Mechanical disorder of sticky-sphere glasses. II. Thermomechanical inannealability *(14 pages)* 022606
Karina González-López, Mahajan Shivam, Yuanjian Zheng, Massimo Pica Ciamarra, and Edan Lerner

Softness, anomalous dynamics, and fractal-like energy landscape in model cell tissues *(9 pages)* 022607
Yan-Wei Li, Leon Loh Yeong Wei, Matteo Paoluzzi, and Massimo Pica Ciamarra

(Continued)

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 103, NUMBER 2** **FEBRUARY 2021**

Collective firing patterns of neuronal networks with short-term synaptic plasticity *(13 pages)* 022312
Chong-Yang Wang, Ji-Qiang Zhang, Zhi-Xi Wu, and Jian-Yue Guan

Global disassortative rewiring strategy for enhancing the robustness of scale-free networks against localized attack *(8 pages)* 022313
Haoran Geng, Meng Cao, Chengwen Guo, Chenglei Peng, Sidan Du, and Jie Yuan

Network resilience of FitzHugh-Nagumo neurons in the presence of nonequilibrium dynamics *(12 pages)* 022314
Subhendu Bhandary, Taranjot Kaur, Tanmoy Banerjee, and Partha Sharathi Dutta

Tail of the distribution of fatalities in epidemics *(10 pages)* 022315
Álvaro Corral

Community detection in networks using graph embeddings *(11 pages)* 022316
Aditya Tandon, Aiiad Albeshri, Vijey Thayananthan, Wadee Alhalabi, Filippo Radicchi, and Santo Fortunato

Exploring node interaction relationship in complex networks by using high-frequency signal injection *(16 pages)* 022317
Xinyu Wang, Zhaoyang Zhang, Haihong Li, Yang Chen, Yuanyuan Mi, and Gang Hu

Power-law graphs with small diameter: Framework, structural properties, and average trapping time *(12 pages)* 022318
Fei Ma and Ping Wang

Generalized optimal paths and weight distributions revealed through the large deviations of random walks on networks *(15 pages)* 022319
Ricardo Gutiérrez and Carlos Pérez-Espigares

Spreader events and the limitations of projected networks for capturing dynamics on multipartite networks *(13 pages)* 022320
Hyojun A. Lee, Luiz G. A. Alves, and Luís A. Nunes Amaral

Enhanced robustness of single-layer networks with redundant dependencies *(14 pages)* 022321
G. Timár, Gy. Kovács, and J. F. F. Mendes

PART B

Biological Physics

Effects of stochasticity and social norms on complex dynamics of fisheries *(12 pages)* 022401
Sukanta Sarkar, Arzoo Narang, Sudipta Kumar Sinha, and Partha Sharathi Dutta

Continuum analysis to assess field enhancements for tailoring electroporation driven by monopolar or bipolar pulsing based on nonuniformly distributed nanoparticles *(11 pages)* 022402
Q. Hu and R. P. Joshi

Hydrodynamic synchronization in strong confinement *(15 pages)* 022403
Ivan Tanasijević and Eric Lauga

New role for circuit expansion for learning in neural networks *(21 pages)* 022404
Julia Steinberg, Madhu Advani, and Haim Sompolinsky

Gradient sensing via cell communication *(9 pages)* 022405
Dallas Foster, Brian Frost-LaPlante, Collin Victor, and Juan M. Restrepo

(Continued)

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 103, NUMBER 2** **FEBRUARY 2021**

Two-dimensional mobile breather scattering in a hexagonal crystal lattice *(7 pages)* 022212
Jānis Bajārs, J. Chris Eilbeck, and Benedict Leimkuhler

Asymmetric synchronization in lattices of pinned spiral waves *(9 pages)* 022213
Franco M. Zanotto and Oliver Steinbock

Estimating topological entropy using ordinal partition networks *(14 pages)* 022214
Konstantinos Sakellariou, Thomas Stemler, and Michael Small

Asymptotic distribution of sample Shannon entropy in the case of an underlying finite, regular Markov chain *(7 pages)* 022215
Leonardo Ricci

Complex Korteweg–de Vries equation: A deeper theory of shallow water waves *(8 pages)* 022216
M. Crabb and N. Akhmediev

Detection of local mixing in time-series data using permutation entropy *(13 pages)* 022217
Michael Neuder, Elizabeth Bradley, Edward Dlugokencky, James W. C. White, and Joshua Garland

Complex network analysis of the gravity effect on premixed flames propagating in a Hele-Shaw cell *(10 pages)* 022218
Yuji Nomi, Hiroshi Gotoda, Shuya Kandani, and Christophe Almarcha

Networks and Complex Systems

Zero forcing number of graphs with a power law degree distribution *(5 pages)* 022301
Alexei Vazquez

Majority-vote model with degree-weighted influence on complex networks *(7 pages)* 022302
Minsuk Kim and Soon-Hyung Yook

Social contagion in a world with asymmetric influence *(5 pages)* 022303
G. S. Halvorsen, B. N. Pedersen, and K. Sneppen

Models of continuous-time networks with tie decay, diffusion, and convection *(12 pages)* 022304
Xinzhe Zuo and Mason A. Porter

Impact of local network characteristics on network reconstruction *(8 pages)* 022305
Gloria Cecchini, Rok Cestnik, and Arkady Pikovsky

Futility of being selfish in optimized traffic *(14 pages)* 022306
Ho Fai Po, Chi Ho Yeung, and David Saad

Competitive balance theory: Modeling conflict of interest in a heterogeneous network *(8 pages)* 022307
F. Oloomi, R. Masoumi, K. Karimipour, A. Hosseiny, and G. R. Jafari

Transition to multitype mixing in d-dimensional spreading dynamics *(7 pages)* 022309
Alexei Vazquez

Noise amplification precedes extreme epileptic events on human EEG *(10 pages)* 022310
Oleg E. Karpov, Vadim V. Grubov, Vladimir A. Maksimenko, Nikita Utaschev, Viachaslav E. Semerikov, Denis A. Andrikov, and Alexander E. Hramov

Measuring topological descriptors of complex networks under uncertainty *(13 pages)* 022311
Sebastian Raimondo and Manlio De Domenico

(Continued)

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 103, NUMBER 2** **FEBRUARY 2021**

Collective orientation of an immobile fish school and effect on rheotaxis *(7 pages)* 022137
Renaud Larrieu, Catherine Quilliet, Aurélie Dupont, and Philippe Peyla

Time increasing rates of infiltration and reaction in porous media at the percolation thresholds *(12 pages)* 022138
Ismael S. S. Carrasco and Fábio D. A. Aarão Reis

Statistical mechanics of dislocation pileups in two dimensions *(21 pages)* 022139
Grace H. Zhang and David R. Nelson

Free-energy transduction within autonomous systems *(9 pages)* 022140
Steven J. Large, Jannik Ehrich, and David A. Sivak

Thermodynamic uncertainty relation for energy transport in a transient regime: A model study *(15 pages)* 022141
Sushant Saryal, Onkar Sadekar, and Bijay Kumar Agarwalla

Multipole conservation laws and subdiffusion in any dimension *(7 pages)* 022142
Jason Iaconis, Andrew Lucas, and Rahul Nandkishore

Nonlinear Dynamics and Chaos

Nonlinearity-generated resilience in large complex systems *(16 pages)* 022201
S. Belga Fedeli, Y. V. Fyodorov, and J. R. Ipsen

Stability of a planetary climate system with the biosphere species competing for resources *(12 pages)* 022202
Sergey A. Vakulenko, Ivan Sudakov, Sergei V. Petrovskii, and Dmitry Lukichev

Ratchet universality in the bidirectional escape from a symmetric potential well *(9 pages)* 022203
R. Chacón, P. J. Martínez, J. M. Marcos, F. J. Aranda, and J. A. Martínez

Ground-state phase and superfluidity of tunable spin-orbit-coupled Bose-Einstein condensates *(12 pages)* 022204
Jun-Cheng Liang, Yan-Chao Zhang, Chen Jiao, Ai-Xia Zhang, and Ju-Kui Xue

Vector solitons in nonlocal optical media with pseudo spin-orbit-coupling *(6 pages)* 022205
Huagang Li (李华刚), Xi Peng (彭喜), and Zhiwei Shi (石智伟)

Synchronization in asymmetrically coupled networks with homogeneous oscillators *(10 pages)* 022206
Antonio Palacios

Experimental investigation on the susceptibility of minimal networks to a change in topology and number of oscillators *(10 pages)* 022207
Krishna Manoj, Samadhan A. Pawar, and R. I. Sujith

Higher-order correction terms to the nonlinear amplification or absorption, the nonlinear refractive index, and the intrapulse Raman scattering *(12 pages)* 022208
Ivan M. Uzunov and Todor N. Arabadzhiev

Internal chaotic sea structure and chaos-chaos intermittency in Hamiltonian systems *(11 pages)* 022209
D. M. Naplekov and V. V. Yanovsky

Ginzburg-Landau amplitude equation for nonlinear nonlocal models *(12 pages)* 022210
Stefano Garlaschi, Deepak Gupta, Amos Maritan, and Sandro Azaele

Degenerate isostable reduction for fixed-point and limit-cycle attractors with defective linearizations *(19 pages)* 022211
Dan Wilson

(Continued)

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 103, NUMBER 2** **FEBRUARY 2021**

Refining Deutsch's approach to thermalization *(5 pages)* 022119
Peter Reimann and Lennart Dabelow

Dynamics and decay rates of a time-dependent two-saddle system *(11 pages)* 022121
Johannes Reiff, Matthias Feldmaier, Jörg Main, and Rigoberto Hernandez

Information bound for entropy production from the detailed fluctuation theorem *(6 pages)* 022122
Domingos S. P. Salazar

Exact asymptotic solution of an aggregation model with a bell-shaped distribution *(14 pages)* 022123
F. Leyvraz

Average search time bounds in cue-based searches *(6 pages)* 022124
Vaibhav Wasnik

Effective Langevin equations leading to large deviation function of time-averaged velocity for a nonequilibrium Rayleigh piston *(9 pages)* 022125
Masato Itami, Yohei Nakayama, Naoko Nakagawa, and Shin-ichi Sasa

Site percolation on square and simple cubic lattices with extended neighborhoods and their continuum limit *(11 pages)* 022126
Zhipeng Xun, Dapeng Hao, and Robert M. Ziff

Critical polynomials in the nonplanar and continuum percolation models *(11 pages)* 022127
Wenhui Xu, Junfeng Wang, Hao Hu, and Youjin Deng

Autonomous Brownian gyrators: A study on gyrating characteristics *(8 pages)* 022128
Hsin Chang, Chi-Lun Lee, Pik-Yin Lai, and Yung-Fu Chen

Formation of vocabularies in a decentralized graph-based approach to human language *(6 pages)* 022129
Javier Vera, Felipe Urbina, and Wenceslao Palma

Extraction of unknown signals in arbitrary noise *(14 pages)* 022130
Glenn Ierley and Alex Kostinski

Efficiency estimation for an equilibrium version of the Maxwell refrigerator *(8 pages)* 022131
Toby Joseph and Kiran V.

Self-reinforcing directionality generates truncated Lévy walks without the power-law assumption *(7 pages)* 022132
Daniel Han, Marco A. A. da Silva, Nickolay Korabel, and Sergei Fedotov

Ising spin glass in a random network with a Gaussian random field *(8 pages)* 022133
R. Erichsen Jr., A. Silveira, and S. G. Magalhaes

Critical behavior of the weakly disordered Ising model: Six-loop $\sqrt{\varepsilon}$ expansion study *(11 pages)* 022134
M. V. Kompaniets, A. Kudlis, and A. I. Sokolov

Mean perimeter and area of the convex hull of a planar Brownian motion in the presence of resetting *(11 pages)* 022135
Satya N. Majumdar, Francesco Mori, Hendrik Schawe, and Grégory Schehr

Quantumness and thermodynamic uncertainty relation of the finite-time Otto cycle *(12 pages)* 022136
Sangyun Lee, Meesoon Ha, and Hawoong Jeong

(Continued)

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 103, NUMBER 2** **FEBRUARY 2021**

ARTICLES

Statistical Physics

Inverse design of nonequilibrium steady states: A large-deviation approach *(7 pages)* 022101
William D. Piñeros and Tsvi Tlusty

Evaluation of memory effects at phase transitions and during relaxation processes *(8 pages)* 022102
Hugues Meyer, Fabian Glatzel, Wilkin Wöhler, and Tanja Schilling

Continuous time random walks under Markovian resetting *(8 pages)* 022103
Vicenç Méndez, Axel Masó-Puigdellosas, Trifce Sandev, and Daniel Campos

Branching random graph model of rough surfaces describes thermal properties of the effective molecular potential *(13 pages)* 022104
Aleksey Khlyupin and Timur Aslyamov

Landscape-scaled strategies can outperform Lévy random searches *(5 pages)* 022105
J. Ferreira, E. P. Raposo, H. A. Araújo, M. G. E. da Luz, G. M. Viswanathan, F. Bartumeus, and D. Campos

Stochastic fractal and Noether's theorem *(12 pages)* 022106
Rakibur Rahman, Fahima Nowrin, M. Shahnoor Rahman, Jonathan A. D. Wattis, and Md. Kamrul Hassan

Nonequilibrium grand-canonical ensemble built from a physical particle reservoir *(12 pages)* 022107
Jules Guioth and Eric Bertin

Non-Markovianity, entropy production, and Jarzynski equality *(16 pages)* 022108
Jackes Martins, Lucianno Defaveri, Diogo O. Soares-Pinto, Sílvio M. Duarte Queirós, and Welles A. M. Morgado

Thermodynamic behavior of modified integer-spin Kitaev models on the honeycomb lattice *(13 pages)* 022109
Owen Bradley, Jaan Oitmaa, Diptiman Sen, and Rajiv R. P. Singh

Active pooling design in group testing based on Bayesian posterior prediction *(8 pages)* 022110
Ayaka Sakata

Modeling ternary fluids in contact with elastic membranes *(16 pages)* 022112
M. Pepona, A. C. M. Shek, C. Semprebon, T. Krüger, and H. Kusumaatmaja

Demixing of two species via reciprocally concentration-dependent diffusivity *(17 pages)* 022113
Lutz Schimansky-Geier, Benjamin Lindner, Sebastian Milster, and Alexander B. Neiman

Random walk through a fertile site *(21 pages)* 022114
Michel Bauer, P. L. Krapivsky, and Kirone Mallick

Emergence of logarithmic-periodic oscillations in contact process with topological disorder *(6 pages)* 022115
Priyanka D. Bhoyar and Prashant M. Gade

Auxiliary open quantum system for the Floquet quantum master equation *(8 pages)* 022116
Fei Liu

Subdiffusion in a system with a partially permeable partially absorbing wall *(9 pages)* 022117
Tadeusz Kosztołowicz

(Continued)

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 103, NUMBER 2 PARTS A AND B | ***CONTENTS*** | **FEBRUARY 2021**

The Table of Contents is a total listing of Parts A and B.
Part A consists of pages L020101–022321, and Part B pages 022401–029902(E).

PART A

LETTERS

Statistical Physics

Dimension of diffusion-limited aggregates grown on a line *(4 pages)* L020101
Eviatar B. Procaccia and Itamar Procaccia

Local Granger causality *(5 pages)* L020102
Sebastiano Stramaglia, Tomas Scagliarini, Yuri Antonacci, and Luca Faes

Nonlinear Dynamics and Chaos

Quantum chaos, equilibration, and control in extremely short spin chains *(6 pages)* L020201
Nicolás Mirkin and Diego Wisniacki

Nonlinear Fourier transform for analysis of optical spectral combs *(5 pages)* L020202
S. K. Turitsyn, I. S. Chekhovskoy, and M. P. Fedoruk

Networks and Complex Systems

Activation function dependence of the storage capacity of treelike neural networks *(6 pages)* L020301
Jacob A. Zavatone-Veth and Cengiz Pehlevan

Percolation theory of self-exciting temporal processes *(5 pages)* L020302
Daniele Notarmuzi, Claudio Castellano, Alessandro Flammini, Dario Mazzilli, and Filippo Radicchi

Biological Physics

Anticipation and negative group delay in a retina *(5 pages)* L020401
Po-Yu Chou, Jo-Fan Chien, Kevin Sean Chen, Yu-Ting Huang, Chun-Chung Chen, and C. K. Chan

Plasma Physics

Ultrashort high energy electron bunches from tunable surface plasma waves driven with laser wavefront rotation *(5 pages)* L021201
S. Marini, P. S. Kleij, F. Pisani, F. Amiranoff, M. Grech, A. Macchi, M. Raynaud, and C. Riconda

Copyright 2021 by American Physical Society

2470-0045(202102)103:2:A;1-B

(Continued)

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).