# G Bard Ermentrout

List of Publications by Year
in descending order

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|---|---|---|---|
| 220 papers | 14,331 citations | 31902 53 h-index | 27345 106 g-index |

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|---|---|---|---|
| 231 all docs | 231 docs citations | 231 times ranked | 8016 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Type I Membranes, Phase Resetting Curves, and Synchrony. Neural Computation, 1996, 8, 979-1001. | 1.3 | 867 |
| 2 | Mathematical Foundations of Neuroscience. Interdisciplinary Applied Mathematics, 2010, , . | 0.2 | 852 |
| 3 | When inhibition not excitation synchronizes neural firing. Journal of Computational Neuroscience, 1994, 1, 313-321. | 0.6 | 696 |
| 4 | Simulation of networks of spiking neurons: A review of tools and strategies. Journal of Computational Neuroscience, 2007, 23, 349-398. | 0.6 | 639 |
| 5 | Neural networks as spatio-temporal pattern-forming systems. Reports on Progress in Physics, 1998, 61, 353-430. | 8.1 | 600 |
| 6 | Chemical and electrical synapses perform complementary roles in the synchronization of interneuronal networks. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 15482-15487. | 3.3 | 313 |
| 7 | Spatially Structured Activity in Synaptically Coupled Neuronal Networks: I. Traveling Fronts and Pulses. SIAM Journal on Applied Mathematics, 2001, 62, 206-225. | 0.8 | 276 |
| 8 | A reduced mathematical model of the acute inflammatory response: I. Derivation of model and analysis of anti-inflammation. Journal of Theoretical Biology, 2006, 242, 220-236. | 0.8 | 238 |
| 9 | Reliability, synchrony and noise. Trends in Neurosciences, 2008, 31, 428-434. | 4.2 | 231 |
| 10 | Efficient Estimation of Phase-Resetting Curves in Real Neurons and its Significance for Neural-Network Modeling. Physical Review Letters, 2005, 94, 158101. | 2.9 | 222 |
| 11 | Linearization of F-I Curves by Adaptation. Neural Computation, 1998, 10, 1721-1729. | 1.3 | 218 |
| 12 | Multiple Bumps in a Neuronal Model of Working Memory. SIAM Journal on Applied Mathematics, 2002, 63, 62-97. | 0.8 | 216 |
| 13 | The Effects of Spike Frequency Adaptation and Negative Feedback on the Synchronization of Neural Oscillators. Neural Computation, 2001, 13, 1285-1310. | 1.3 | 208 |
| 14 | Existence and uniqueness of travelling waves for a neural network. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 1993, 123, 461-478. | 0.8 | 193 |
| 15 | Dynamics of Membrane Excitability Determine Interspike Interval Variability: A Link Between Spike Generation Mechanisms and Cortical Spike Train Statistics. Neural Computation, 1998, 10, 1047-1065. | 1.3 | 191 |
| 16 | Modelling of intersegmental coordination in the lamprey central pattern generator for locomotion. Trends in Neurosciences, 1992, 15, 434-438. | 4.2 | 187 |
| 17 | Phase-Response Curves Give the Responses of Neurons to Transient Inputs. Journal of Neurophysiology, 2005, 94, 1623-1635. | 0.9 | 187 |
| 18 | Synchrony, stability, and firing patterns in pulse-coupled oscillators. Physica D: Nonlinear Phenomena, 2002, 163, 191-216. | 1.3 | 179 |

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| 19 | Correlation-Induced Synchronization of Oscillations in Olfactory Bulb Neurons. Journal of Neuroscience, 2006, 26, 3646-3655. | 1.7 | 176 |
| 20 | Testing Turingâ€™s theory of morphogenesis in chemical cells. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 4397-4402. | 3.3 | 168 |
| 21 | Spatially Structured Activity in Synaptically Coupled Neuronal Networks: II. Lateral Inhibition and Standing Pulses. SIAM Journal on Applied Mathematics, 2001, 62, 226-243. | 0.8 | 162 |
| 22 | Phase-response curves and synchronized neural networks. Philosophical Transactions of the Royal Society B: Biological Sciences, 2010, 365, 2407-2422. | 1.8 | 155 |
| 23 | Turning on and off with excitation: the role of spike-timing asynchrony and synchrony in sustained neural activity. Journal of Computational Neuroscience, 2001, 11, 121-134. | 0.6 | 153 |
| 24 | Glutamate Receptor Subtypes Mediating Synaptic Activation of Prefrontal Cortex Neurons: Relevance for Schizophrenia. Journal of Neuroscience, 2011, 31, 142-156. | 1.7 | 136 |
| 25 | Reduction of Conductance-Based Models with Slow Synapses to Neural Nets. Neural Computation, 1994, 6, 679-695. | 1.3 | 133 |
| 26 | Multiple Rhythmic States in a Model of the Respiratory Central Pattern Generator. Journal of Neurophysiology, 2009, 101, 2146-2165. | 0.9 | 129 |
| 27 | Actomyosin meshwork mechanosensing enables tissue shape to orient cell force. Nature Communications, 2017, 8, 15014. | 5.8 | 125 |
| 28 | A quantitative population model of whisker barrels: Re-examining the Wilson-Cowan equations. Journal of Computational Neuroscience, 1996, 3, 247-264. | 0.6 | 118 |
| 29 | Stable Periodic Solutions to Discrete and Continuum Arrays of Weakly Coupled Nonlinear Oscillators. SIAM Journal on Applied Mathematics, 1992, 52, 1665-1687. | 0.8 | 114 |
| 30 | Dynamics of Limit-Cycle Oscillators Subject to General Noise. Physical Review Letters, 2010, 105, 154101. | 2.9 | 102 |
| 31 | n:m Phase-locking of weakly coupled oscillators. Journal of Mathematical Biology, 1981, 12, 327-342. | 0.8 | 101 |
| 32 | Spike Frequency Adaptation Affects the Synchronization Properties of Networks of Cortical Oscillators. Neural Computation, 1998, 10, 837-854. | 1.3 | 97 |
| 33 | Stochastic Phase Reduction for a General Class of Noisy Limit Cycle Oscillators. Physical Review Letters, 2009, 102, 194102. | 2.9 | 92 |
| 34 | Relating Neural Dynamics to Neural Coding. Physical Review Letters, 2007, 99, 248103. | 2.9 | 89 |
| 35 | The neural origins of shell structure and pattern in aquatic mollusks. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 6837-6842. | 3.3 | 81 |
| 36 | Wandering Bumps in Stochastic Neural Fields. SIAM Journal on Applied Dynamical Systems, 2013, 12, 61-94. | 0.7 | 80 |

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| 37 | The analysis of synaptically generated traveling waves. , 1998, 5, 191-208. | | 79 |
| 38 | Inflammatory Modulation of Hepatocyte Apoptosis by Nitric Oxide: In Vivo, In Vitro, and In Silico Studies. Current Molecular Medicine, 2004, 4, 753-762. | 0.6 | 78 |
| 39 | Class-II neurons display a higher degree of stochastic synchronization than class-I neurons. Physical Review E, 2008, 77, 041918. | 0.8 | 78 |
| 40 | Modeling neural oscillations. Physiology and Behavior, 2002, 77, 629-633. | 1.0 | 75 |
| 41 | On the origin and dynamics of the vasomotion of small arteries. Mathematical Biosciences, 1994, 119, 127-167. | 0.9 | 74 |
| 42 | Optimal Time Scale for Spike-Time Reliability: Theory, Simulations, and Experiments. Journal of Neurophysiology, 2008, 99, 277-283. | 0.9 | 71 |
| 43 | Analysis of a Canard Mechanism by Which Excitatory Synaptic Coupling Can Synchronize Neurons at Low Firing Frequencies. SIAM Journal on Applied Mathematics, 2004, 65, 69-92. | 0.8 | 70 |
| 44 | Canards, Clusters, and Synchronization in a Weakly Coupled Interneuron Model. SIAM Journal on Applied Dynamical Systems, 2009, 8, 253-278. | 0.7 | 70 |
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| 46 | Bistability in Pulse Propagation in Networks of Excitatory and Inhibitory Populations. Physical Review Letters, 2001, 86, 4179-4182. | 2.9 | 66 |
| 47 | Stable Rotating Waves in Two-Dimensional Discrete Active Media. SIAM Journal on Applied Mathematics, 1994, 54, 1720-1744. | 0.8 | 65 |
| 48 | Effects of axonal time delay on synchronization and wave formation in sparsely coupled neuronal oscillators. Physical Review E, 2007, 76, 056206. | 0.8 | 64 |
| 49 | Functional Maturation of GABA Synapses During Postnatal Development of the Monkey Dorsolateral Prefrontal Cortex. Cerebral Cortex, 2015, 25, 4076-4093. | 1.6 | 61 |
| 50 | Greater accuracy and broadened applicability of phase reduction using isostable coordinates. Journal of Mathematical Biology, 2018, 76, 37-66. | 0.8 | 61 |
| 51 | Models for the Length Distributions of Actin Filaments: I. Simple Polymerization and Fragmentation. Bulletin of Mathematical Biology, 1998, 60, 449-475. | 0.9 | 59 |
| 52 | Type-II phase resetting curve is optimal for stochastic synchrony. Physical Review E, 2009, 80, 011911. | 0.8 | 59 |
| 53 | Spike generating dynamics and the conditions for spike-time precision in cortical neurons. Journal of Computational Neuroscience, 2003, 15, 91-103. | 0.6 | 57 |
| 54 | Optimizing Working Memory with Heterogeneity of Recurrent Cortical Excitation. Journal of Neuroscience, 2013, 33, 18999-19011. | 1.7 | 57 |

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| 55 | Trail following in ants: individual properties determine population behaviour. Behavioral Ecology and Sociobiology, 1995, 36, 119-133. | 0.6 | 56 |
| 56 | A Mathematical Model of the Pancreatic Duct Cell Generating High Bicarbonate Concentrations in Pancreatic Juice. Pancreas, 2004, 29, e30-e40. | 0.5 | 56 |
| 57 | Reflected Waves in an Inhomogeneous Excitable Medium. SIAM Journal on Applied Mathematics, 1996, 56, 1107-1128. | 0.8 | 55 |
| 58 | Using a Mathematical Model to Analyze the Role of Probiotics and Inflammation in Necrotizing Enterocolitis. PLoS ONE, 2010, 5, e10066. | 1.1 | 55 |
| 59 | Delays and weakly coupled neuronal oscillators. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 1097-1115. | 1.6 | 53 |
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| 63 | Minimal Model of Oscillations and Waves in the Limax Olfactory Lobe With Tests of the Model's Predictive Power. Journal of Neurophysiology, 1998, 79, 2677-2689. | 0.9 | 46 |
| 64 | The inflammatory response to influenza A virus (H1N1): An experimental and mathematical study. Journal of Theoretical Biology, 2015, 374, 83-93. | 0.8 | 46 |
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| 66 | A Model for the Origin and Properties of Flicker-Induced Geometric Phosphenes. PLoS Computational Biology, 2011, 7, e1002158. | 1.5 | 45 |
| 67 | Intrinsic heterogeneity in oscillatory dynamics limits correlation-induced neural synchronization. Journal of Neurophysiology, 2012, 108, 2115-2133. | 0.9 | 45 |
| 68 | Dendritic and synaptic effects in systems of coupled cortical oscillators. Journal of Computational Neuroscience, 1998, 5, 315-329. | 0.6 | 44 |
| 69 | Synchronization dynamics of two coupled neural oscillators receiving shared and unshared noisy stimuli. Journal of Computational Neuroscience, 2009, 26, 425-443. | 0.6 | 44 |
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| 74 | Phase resetting and coupling of noisy neural oscillators. Journal of Computational Neuroscience, 2006, 20, 179-190. | 0.6 | 40 |
| 75 | Dopamine and gamma band synchrony in schizophrenia â€“ insights from computational and empirical studies. European Journal of Neuroscience, 2012, 36, 2146-2155. | 1.2 | 40 |
| 76 | Stimulus-Driven Traveling Solutions in Continuum Neuronal Models with a General Smooth Firing Rate Function. SIAM Journal on Applied Mathematics, 2010, 70, 3039-3064. | 0.8 | 39 |
| 77 | Impact of neuronal heterogeneity on correlated colored noise-induced synchronization. Frontiers in Computational Neuroscience, 2013, 7, 113. | 1.2 | 39 |
| 78 | Population dynamics of the modified theta model: macroscopic phase reduction and bifurcation analysis link microscopic neuronal interactions to macroscopic gamma oscillation. Journal of the Royal Society Interface, 2014, 11, 20140058. | 1.5 | 39 |
| 79 | The evolution of synaptically generated waves in one- and two-dimensional domains. Physica D: Nonlinear Phenomena, 2002, 163, 217-235. | 1.3 | 37 |
| 80 | Waves in a simple, excitable or oscillatory, reaction-diffusion model. Journal of Mathematical Biology, 1981, 11, 269-294. | 0.8 | 36 |
| 81 | Learning of Phase Lags in Coupled Neural Oscillators. Neural Computation, 1994, 6, 225-241. | 1.3 | 36 |
| 82 | Transition fronts and localized structures in bistable reactionâ€”diffusion equations. Physica D: Nonlinear Phenomena, 1997, 108, 147-167. | 1.3 | 35 |
| 83 | A model for actin-filament length distribution in a lamellipod. Journal of Mathematical Biology, 2001, 43, 325-355. | 0.8 | 35 |
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| 85 | Stochastic representations of ion channel kinetics and exact stochastic simulation of neuronal dynamics. Journal of Computational Neuroscience, 2015, 38, 67-82. | 0.6 | 35 |
| 86 | Slow excitation supports propagation of slow pulses in networks of excitatory and inhibitory populations. Physical Review E, 2002, 65, 061911. | 0.8 | 34 |
| 87 | Phase locking in chains of multiple-coupled oscillators. Physica D: Nonlinear Phenomena, 2000, 143, 56-73. | 1.3 | 33 |
| 88 | Augmented Phase Reduction of (Not So) Weakly Perturbed Coupled Oscillators. SIAM Review, 2019, 61, 277-315. | 4.2 | 33 |
| 89 | Actin filament branching and protrusion velocity in a simple 1D model of a motile cell. Journal of Theoretical Biology, 2006, 242, 265-279. | 0.8 | 32 |
| 90 | A mathematical model of pulmonary gas exchange under inflammatory stress. Journal of Theoretical Biology, 2010, 264, 161-173. | 0.8 | 32 |

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| 91 | The Shape of Phase-Resetting Curves in Oscillators with a Saddle Node on an Invariant Circle Bifurcation. Neural Computation, 2012, 24, 3111-3125. | 1.3 | 32 |
| 92 | Weakly coupled oscillators in a slowly varying world. Journal of Computational Neuroscience, 2016, 40, 269-281. | 0.6 | 32 |
| 93 | Macroscopic phase-resetting curves for spiking neural networks. Physical Review E, 2017, 96, 042311. | 0.8 | 31 |
| 94 | Oscillations in working memory and neural binding: A mechanism for multiple memories and their interactions. PLoS Computational Biology, 2018, 14, e1006517. | 1.5 | 30 |
| 95 | Mouse Navigation Strategies for Odor Source Localization. Frontiers in Neuroscience, 2020, 14, 218. | 1.4 | 30 |
| 96 | Predicting synchronized neural assemblies from experimentally estimated phase-resetting curves. Neurocomputing, 2006, 69, 1112-1115. | 3.5 | 29 |
| 97 | Finite-size and correlation-induced effects in mean-field dynamics. Journal of Computational Neuroscience, 2011, 31, 453-484. | 0.6 | 29 |
| 98 | A mathematical model of intrahost pneumococcal pneumonia infection dynamics in murine strains. Journal of Theoretical Biology, 2014, 353, 44-54. | 0.8 | 29 |
| 99 | Effects of delay on the type and velocity of travelling pulses in neuronal networks with spatially decaying connectivity. , 0, . | | 29 |
| 100 | Pattern formation in systems with one spatially distributed species. Bulletin of Mathematical Biology, 1997, 59, 533-549. | 0.9 | 28 |
| 101 | Mathematical modeling in necrotizing enterocolitisâ€"a new look at an ongoing problem. Journal of Pediatric Surgery, 2007, 42, 445-453. | 0.8 | 28 |
| 102 | Models for the Length Distributions of Actin Filaments: II. Polymerization and Fragmentation by Gelsolin Acting Together. Bulletin of Mathematical Biology, 1998, 60, 477-503. | 0.9 | 27 |
| 103 | Bifurcations in the Wilson--Cowan Equations with Nonsmooth Firing Rate. SIAM Journal on Applied Dynamical Systems, 2015, 14, 43-72. | 0.7 | 27 |
| 104 | Gap junctions destroy persistent states in excitatory networks. Physical Review E, 2006, 74, 031918. | 0.8 | 26 |
| 105 | Sensory dynamics of visual hallucinations in the normal population. ELife, 2016, 5, . | 2.8 | 26 |
| 106 | Phase Models Beyond Weak Coupling. Physical Review Letters, 2019, 123, 164101. | 2.9 | 26 |
| 107 | Effects of delay on the type and velocity of travelling pulses in neuronal networks with spatially decaying connectivity. Network: Computation in Neural Systems, 2000, 11, 221-246. | 2.2 | 25 |
| 108 | Regular Traveling Waves in a One-Dimensional Network of Theta Neurons. SIAM Journal on Applied Mathematics, 2002, 62, 1197-1221. | 0.8 | 25 |

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| 109 | Model for Transition from Waves to Synchrony in the Olfactory Lobe of Limax. Journal of Computational Neuroscience, 2004, 17, 365-383. | 0.6 | 25 |
| 110 | Modeling the interactions of bacteria and Toll-like receptor-mediated inflammation in necrotizing enterocolitis. Journal of Theoretical Biology, 2013, 321, 83-99. | 0.8 | 25 |
| 111 | Recent advances in coupled oscillator theory. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20190092. | 1.6 | 25 |
| 112 | The Existence of Spiral Waves in an Oscillatory Reaction-Diffusion System. SIAM Journal on Applied Mathematics, 1994, 54, 1386-1401. | 0.8 | 24 |
| 113 | Stable small-amplitude solutions in reaction-diffusion systems. Quarterly of Applied Mathematics, 1981, 39, 61-86. | 0.5 | 23 |
| 114 | Period Doublings and Possible Chaos in Neural Models. SIAM Journal on Applied Mathematics, 1984, 44, 80-95. | 0.8 | 23 |
| 115 | Models for spatial polymerization dynamics of rod-like polymers. Journal of Mathematical Biology, 2000, 40, 64-96. | 0.8 | 23 |
| 116 | Pattern Formation in an Array of Oscillators with Electrical and Chemical Coupling. SIAM Journal on Applied Mathematics, 2007, 67, 512-529. | 0.8 | 23 |
| 117 | Reliability and stochastic synchronization in type I vs. type II neural oscillators. Neurocomputing, 2007, 70, 2102-2106. | 3.5 | 23 |
| 118 | Pattern Formation in a Model of Acute Inflammation. SIAM Journal on Applied Dynamical Systems, 2012, 11, 629-660. | 0.7 | 23 |
| 119 | A model for complex sequence learning and reproduction in neural populations. Journal of Computational Neuroscience, 2012, 32, 403-423. | 0.6 | 22 |
| 120 | Computational Insights on the Competing Effects of Nitric Oxide in Regulating Apoptosis. PLoS ONE, 2008, 3, e2249. | 1.1 | 21 |
| 121 | Phase-resetting curve determines how BK currents affect neuronal firing. Journal of Computational Neuroscience, 2011, 30, 211-223. | 0.6 | 21 |
| 122 | Wave propagation mediated by GABAB synapse and rebound excitation in an inhibitory network: a reduced model approach. Journal of Computational Neuroscience, 1998, 5, 53-69. | 0.6 | 20 |
| 123 | Monotonicity of Phaselocked Solutions in Chains and Arrays of Nearest-Neighbor Coupled Oscillators. SIAM Journal on Mathematical Analysis, 1998, 29, 208-234. | 0.9 | 20 |
| 124 | Evolution of patterns on Conus shells. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E234-41. | 3.3 | 20 |
| 125 | Hallucinogen persisting perception disorder in neuronal networks with adaptation. Journal of Computational Neuroscience, 2012, 32, 25-53. | 0.6 | 20 |
| 126 | An Operational Definition of Phase Characterizes the Transient Response of Perturbed Limit Cycle Oscillators. SIAM Journal on Applied Dynamical Systems, 2018, 17, 2516-2543. | 0.7 | 20 |

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| 127 | Nonlinear Coupling near a Degenerate Hopf (Bautin) Bifurcation. SIAM Journal on Applied Mathematics, 2003, 63, 1627-1647. | 0.8 | 19 |
| 128 | Local Spatial and Temporal Processes of Influenza in Pennsylvania, USA: 2003â€“2009. PLoS ONE, 2012, 7, e34245. | 1.1 | 19 |
| 129 | Olfactory Navigation and the Receptor Nonlinearity. Journal of Neuroscience, 2019, 39, 3713-3727. | 1.7 | 19 |
| 130 | Selecting a common direction. Journal of Mathematical Biology, 1996, 34, 811-842. | 0.8 | 18 |
| 131 | Oscillations in a refractory neural net. Journal of Mathematical Biology, 2001, 43, 81-100. | 0.8 | 18 |
| 132 | Correlation transfer in stochastically driven neural oscillators over long and short time scales. Physical Review E, 2011, 84, 061914. | 0.8 | 18 |
| 133 | Synchrony, waves and ripple in spatially coupled Kuramoto oscillators with Mexican hat connectivity. Biological Cybernetics, 2015, 109, 333-347. | 0.6 | 17 |
| 134 | Emergent Dynamical Properties of the BCM Learning Rule. Journal of Mathematical Neuroscience, 2017, 7, 2. | 2.4 | 17 |
| 135 | Multiple-spike waves in a one-dimensional integrate-and-fire neural network. Journal of Mathematical Biology, 2004, 48, 243-274. | 0.8 | 16 |
| 136 | Amplification of Asynchronous Inhibition-Mediated Synchronization by Feedback in Recurrent Networks. PLoS Computational Biology, 2010, 6, e1000679. | 1.5 | 16 |
| 137 | Relationship between the mechanisms of gamma rhythm generation and the magnitude of the macroscopic phase response function in a population of excitatory and inhibitory modified quadratic integrate-and-fire neurons. Physical Review E, 2018, 97, 012209. | 0.8 | 16 |
| 138 | Balancing organization and flexibility in foraging dynamics. Journal of Theoretical Biology, 2010, 266, 391-400. | 0.8 | 15 |
| 139 | Coupling regularizes individual units in noisy populations. Physical Review E, 2010, 81, 011911. | 0.8 | 15 |
| 140 | Analysis of Recurrent Networks of Pulse-Coupled Noisy Neural Oscillators. SIAM Journal on Applied Dynamical Systems, 2010, 9, 113-137. | 0.7 | 15 |
| 141 | A model of cardiac ryanodine receptor gating predicts experimental Ca2+-dynamics and Ca2+-triggered arrhythmia in the long QT syndrome. Chaos, 2017, 27, 093940. | 1.0 | 15 |
| 142 | Noise-Induced Synchronization and Antiresonance in Interacting Excitable Systems: Applications to Deep Brain Stimulation in Parkinsonâ€™s Disease. Physical Review X, 2020, 10, . | 2.8 | 15 |
| 143 | Response of traveling waves to transient inputs in neural fields. Physical Review E, 2012, 85, 021910. | 0.8 | 14 |
| 144 | Phase Resetting Neural Oscillators: Topological Theory Versus the RealWorld. , 2012, , 33-51. | | 14 |

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| 145 | Contact response of cells can mediate morphogenetic pattern formation. Differentiation, 1990, 45, 147-159. | 1.0 | 13 |
| 146 | Dynamical Consequences of Fast-Rising, Slow-Decaying Synapses in Neuronal Networks. Neural Computation, 2003, 15, 2483-2522. | 1.3 | 13 |
| 147 | The mechanisms for compression and reflection of cortical waves. Biological Cybernetics, 2011, 105, 253-268. | 0.6 | 13 |
| 148 | Bifurcations of Stationary Solutions in an Interacting Pair of E-I Neural Fields. SIAM Journal on Applied Dynamical Systems, 2012, 11, 895-938. | 0.7 | 13 |
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| 151 | A homeostatic rule for inhibitory synapses promotes temporal sharpening and cortical reorganization. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 16526-16531. | 3.3 | 12 |
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| 153 | Analysis of Synchronization in a Slowly Changing Environment: How Slow Coupling Becomes Fast Weak Coupling. Physical Review Letters, 2013, 110, 204101. | 2.9 | 12 |
| 154 | Compartmental Model Suggests Importance of Innate Immune Response to COVID-19 Infection in Rhesus Macaques. Bulletin of Mathematical Biology, 2021, 83, 79. | 0.9 | 12 |
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| 156 | Complex Times for Earthquakes, Stocks, and the Brain's Activity. Neuron, 2010, 66, 329-331. | 3.8 | 11 |
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| 158 | Pattern formation in oscillatory media without lateral inhibition. Physical Review E, 2016, 94, 012412. | 0.8 | 11 |
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| 160 | Direction-selective motion discrimination by traveling waves in visual cortex. PLoS Computational Biology, 2020, 16, e1008164. | 1.5 | 11 |
| 161 | Optogenetic Stimulation Shifts the Excitability of Cerebral Cortex from Type I to Type II: Oscillation Onset and Wave Propagation. PLoS Computational Biology, 2017, 13, e1005349. | 1.5 | 11 |
| 162 | BioSimulators: a central registry of simulation engines and services for recommending specific tools. Nucleic Acids Research, 2022, 50, W108-W114. | 6.5 | 11 |

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| 163 | A heuristic description of spiral wave instability in discrete media. Physica D: Nonlinear Phenomena, 1995, 82, 154-164. | 1.3 | 10 |
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| 165 | The Uniqueness and Stability of the Rest State for Strongly Coupled Oscillators. SIAM Journal on Mathematical Analysis, 1989, 20, 1436-1446. | 0.9 | 9 |
| 166 | A model of ocular dominance column development by competition for trophic factor: effects of excess trophic factor with monocular deprivation and effects of antagonist of trophic factor. Journal of Computational Neuroscience, 2000, 8, 227-250. | 0.6 | 9 |
| 167 | Reliability, discriminability and stochastic synchronization of olfactory neurons. Sensors and Actuators B: Chemical, 2006, 116, 168-173. | 4.0 | 9 |
| 168 | From working memory to epilepsy: Dynamics of facilitation and inhibition in a cortical network. Chaos, 2009, 19, 015115. | 1.0 | 9 |
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| 170 | The rhythms of steady posture: Motor commands as spatially organized oscillation patterns. Neurocomputing, 2015, 170, 3-14. | 3.5 | 9 |
| 171 | Discrete Dynamical Modeling of Influenza Virus Infection Suggests Age-Dependent Differences in Immunity. Journal of Virology, 2017, 91, . | 1.5 | 9 |
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