

Alexander B Neiman

List of Publications by Year in descending order

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122
papers

5,878
citations

94433

37
h-index

76900

74
g-index

130
all docs

130
docs citations

130
times ranked

2567
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | Information processing in tree networks of excitable elements. <i>Physical Review E</i> , 2021, 103, 012308. | 2.1 | 0 |
| 2 | Demixing of two species via reciprocally concentration-dependent diffusivity. <i>Physical Review E</i> , 2021, 103, 022113. | 2.1 | 1 |
| 3 | Memories of a teacher, colleague and friend Vadim S. Anishchenko (1943–2020). <i>Izvestiya of Saratov University, New Series: Physics</i> , 2021, 21, 88-101. | 0.1 | 1 |
| 4 | Measuring chaos in the Lorenz and Rössler models: Fidelity tests for reservoir computing. <i>Chaos</i> , 2021, 31, 093121. | 2.5 | 3 |
| 5 | Vocal wow in an adapted reflex resonance model. <i>Journal of the Acoustical Society of America</i> , 2020, 147, 1822-1833. | 1.1 | 1 |
| 6 | Control of sampling rate in map-based models of spiking neurons. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2018, 61, 127-137. | 3.3 | 9 |
| 7 | Variability of collective dynamics in random tree networks of strongly coupled stochastic excitable elements. <i>Physical Review E</i> , 2018, 98, . | 2.1 | 3 |
| 8 | Introduction to Focus Issue: Nonlinear science of living systems: From cellular mechanisms to functions. <i>Chaos</i> , 2018, 28, 106201. | 2.5 | 0 |
| 9 | Bottom-up approach to torus bifurcation in neuron models. <i>Chaos</i> , 2018, 28, 106317. | 2.5 | 30 |
| 10 | Effect of receptor potential on mechanical oscillations in a model of sensory hair cell. <i>European Physical Journal: Special Topics</i> , 2017, 226, 1953-1962. | 2.6 | 6 |
| 11 | Emergent stochastic oscillations and signal detection in tree networks of excitable elements. <i>Scientific Reports</i> , 2017, 7, 3956. | 3.3 | 15 |
| 12 | Weak Transient Chaos. <i>Advances in Dynamics, Patterns, Cognition</i> , 2017, , 3-12. | 0.3 | 1 |
| 13 | Spontaneous and Response Stochastic Dynamics of Saccular Hair Cells. <i>Biophysical Journal</i> , 2016, 110, 334a. | 0.5 | 0 |
| 14 | Emergence and coherence of oscillations in star networks of stochastic excitable elements. <i>Physical Review E</i> , 2016, 93, 042406. | 2.1 | 12 |
| 15 | Noise-induced transitions in a double-well oscillator with nonlinear dissipation. <i>Physical Review E</i> , 2016, 93, 052210. | 2.1 | 15 |
| 16 | Stochastic sensitivity analysis of noise-induced suppression of firing and giant variability of spiking in a Hodgkin-Huxley neuron model. <i>Physical Review E</i> , 2015, 91, 052920. | 2.1 | 49 |
| 17 | Phase Diffusion in Unequally Noisy Coupled Oscillators. <i>Physical Review Letters</i> , 2015, 115, 034101. | 7.8 | 8 |
| 18 | Effect of bidirectional mechano-electrical coupling on spontaneous oscillations and sensitivity in a model of hair cells. <i>Physical Review E</i> , 2014, 90, 052704. | 2.1 | 11 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 19 | Robust design of polyrhythmic neural circuits. <i>Physical Review E</i> , 2014, 90, 022715. | 2.1 | 22 |
| 20 | Noise-induced dispersion and breakup of clusters in cell cycle dynamics. <i>Journal of Theoretical Biology</i> , 2014, 355, 160-169. | 1.7 | 5 |
| 21 | Stochastic sensitivity analysis of the noise-induced excitability in a model of a hair bundle. <i>Physical Review E</i> , 2013, 87, 052711. | 2.1 | 32 |
| 22 | Excitable elements controlled by noise and network structure. <i>European Physical Journal: Special Topics</i> , 2013, 222, 2517-2529. | 2.6 | 22 |
| 23 | Modelling of photo-thermal control of biological cellular oscillators. <i>European Physical Journal: Special Topics</i> , 2013, 222, 2697-2704. | 2.6 | 5 |
| 24 | Characteristic Effects of Stochastic Oscillatory Forcing on Neural Firing: Analytical Theory and Comparison to Paddlefish Electroreceptor Data. <i>PLoS Computational Biology</i> , 2013, 9, e1003170. | 3.2 | 17 |
| 25 | Quantifying Utricular Stimulation During Natural Behavior. <i>Journal of Experimental Zoology</i> , 2012, 317, 467-480. | 1.2 | 5 |
| 26 | Information analysis of posterior canal afferents in the turtle, <i>Trachemys scripta elegans</i> . <i>Brain Research</i> , 2012, 1434, 226-242. | 2.2 | 12 |
| 27 | Voltage oscillations and response dynamics in a model of sensory hair cells. <i>BMC Neuroscience</i> , 2012, 13, P186. | 1.9 | 1 |
| 28 | Sensory coding in oscillatory electroreceptors of paddlefish. <i>Chaos</i> , 2011, 21, 047505. | 2.5 | 16 |
| 29 | Spontaneous voltage oscillations and response dynamics of a Hodgkin-Huxley type model of sensory hair cells. <i>Journal of Mathematical Neuroscience</i> , 2011, 1, 11. | 2.4 | 33 |
| 30 | Introduction to Focus Issue: Nonlinear and Stochastic Physics in Biology. <i>Chaos</i> , 2011, 21, 047501. | 2.5 | 2 |
| 31 | Announcement: Focus Issue on "Nonlinear and Stochastic Physics in Biology". <i>Chaos</i> , 2011, 21, 010202. | 2.5 | 0 |
| 32 | Identifying Temporal Codes in Spontaneously Active Sensory Neurons. <i>PLoS ONE</i> , 2011, 6, e27380. | 2.5 | 4 |
| 33 | Spontaneous dynamics and response properties of a Hodgkin-Huxley-type neuron model driven by harmonic synaptic noise. <i>European Physical Journal: Special Topics</i> , 2010, 187, 179-187. | 2.6 | 5 |
| 34 | Spontaneous oscillations, signal amplification, and synchronization in a model of active hair bundle mechanics. <i>Physical Review E</i> , 2010, 81, 041913. | 2.1 | 27 |
| 35 | Coherent stochastic oscillations enhance signal detection in spiking neurons. <i>Physical Review E</i> , 2009, 80, 021919. | 2.1 | 18 |
| 36 | The Effect of Noise on Spike-Adding Bifurcations in a Neuronal Burster (abstract). , 2009, , . | | 0 |

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|----|---|-----|-----------|
| 37 | Variability of bursting patterns in a neuron model in the presence of noise. Journal of Computational Neuroscience, 2009, 27, 527-542. | 1.0 | 42 |
| 38 | Periodic renewal processes: application to periodically driven FitzHugh-Nagumo system. European Physical Journal B, 2009, 69, 119-126. | 1.5 | 5 |
| 39 | Spontaneous firing statistics and information transfer in electroreceptors of paddlefish. Physical Review E, 2008, 78, 051922. | 2.1 | 8 |
| 40 | Response clustering in transient stochastic synchronization and desynchronization of coupled neuronal bursters. Physical Review E, 2007, 76, 021908. | 2.1 | 30 |
| 41 | Noise-Induced Transition to Bursting in Responses of Paddlefish Electroreceptor Afferents. Journal of Neurophysiology, 2007, 98, 2795-2806. | 1.8 | 32 |
| 42 | Stochastic Dynamics. , 2007, , 307-443. | | 4 |
| 43 | Coherence resonance. Scholarpedia Journal, 2007, 2, 1442. | 0.3 | 12 |
| 44 | Dynamical Chaos. , 2007, , 109-306. | | 2 |
| 45 | Measuring direction in the coupling of biological oscillators: A case study for electroreceptors of paddlefish. Chaos, 2006, 16, 026111. | 2.5 | 28 |
| 46 | Information processing in noisy burster models of sensory neurons. Journal of Theoretical Biology, 2005, 237, 30-40. | 1.7 | 21 |
| 47 | Noise induced complexity: From subthreshold oscillations to spiking in coupled excitable systems. Chaos, 2005, 15, 026117. | 2.5 | 91 |
| 48 | STOCHASTIC DYNAMICS OF ACTIVE AGENTS IN EXTERNAL FIELDS. Fluctuation and Noise Letters, 2005, 05, L185-L192. | 1.5 | 8 |
| 49 | CONTROLLING STOCHASTIC OSCILLATIONS CLOSE TO A HOPF BIFURCATION BY TIME-DELAYED FEEDBACK. Stochastics and Dynamics, 2005, 05, 281-295. | 1.2 | 38 |
| 50 | Models of stochastic biperiodic oscillations and extended serial correlations in electroreceptors of paddlefish. Physical Review E, 2005, 71, 061915. | 2.1 | 31 |
| 51 | Thermal activation by power-limited coloured noise. New Journal of Physics, 2005, 7, 17-17. | 2.9 | 14 |
| 52 | Two Distinct Types of Noisy Oscillators in Electroreceptors of Paddlefish. Journal of Neurophysiology, 2004, 92, 492-509. | 1.8 | 50 |
| 53 | STOCHASTIC DYNAMICS OF ELECTRORECEPTORS IN PADDLEFISH. Fluctuation and Noise Letters, 2004, 04, L139-L149. | 1.5 | 2 |
| 54 | NOISE IN BIOPHYSICAL SYSTEMS. Fluctuation and Noise Letters, 2004, 04, v-vi. | 1.5 | 1 |

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|----|--|------|-----------|
| 55 | Effects of noise in excitable systems. <i>Physics Reports</i> , 2004, 392, 321-424. | 25.6 | 1,265 |
| 56 | Noise-controlled oscillations and their bifurcations in coupled phase oscillators. <i>Physical Review E</i> , 2003, 68, 066206. | 2.1 | 67 |
| 57 | Oscillations, noise, and extended negative correlations in electroreceptors. , 2003, , . | | 0 |
| 58 | Stochastic synchronization: applications to oscillatory electroreceptors. , 2003, , . | | 0 |
| 59 | Thresholds and noise. , 2003, , . | | 3 |
| 60 | Walking on ratchets: a model of two Brownian motors with bistable coupling. , 2003, 5114, 20. | | 3 |
| 61 | Noise-Induced Transition and Synchronization in Paddlefish Electroreceptors. <i>AIP Conference Proceedings</i> , 2003, , . | 0.4 | 0 |
| 62 | Noise-Induced Walking Patterns on Ratchets. <i>AIP Conference Proceedings</i> , 2003, , . | 0.4 | 0 |
| 63 | Oscillations and Noise in Paddlefish Electroreceptors. <i>AIP Conference Proceedings</i> , 2003, , . | 0.4 | 1 |
| 64 | Phase synchronization and stochastic resonance effects in the crayfish caudal photoreceptor. <i>Physical Review E</i> , 2002, 65, 050901. | 2.1 | 47 |
| 65 | Surrogate analysis of coherent multichannel data. <i>Physical Review E</i> , 2002, 65, 026108. | 2.1 | 32 |
| 66 | Synchronization of Noise-Induced Bursts in Noncoupled Sensory Neurons. <i>Physical Review Letters</i> , 2002, 88, 138103. | 7.8 | 145 |
| 67 | Homoclinic Bifurcation in a Thermally Sensitive Neuron. <i>AIP Conference Proceedings</i> , 2002, , . | 0.4 | 1 |
| 68 | Behavioral Stochastic Resonance: How the Noise from a Daphnia Swarm Enhances Individual Prey Capture by Juvenile Paddlefish. <i>Journal of Theoretical Biology</i> , 2002, 214, 71-83. | 1.7 | 71 |
| 69 | Stochastic resonance in psychophysics and in animal behavior. <i>Biological Cybernetics</i> , 2002, 87, 91-101. | 1.3 | 90 |
| 70 | Stochastic resonance and noise-induced phase coherence. , 2001, , 309-323. | | 3 |
| 71 | Chapter 2 Phase synchronization: From periodic to chaotic and noisy. <i>Handbook of Biological Physics</i> , 2001, 4, 23-82. | 0.8 | 3 |
| 72 | Noise-induced impulse pattern modifications at different dynamical period-one situations in a computer model of temperature encoding. <i>BioSystems</i> , 2001, 62, 99-112. | 2.0 | 38 |

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|----|--|-----|-----------|
| 73 | NOISE EFFECTS ON THE ELECTROSENSE-MEDIATED FEEDING BEHAVIOR OF SMALL PADDLEFISH. Fluctuation and Noise Letters, 2001, 01, L71-L86. | 1.5 | 12 |
| 74 | Long-range temporal anti-correlations in paddlefish electroreceptors. Europhysics Letters, 2001, 56, 454-460. | 2.0 | 67 |
| 75 | Synchronization of hyperexcitable systems with phase-repulsive coupling. Physical Review E, 2001, 64, 041912. | 2.1 | 51 |
| 76 | Behavioral stochastic resonance: How a noisy army betrays its outpost. Physical Review E, 2001, 63, 031910. | 2.1 | 27 |
| 77 | Entropy and local uncertainty of data from sensory neurons. Physical Review E, 2001, 64, 061911. | 2.1 | 26 |
| 78 | Stochastic Biperiodic Oscillations in the Electroreceptors of Paddlefish. Physical Review Letters, 2001, 86, 3443-3446. | 7.8 | 52 |
| 79 | Noise-induced phase synchronization enhanced by dichotomic noise. Physical Review E, 2001, 64, 051107. | 2.1 | 59 |
| 80 | DETECTION OF UNSTABLE PERIODIC ORBITS IN NOISY DATA, AND CHOOSING THE RIGHT SURROGATES. , 2001, , . | | 0 |
| 81 | STOCHASTIC PHASE SYNCHRONIZATION OF ELECTROSENSITIVE CELLS OF THE PADDLEFISH AND IN CULTURED GLIAL CELL NETWORKS. , 2001, , . | | 0 |
| 82 | Interactions between slow and fast conductances in the Huber/Braun model of cold-receptor discharges. Neurocomputing, 2000, 32-33, 51-59. | 5.9 | 22 |
| 83 | Noisy precursors of bifurcations in a neurodynamical model for disease states of mood disorders. Neurocomputing, 2000, 32-33, 823-831. | 5.9 | 14 |
| 84 | Stochastic resonance and noise-induced synchronization. AIP Conference Proceedings, 2000, , . | 0.4 | 0 |
| 85 | STOCHASTIC SYNCHRONIZATION OF ELECTRORECEPTORS IN PADDLEFISH. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2000, 10, 2499-2517. | 1.7 | 22 |
| 86 | Analytic description of noise-induced phase synchronization. Europhysics Letters, 2000, 50, 8-14. | 2.0 | 53 |
| 87 | Detecting the onset of bifurcations and their precursors from noisy data. Physical Review E, 2000, 61, 4848-4853. | 2.1 | 17 |
| 88 | Stochastic resonance enhanced by dichotomic noise in a bistable system. Physical Review E, 2000, 62, R3031-R3034. | 2.1 | 41 |
| 89 | Stochastic Resonance Enhances the Electrosensory Information Available to Paddlefish for Prey Capture. Physical Review Letters, 2000, 84, 4773-4776. | 7.8 | 108 |
| 90 | Homoclinic bifurcation in a Hodgkin-Huxley model of thermally sensitive neurons. Chaos, 2000, 10, 231-239. | 2.5 | 162 |

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| 91 | Phase synchronization of switchings in stochastic and chaotic bistable systems. <i>Dynamical Systems</i> , 1999, 14, 211-231. | 0.7 | 3 |
| 92 | Synchronization of noisy systems by stochastic signals. <i>Physical Review E</i> , 1999, 60, 284-292. | 2.1 | 78 |
| 93 | Synchronization of the Noisy Electrosensitive Cells in the Paddlefish. <i>Physical Review Letters</i> , 1999, 82, 660-663. | 7.8 | 163 |
| 94 | Surrogates for finding unstable periodic orbits in noisy data sets. <i>Physical Review E</i> , 1999, 59, 5235-5241. | 2.1 | 45 |
| 95 | Stochastic resonance: noise-enhanced order. <i>Physics-Uspekhi</i> , 1999, 42, 7-36. | 2.2 | 334 |
| 96 | Noise-Enhanced Phase Synchronization in Excitable Media. <i>Physical Review Letters</i> , 1999, 83, 4896-4899. | 7.8 | 214 |
| 97 | Stochastic resonance of front motion in inhomogeneous media. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1998, 246, 259-266. | 2.1 | 6 |
| 98 | Spatio-temporal stochastic resonance of a domain wall motion in an inhomogeneous magnet. <i>Journal of Magnetism and Magnetic Materials</i> , 1998, 188, 301-309. | 2.3 | 5 |
| 99 | Reconstruction of dynamical and geometrical properties of chaotic attractors from threshold-crossing interspike intervals. <i>Physical Review E</i> , 1998, 58, R4-R7. | 2.1 | 50 |
| 100 | Stochastic resonance: Noise-enhanced phase coherence. <i>Physical Review E</i> , 1998, 58, 7118-7125. | 2.1 | 140 |
| 101 | Coherence resonance in a Hodgkin-Huxley neuron. <i>Physical Review E</i> , 1998, 57, 3292-3297. | 2.1 | 219 |
| 102 | Noise Induced Order: Stochastic Resonance. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 1998, 08, 869-879. | 1.7 | 19 |
| 103 | Stochastic synchronization. , 1997, , 154-166. | | 4 |
| 104 | Characterizing the dynamics of stochastic bistable systems by measures of complexity. <i>Physical Review E</i> , 1997, 55, 5050-5059. | 2.1 | 23 |
| 105 | Stochastic Resonance in Ensembles of Nondynamical Elements: The Role of Internal Noise. <i>Physical Review Letters</i> , 1997, 79, 4701-4704. | 7.8 | 98 |
| 106 | Linear response theory applied to stochastic resonance in models of ensembles of oscillators. <i>Physical Review E</i> , 1997, 56, R9-R12. | 2.1 | 80 |
| 107 | Zero-Dispersion Nonlinear Resonance. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 1997, 07, 923-936. | 1.7 | 23 |
| 108 | Coherence resonance at noisy precursors of bifurcations in nonlinear dynamical systems. <i>Physical Review E</i> , 1997, 56, 270-273. | 2.1 | 200 |

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|-----|--|-----|-----------|
| 109 | Synchronization in ensembles of stochastic resonators. , 1997, , . | | 1 |
| 110 | Dynamical Entropies Applied to Stochastic Resonance. Physical Review Letters, 1996, 77, 4851-4851. | 7.8 | 4 |
| 111 | Dynamical Entropies Applied to Stochastic Resonance. Physical Review Letters, 1996, 76, 4299-4302. | 7.8 | 96 |
| 112 | Memory effects on stochastic resonance. Physics Letters, Section A: General, Atomic and Solid State Physics, 1996, 223, 341-347. | 2.1 | 55 |
| 113 | Comment on "Nonlinear resonance and chaos in the relativistic phase space for driven nonlinear systems". Physical Review E, 1996, 53, 4240-4241. | 2.1 | 10 |
| 114 | Stochastic resonance in two coupled bistable systems. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 197, 379-386. | 2.1 | 77 |
| 115 | Long-range correlations between letters and sentences in texts. Physica A: Statistical Mechanics and Its Applications, 1995, 215, 233-241. | 2.6 | 74 |
| 116 | The cumulant approach for investigating the noise influence on mode-locking bifurcations. Journal of Physics A, 1995, 28, 2471-2480. | 1.6 | 12 |
| 117 | Mean Switching Frequency Locking in Stochastic Bistable Systems Driven by a Periodic Force. Physical Review Letters, 1995, 75, 4157-4160. | 7.8 | 146 |
| 118 | Stochastic resonance in bistable systems driven by harmonic noise. Physical Review Letters, 1994, 72, 2988-2991. | 7.8 | 80 |
| 119 | Period-doubling bifurcations in the presence of colored noise. Physical Review E, 1994, 49, 3801-3806. | 2.1 | 11 |
| 120 | Synchronizationlike phenomena in coupled stochastic bistable systems. Physical Review E, 1994, 49, 3484-3487. | 2.1 | 74 |
| 121 | Power law distributions of spectral density and higher order entropies. Chaos, Solitons and Fractals, 1994, 4, 69-81. | 5.1 | 11 |
| 122 | Stochastic resonance in chaotic systems. Journal of Statistical Physics, 1993, 70, 183-196. | 1.2 | 117 |