Luis Bonilla

List of Publications by Year
in descending order

246 papers	6,830 citations	109321 35 h-index	74163 75 g-index
274 all docs	274 docs citations	274 times ranked	3521 citing authors

#	Article	IF	Citations
1	The Kuramoto model: A simple paradigm for synchronization phenomena. Reviews of Modern Physics, 2005, 77, 137-185.	45.6	2,547
2	Non-linear dynamics of semiconductor superlattices. Reports on Progress in Physics, 2005, 68, 577-683.	20.1	190
3	Electrically tunable GHz oscillations in doped GaAs-AlAs superlattices. Physical Review B, 1997, 55, 2476-2488.	3.2	134
4	Nonlinear stability of incoherence and collective synchronization in a population of coupled oscillators. Journal of Statistical Physics, 1992, 67, 313-330.	1.2	125
5	Dynamics of electric-field domains and oscillations of the photocurrent in a simple superlattice model. Physical Review B, 1994, 50, 8644-8657.	3.2	122
6	Self-oscillations of domains in doped GaAs-AlAs superlattices. Physical Review B, 1995, 52, 13761-13764.	3.2	95
7	Chaos in resonant-tunneling superlattices. Physical Review B, 1995, 52, 7849-7852.	3.2	82
8	Dislocations in graphene. New Journal of Physics, 2008, 10, 053021.	2.9	80
9	Synchronization in populations of globally coupled oscillators with inertial effects. Physical Review E, 2000, 62, 3437-3454.	2.1	78
10	Explosive Bifurcation to Chaos in Weakly Coupled Semiconductor Superlattices. Physical Review Letters, 1998, 81, 1290-1293.	7.8	76
11	Stable nonequilibrium probability densities and phase transitions for meanfield models in the thermodynamic limit. Journal of Statistical Physics, 1987, 46, 659-678.	1.2	75
12	Current-voltage characteristic and stability in resonant-tunneling n-dopedsemiconductor superlattices. Physical Review B, 1997, 55, 2466-2475.	3.2	69
13	Theory of nonlinear charge transport, wave propagation, and self-oscillations in semiconductor superlattices. Journal of Physics Condensed Matter, 2002, 14, R341-R381.	1.8	65
14	Self-Oscillations of the Current in Doped Semiconductor Superlattices. Japanese Journal of Applied Physics, 1995, 34, 4526-4528.	1.5	64
15	Time-periodic phases in populations of nonlinearly coupled oscillators with bimodal frequency distributions. Physica D: Nonlinear Phenomena, 1998, 113, 79-97.	2.8	62
16	Chaotic dynamics of electric-field domains in periodically driven superlattices. Physical Review B, 1996, 53, 10008-10018.	3.2	55
17	Glassy synchronization in a population of coupled oscillators. Journal of Statistical Physics, 1993, 70, 921-937.	1.2	53
18	Microscopic model for sequential tunneling in semiconductor multiple quantum wells. Physical Review B, 1997, 55, R16053-R16056.	3.2	48

#	Article	IF	Citations
19	Dynamic scenarios of multistable switching in semiconductor superlattices. Physical Review E, 2001, 63, 066207.	2.1	46
20	Active Ornstein-Uhlenbeck particles. Physical Review E, 2019, 100, 022601.	2.1	46
21	Gunn instability in finite samples of GaAs II. Oscillatory states in long samples. Physica D: Nonlinear Phenomena, 1992, 57, 161-184.	2.8	45
22	Asymptotic Behavior of an Initial-Boundary Value Problem for the Vlasov--Poisson--Fokker--Planck System. SIAM Journal on Applied Mathematics, 1997, 57, 1343-1372.	1.8	45
23	HIGH-FIELD LIMIT OF THE VLASOVâ€“POISSONâ€“FOKKERâ€“PLANCK SYSTEM: A COMPARISON OF DIFFERENT PERTURBATION METHODS. Mathematical Models and Methods in Applied Sciences, 2001, 11, 1457-1468.	3.3	45
24	Depinning Transitions in Discrete Reaction-Diffusion Equations. SIAM Journal on Applied Mathematics, 2003, 63, 1056-1082.	1.8	45
25	Periodized discrete elasticity models for defects in graphene. Physical Review B, 2008, 78, .	3.2	44
26	Domain-wall kinetics and tunneling-induced instabilities in superlattices. Physical Review B, 1995, 51, 10171-10174.	3.2	43
27	Microscopic derivation of transport coefficients and boundary conditions in discrete drift-diffusion models of weakly coupled superlattices. Physical Review B, 2000, 62, 2786-2796.	3.2	43
28	Wave Front Depinning Transition in Discrete One-Dimensional Reaction-Diffusion Systems. Physical Review Letters, 2001, 86, 6034-6037.	7.8	43
29	Current self-oscillations, spikes, and crossover between charge monopole and dipole waves in semiconductor superlattices. Physical Review B, 1999, 60, 4489-4492.	3.2	42
30	Collapse of the wave packet and chaos in a model with classical and quantum degrees of freedom. Physical Review A, 1992, 45, 7718-7728.	2.5	40
31	Self-synchronization of populations of nonlinear oscillators in the thermodynamic limit. Journal of Statistical Physics, 1987, 48, 571-591.	1.2	37
32	Irreversibility and nonrecurrence. Journal of Statistical Physics, 1986, 42, 1115-1125.	1.2	36
33	Motion of kinks in the ac-driven damped Frenkel-Kontorova chain. Physical Review B, 1991, 43, 11539-11541.	3.2	36
34	Aging in the linear harmonic oscillator. Physica A: Statistical Mechanics and Its Applications, 1998, 250, 315-326.	2.6	36
35	Breaking the symmetry in bimodal frequency distributions of globally coupled oscillators. Physical Review E, 1998, 57, 5287-5290.	2.1	36
36	Wave fronts may move upstream in semiconductor superlattices. Physical Review E, 2000, 61, 4866-4876.	2.1	34

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37	Oscillatory wave fronts in chains of coupled nonlinear oscillators. Physical Review E, 2003, 67, 056621.	2.1	34
38	Edge Dislocations in Crystal Structures Considered as Traveling Waves in Discrete Models. Physical Review Letters, 2003, 90, 135502.	7.8	34
39	Pulse Propagation in Discrete Systems of Coupled Excitable Cells. SIAM Journal on Applied Mathematics, 2003, 63, 619-635.	1.8	33
40	Three eras of micellization. Physical Review E, 2002, 66, 061406.	2.1	32
41	Chaos-based true random number generators. Journal of Mathematics in Industry, 2016, 7, .	1.2	32
42	Bistable Limit Cycles in a Model for a Laser with a Saturable Absorber. Physical Review Letters, 1982, 49, 35-38.	7.8	31
43	Theory of periodic and solitary space charge waves in extrinsic semiconductors. Physica D: Nonlinear Phenomena, 1991, 50, 545-559.	2.8	31
44	Exactly Solvable Phase Oscillator Models with Synchronization Dynamics. Physical Review Letters, 1998, 81, 3643-3646.	7.8	30
45	Periodic Generation and Propagation of Traveling Fronts in DC Voltage Biased Semiconductor Superlattices. SIAM Journal on Applied Mathematics, 1997, 57, 1588-1614.	1.8	29
46	Hybrid modeling of tumor-induced angiogenesis. Physical Review E, 2014, 90, 062716.	2.1	29
47	Generalized drift-diffusion model for miniband superlattices. Physical Review B, 2003, 68, .	3.2	28
48	Asymptotic description of transients and synchronized states of globally coupled oscillators. Physica D: Nonlinear Phenomena, 1998, 114, 296-314.	2.8	27
49	Quasiperiodic current and strange attractors in ac-driven superlattices. Physical Review B, 2001, 63, .	3.2	27
50	Voltage switching and domain relocation in semiconductor superlattices. Physical Review B, 2006, 73, .	3.2	27
51	Hydrodynamic Limit of a Fokkerâ€“Planck Equation Describing Fiber Lay-Down Processes. SIAM Journal on Applied Mathematics, 2008, 68, 648-665.	1.8	27
52	Coherence Resonance and Stochastic Resonance in an Excitable Semiconductor Superlattice. Physical Review Letters, 2018, 121, 086805.	7.8	27
53	Discrete models of dislocations and their motion in cubic crystals. Physical Review B, 2005, 71, .	3.2	26
54	Solitary Waves in Semiconductors with Finite Geometry and the Gunn Effect. SIAM Journal on Applied Mathematics, 1991, 51, 727-747.	1.8	25

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55	The Onset and End of the Gunn Effect in Extrinsic Semiconductors. SIAM Journal on Applied Mathematics, 1995, 55, 1625-1649.	1.8	25
56	Motion of wave fronts in semiconductor superlattices. Physical Review E, 2001, 64, 036204.	2.1	25
57	Notch signaling and taxis mechanisms regulate early stage angiogenesis: A mathematical and computational model. PLoS Computational Biology, 2020, 16, e1006919.	3.2	25
58	Transition between static and dynamic electric-field domain formation in weakly coupled GaAs/AlAs superlattices. Physical Review B, 1998, 58, R7528-R7531.	3.2	23
59	Electrical control of phonon-mediated spin relaxation rate in semiconductor quantum dots: Rashba versus Dresselhaus spin-orbit coupling. Physical Review B, 2013, 87, .	3.2	23
60	Theory of force-extension curves for modular proteins and DNA hairpins. Physical Review E, 2015, 91, 052712.	2.1	23
61	Singular perturbations approach to the limit cycle and global patterns in a nonlinear diffusionâ€reaction problem with autocatalysis and saturation law. Journal of Mathematical Physics, 1979, 20, 2692-2703.	1.1	22
62	Sawtooth patterns in force-extension curves of biomolecules: An equilibrium-statistical-mechanics theory. Physical Review E, 2013, 88, 012704.	2.1	22
63	Fast Detection of a Weak Signal by a Stochastic Resonance Induced by a Coherence Resonance in an Excitable <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>GaAs</mml:mi><mml:mo>/</mml:mo><mml:msub><mml:mrow><mml:mi>Al</mml:mi></mml:mr Superlattice. Physical Review Letters, 2018, 121, 086806.	7.8	22
64	Multifractal dimension of chaotic attractors in a driven semiconductor superlattice. Physical Review B, 1999, 60, 5694-5697.	3.2	21
65	Axial ligand effect on the catalytic activity of biomimetic Fe-porphyrin catalyst: An experimental and DFT study. Journal of Catalysis, 2016, 344, 768-777.	6.2	20
66	Fluctuation-induced current from freestanding graphene. Physical Review E, 2020, 102, 042101.	2.1	20
67	Acoustoelastic effect and wave propagation in heterogeneous weakly anisotropic materials. Journal of the Mechanics and Physics of Solids, 1985, 33, 241-261.	4.8	19
68	Gunn instability in finite samples of GaAs. Physica D: Nonlinear Phenomena, 1991, 52, 458-476.	2.8	19
69	Small-signal analysis of spontaneous current instabilities in extrinsic semiconductors with trapping: Application to ultrapurep-type germanium. Physical Review B, 1992, 45, 11642-11654.	3.2	19
70	Asymptotic analysis of the Gunn effect with realistic boundary conditions. Physical Review E, 1997, 56, 1500-1510.	2.1	19
71	Model of ripples in graphene. Physical Review B, 2012, 86, .	3.2	19
72	Stochastic model of tumor-induced angiogenesis: Ensemble averages and deterministic equations. Physical Review E, 2016, 93, 022413.	2.1	19

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73	Driving Dislocations in Graphene. Science, 2012, 337, 161-162.	12.6	18
74	Noise-enhanced spontaneous chaos in semiconductor superlattices at room temperature. Europhysics Letters, 2014, 107, 37002.	2.0	18
75	Solitary-wave dynamics in extrinsic semiconductors under dc voltage bias. Physical Review B, 1993, 48, 12278-12281.	3.2	17
76	Liapunov functionals and large-time-asymptotics of mean-field nonlinear Fokker-Planck equations. Transport Theory and Statistical Physics, 1996, 25, 733-751.	0.4	17
77	Chapman-Enskog method and synchronization of globally coupled oscillators. Physical Review E, 2000, 62, 4862-4868.	2.1	17
78	Temperature dependence of current self-oscillations and electric-field domains in sequential-tunneling doped superlattices. Physical Review B, 2001, 64, .	3.2	17
79	Ripples in a string coupled to Glauber spins. Physical Review E, 2012, 85, 031125.	2.1	17
80	Tracking collective cell motion by topological data analysis. PLoS Computational Biology, 2020, 16, e1008407.	3.2	17
81	Nonequilibrium phase transition to a time-dependent probability density for a model of charge-density waves. Physical Review B, 1987, 35, 3637-3639.	3.2	16
82	Reduction of the wavepacket through classical variables. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1991, 271, 196-200.	4.1	16
83	On the short-time dynamics of networks of Hebbian coupled oscillators. Journal of Physics A, 1996, 29, L9-L16.	1.6	16
84	Chaotic motion of space charge wave fronts in semiconductors under time-independent voltage bias. Physical Review E, 2001, 63, 056216.	2.1	16
85	Low-Field Limit for a Nonlinear Discrete Drift-Diffusion Model Arising in Semiconductor Superlattices Theory. SIAM Journal on Applied Mathematics, 2004, 64, 1526-1549.	1.8	16
86	Contrarian compulsions produce exotic time-dependent flocking of active particles. Physical Review E, 2019, 99, 012612.	2.1	16
87	The Gunn Effect: Instability of the Steady State and Stability of the Solitary Wave in Long Extrinsic Semiconductors. SIAM Journal on Applied Mathematics, 1994, 54, 1521-1541.	1.8	15
88	Closure of the Monte Carlo dynamical equations in the spherical Sherrington-Kirkpatrick model. Physical Review B, 1996, 54, 4170-4182.	3.2	15
89	Spikes in the Current Self-Oscillations of Doped GaAs/AlAs Superlattices. Physica Status Solidi (B): Basic Research, 1997, 204, 500-503.	1.5	15
90	Bifurcation Behavior of a Superlattice Model. SIAM Journal on Applied Mathematics, 2000, 60, 2029-2057.	1.8	15

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91	Nonlinear Electron and Spin Transport in Semiconductor Superlattices. SIAM Journal on Applied Mathematics, 2008, 69, 494-513.	1.8	15
92	Homogeneous nucleation of dislocations as bifurcations in a periodized discrete elasticity model. Europhysics Letters, 2008, 81, 36001.	2.0	15
93	Critical radius and temperature for buckling in graphene. Physical Review B, 2016, 93, .	3.2	15
94	Soliton driven angiogenesis. Scientific Reports, 2016, 6, 31296.	3.3	15
95	Kovacs Memory Effect with an Optically Levitated Nanoparticle. Physical Review Letters, 2021, 127, 130603.	7.8	15
96	On the mathematical modelling of tumor-induced angiogenesis. Mathematical Biosciences and Engineering, 2017, 14, 45-66.	1.9	15
97	Limit cycle in a bound exciton recombination model in non-equilibrium semiconductors. Journal of Physics and Chemistry of Solids, 1981, 42, 873-881.	4.0	14
98	Theory of solitary waves and spontaneous current instabilities in dc voltage biased extrinsic semiconductors. Physica D: Nonlinear Phenomena, 1992, 55, 182-196.	2.8	14
99	Determination of EL2 capture and emission coefficients in semi-insulating n-GaAs. Applied Physics Letters, 1999, 74, 988-990.	3.3	14
100	WIGNERâ€“POISSON AND NONLOCAL DRIFT-DIFFUSION MODEL EQUATIONS FOR SEMICONDUCTOR SUPERLATTICES. Mathematical Models and Methods in Applied Sciences, 2005, 15, 1253-1272.	3.3	14
101	Noise-enhanced chaos in a weakly coupled GaAs/(Al,Ga)As superlattice. Physical Review E, 2017, 95, 012218.	2.1	14
102	Solitary-wave conduction inp-type Ge under time-dependent voltage bias. Physical Review B, 1996, 53, 1327-1335.	3.2	13
103	Photorefractive Gunn effect. Physical Review B, 1998, 58, 7046-7052.	3.2	13
104	The influence of anisotropic gate potentials on the phonon induced spin-flip rate in GaAs quantum dots. Applied Physics Letters, 2012, 100, 023108.	3.3	13
105	Ripples in a graphene membrane coupled to Glauber spins. Journal of Statistical Mechanics: Theory and Experiment, 2012, 2012, P09015.	2.3	13
106	Solitonlike attractor for blood vessel tip density in angiogenesis. Physical Review E, 2016, 94, 062415.	2.1	13
107	Dynamics of a soft-spin van Hemmen model. I. Phase and bifurcation diagrams for stationary distributions. Journal of Statistical Physics, 1989, 56, 113-125.	1.2	12
108	Onset of current oscillations in extrinsic semiconductors under DC voltage bias. Semiconductor Science and Technology, 1994, 9, 599-602.	2.0	12

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109	H-theorem for electrostatic or self-gravitating Vlasov-Poisson-Fokker-Planck systems. Physics Letters, Section A: General, Atomic and Solid State Physics, 1996, 212, 55-59.	2.1	12
110	Coherent patterns and self-induced diffraction of electrons on a thin nonlinear layer. Physical Review B, 1996, 54, 1537-1540.	3.2	12
111	Universality of the Gunn effect: Self-sustained oscillations mediated by solitary waves. Physical Review E, 1997, 56, 3628-3632.	2.1	12
112	Nonlinear stochastic discrete drift-diffusion theory of charge fluctuations and domain relocation times in semiconductor superlattices. Physical Review B, 2002, 65, .	3.2	12
113	Kinetics of helium bubble formation in nuclear materials. Physica D: Nonlinear Phenomena, 2006, 222, 131-140.	2.8	12
114	Gate control of Berry phase in III-V semiconductor quantum dots. Physical Review B, 2014, 89, .	3.2	12
115	Ripples in hexagonal lattices of atoms coupled to Glauber spins. Journal of Statistical Mechanics: Theory and Experiment, 2015, 2015, P05015.	2.3	12
116	Nonequilibrium statistical mechanics model showing self-sustained oscillations. Physical Review Letters, 1988, 60, 1398-1401.	7.8	11
117	Analytical solution of the Monte Carlo dynamics of a simple spin-glass model. Europhysics Letters, 1996, 34, 159-164.	2.0	11
118	Asymptotics of the trap-dominated Gunn effect in p-type Ge. Physica D: Nonlinear Phenomena, 1997, 108, 168-190.	2.8	11
119	Multi-quantum-well spin oscillator. Applied Physics Letters, 2007, 91, .	3.3	11
120	Nonequilibrium dynamics of a fast oscillator coupled to Glauber spins. Journal of Statistical Mechanics: Theory and Experiment, 2010, 2010, P09019.	2.3	11
121	Two miniband model for self-sustained oscillations of the current through resonant-tunneling semiconductor superlattices. Physical Review B, 2010, 82, .	3.2	11
122	Influence of primary-particle density in the morphology of agglomerates. Physical Review E, 2014, 90, 012306.	2.1	11
123	Measuring strain and rotation fields at the dislocation core in graphene. Physical Review B, 2015, 92, .	3.2	11
124	STM-driven transition from rippled to buckled graphene in a spin-membrane model. Physical Review B, 2016, 94, .	3.2	11
125	Igniting homogeneous nucleation. Physical Review E, 2005, 71, 021601.	2.1	10
126	Dislocations in cubic crystals described by discrete models. Physica A: Statistical Mechanics and Its Applications, 2007, 376, 361-377.	2.6	10

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127	Bifurcation analysis and phase diagram of a spin-string model with buckled states. Physical Review E, 2017, 96, 062147.	2.1	10
128	Fingering instability in spreading epithelial monolayers: roles of cell polarisation, substrate friction and contractile stresses. Soft Matter, 2021, 17, 8276-8290.	2.7	10
129	Localized nonuniform patterns in a diffusion-reaction model with autocatalysis and the Langmuirâ€“Hinshelwood saturation law. Journal of Mathematical Physics, 1980, 21, 2586.	1.1	9
130	Relaxation Oscillations, Pulses, and Travelling Waves in the Diffusive Volterra Delay-Differential Equation. SIAM Journal on Applied Mathematics, 1984, 44, 369-391.	1.8	9
131	Self-sustained current oscillations in the kinetic theory of semiconductor superlattices. Journal of Computational Physics, 2009, 228, 7689-7705.	3.8	9
132	Phase transitions in a mechanical system coupled to Glauber spins. Journal of Statistical Mechanics: Theory and Experiment, 2010, 2010, P06016.	2.3	9
133	Theory of defect dynamics in graphene: defect groupings and their stability. Continuum Mechanics and Thermodynamics, 2011, 23, 337-346.	2.2	9
134	Theory of spatially inhomogeneous Bloch oscillations in semiconductor superlattices. Physical Review B, 2011, 84, .	3.2	9
135	Spin-oscillator model for the unzipping of biomolecules by mechanical force. Physical Review E, 2012, 86, 021919.	2.1	9
136	On the stability of wavefronts and solitary space charge waves in extrinsic semiconductors under current bias. Physics Letters, Section A: General, Atomic and Solid State Physics, 1991, 156, 179-182.	2.1	8
137	Thermoelectromechanical effects in relaxed-shape graphene and band structures of graphene quantum dots. Physical Review B, 2014, 90, .	3.2	8
138	The Description of Homogeneous Branched-Chain Explosions with Slow Radical Recombination by Self-Adjusting Time Scales. SIAM Journal on Applied Mathematics, 2000, 61, 528-550.	1.8	7
139	Numerical Methods for a Quantum Driftâ€“diffusion Equation in Semiconductor Physics. Journal of Mathematical Chemistry, 2006, 40, 3-13.	1.5	7
140	Self-sustained spin-polarized current oscillations in multiquantum well structures. New Journal of Physics, 2009, 11, 013033.	2.9	7
141	Higher Order Averaging of Linear Fokker--Planck Equations with Periodic Forcing. SIAM Journal on Applied Mathematics, 2012, 72, 1315-1342.	1.8	7
142	Spin echo dynamics under an applied drift field in graphene nanoribbon superlattices. Applied Physics Letters, 2013, 103, 233112.	3.3	7
143	Temperature-dependent dynamical nuclear polarization bistabilities in double quantum dots in the spin-blockade regime. Physical Review B, 2013, 88, .	3.2	7
144	Pseudospin lifetime in relaxed-shape armchair graphene nanoribbons due to in-plane phonon modes. Physical Review B, 2016, 93, .	3.2	7

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145	Enhancing chaotic behavior at room temperature in GaAs/(Al,Ga)As superlattices. Physical Review B, 2017, 95, .	3.2	7
146	A convergent numerical scheme for integrodifferential kinetic models of angiogenesis. Journal of Computational Physics, 2018, 375, 1270-1294.	3.8	7
147	Anomalous Angiogenesis in Retina. Biomedicines, 2021, 9, 224.	3.2	7
148	Designing Hyperchaos and Intermittency in Semiconductor Superlattices. Physical Review Letters, 2021, 127, 096601.	7.8	7
149	Dynamics of Electric Field Domains in Superlattices. Springer Proceedings in Physics, 1995, , 1-20.	0.2	7
150	Lateral Electronâ€“Hole Plasma Domains under Bistable Electro-Optical Absorption in Quantum Wells. Physica Status Solidi (B): Basic Research, 1997, 204, 559-562.	1.5	6
151	Axisymmetric pulse recycling and motion in bulk semiconductors. Physical Review E, 2001, 65, 016607.	2.1	6
152	Photoexcited semiconductor superlattices as constrained excitable media: Motion of dipole domains and current self-oscillations. Physical Review B, 2010, 81, .	3.2	6
153	Spatially confined Bloch oscillations in semiconductor superlattices. Europhysics Letters, 2011, 95, 47001.	2.0	6
154	Strain engineering of graphene nanoribbons: pseudomagnetic versus external magnetic fields. European Physical Journal B, 2017, 90, 1.	1.5	6
155	Ensemble Averages, Soliton Dynamics and Influence of Haptotaxis in a Model of Tumor-Induced Angiogenesis. Entropy, 2017, 19, 209.	2.2	6
156	Parameter dependence of high-frequency nonlinear oscillations and intrinsic chaos in short GaAs/(Al,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	2.5	6
157	Crossover between parabolic and hyperbolic scaling, oscillatory modes, and resonances near flocking. Physical Review E, 2018, 98, .	2.1	6
158	Effective elastic constants of polycrystalline aggregates. Journal of the Mechanics and Physics of Solids, 1985, 33, 227-240.	4.8	5
159	Stability of stationary solutions of extended reaction-diffusion-convection equations on a finite segment. Applied Mathematics Letters, 1991, 4, 41-44.	2.7	5
160	Dynamics of electric-field domains and chaos in semiconductor superlattices. Solid-State Electronics, 1996, 40, 161-165.	1.4	5
161	Stationary states and phase diagram for a model of the Gunn effect under realistic boundary conditions. Physical Review E, 1997, 56, 1490-1499.	2.1	5
162	Two-dimensional oscillatory patterns in semiconductors with point contacts. Physical Review E, 2001, 64, 036203.	2.1	5

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163	Effects of disorder on the wave front depinning transition in spatially discrete systems. Physical Review E, 2002, 65, 035207.	2.1	5
164	Miniband transport and oscillations in semiconductor superlattices. Nanotechnology, 2004, 15, S229-S233.	2.6	5
165	Toy nanoindentation model and incipient plasticity. Chaos, Solitons and Fractals, 2009, 42, 1623-1630.	5.1	5
166	Theory of surface deposition from boundary layers containing condensable vapour and particles. Journal of Fluid Mechanics, 2009, 626, 183-210.	3.4	5
167	Coupled multiphysics, barrier localization, and critical radius effects in embedded nanowire superlattices. Journal of Applied Physics, 2013, 113, 244306.	2.5	5
168	Protein unfolding and refolding as transitions through virtual states. Europhysics Letters, 2014, 108, 28002.	2.0	5
169	Higher-Order Averaging of Fokker--Planck Equations for Nonlinear Fiber Lay-Down Processes. SIAM Journal on Applied Mathematics, 2014, 74, 366-391.	1.8	5
170	Variational formulation, asymptotic analysis, and finite element simulation of wrinkling phenomena in modified plate equations modeling biofilms growing on agar substrates. Computer Methods in Applied Mechanics and Engineering, 2018, 333, 257-286.	6.6	5
171	Numerical study of the rippling instability driven by electron-phonon coupling in graphene. Physical Review B, 2020, 101, .	3.2	5
172	Free-boundary problems describing two-dimensional pulse recycling and motion in semiconductors. Physical Review E, 2003, 67, 036202.	2.1	4
173	Spin transition rates in nanowire superlattices: Rashba spinâ€“orbit coupling effects. Journal Physics D: Applied Physics, 2013, 46, 265302.	2.8	4
174	Timeâ€delay, diffusion and advection in a model for the time evolution of a spruce budworm population. Journal of Interdisciplinary Cycle Research, 1981, 12, 267-272.	0.2	3
175	Pattern formation under bistable electro-optical absorption in quantum wells: I. Journal of Physics Condensed Matter, 1999, 11, 6395-6411.	1.8	3
176	SPATIOTEMPORAL STRUCTURES IN UNDOPED PHOTOEXCITED SEMICONDUCTOR SUPERLATTICES. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2001, 11, 2817-2822.	1.7	3
177	EXACT SOLUTIONS AND DYNAMICS OF GLOBALLY COUPLED OSCILLATORS. Mathematical Models and Methods in Applied Sciences, 2006, 16, 1919-1959.	3.3	3
178	Magnetoswitching of current oscillations in dilute magnetic semiconductor nanostructures. Physical Review B, 2009, 80, .	3.2	3
179	Transport in semiconductor nanowire superlattices described by coupled quantum mechanical and kinetic models. Journal of Physics Condensed Matter, 2013, 25, 335301.	1.8	3
180	Numerical methods for kinetic equations in semiconductor superlattices. Computer Physics Communications, 2013, 184, 720-731.	7.5	3

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181	Wavelength selection of rippling patterns in myxobacteria. Physical Review E, 2016, 93, 012412.	2.1	3
182	Two-dimensional collective electron magnetotransport, oscillations, and chaos in a semiconductor superlattice. Physical Review E, 2017, 96, 062215.	2.1	3
183	Two dimensional soliton in tumor induced angiogenesis. Journal of Statistical Mechanics: Theory and Experiment, 2020, 2020, 083402.	2.3	3
184	Dynamics of electric field domain walls in semiconductor superlattices. Physica E: Low-Dimensional Systems and Nanostructures, 2000, 7, 299-301.	2.7	2
185	Wave dynamics in two-dimensional samples of n-GaAs with point contacts. Chaos, Solitons and Fractals, 2003, 17, 283-288.	5.1	2
186	Theory of charge fluctuations and domain relocation times in semiconductor superlattices. Physica D: Nonlinear Phenomena, 2004, 199, 105-114.	2.8	2
187	Homogeneous nucleation of opposite moving dipole domains and current self-oscillations in undoped photoexcited superlattices. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 1209-1211.	2.7	2
188	Dynamics of optically injected currents in carbon nanotubes. Physical Review B, 2014, 90, .	3.2	2
189	Stochastic Models of Blood Vessel Growth. Springer Proceedings in Mathematics and Statistics, 2019, , 413-436.	0.2	2
190	Space Charge Instabilities and Nonlinear Waves in Extrinsic Semiconductors. Springer Proceedings in Physics, 1995, , 46-69.	0.2	2
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