Gabriel B Mindlin

List of Publications by Year
in descending order

108	2,539	26	46
papers	citations	h-index	g-index
		218592	223716

111	111	111	1344
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Dynamical time series embeddings in recurrent neural networks. Chaos, Solitons and Fractals, 2022, 154, 111612.	2.5	17
2	Neural oscillations are locked to birdsong rhythms in canaries. European Journal of Neuroscience, 2022, 55, 549-565.	1.2	2
3	Multifractal analysis of birdsong and its correlation structure. Physical Review E, 2022, 105, 014118.	0.8	1
4	Neural networks that locate and identify birds through their songs. European Physical Journal: Special Topics, 2022, 231, 185-194.	1.2	5
5	Replay of innate vocal patterns during night sleep in suboscines. Proceedings of the Royal Society B: Biological Sciences, 2021, 288, 20210610.	1.2	2
6	Synthetic Birdsongs as a Tool to Induce, and listen to, Replay Activity in Sleeping Birds. Frontiers in Neuroscience, 2021, 15, 647978.	1.4	3
7	Birds breathe at an aerodynamic resonance. Chaos, 2021, 31, 123132.	1.0	2
8	The structure of reconstructed flows in latent spaces. Chaos, 2020, 30, 093109.	1.0	3
9	Dynamics behind rough sounds in the song of the<i>Pitangus sulphuratus</i>. Physical Review E, 2020, 102, 062415.	0.8	4
10	Dynamical model for the neural activity of singing Serinus canaria. Chaos, 2020, 30, 053134.	1.0	3
11	Lessons from being challenged by COVID-19. Chaos, Solitons and Fractals, 2020, 137, 109923.	2.5	27
12	Unusual Avian Vocal Mechanism Facilitates Encoding of Body Size. Physical Review Letters, 2020, 124, 098101.	2.9	8
13	A dynamical system as the source of augmentation in a deep learning problem. Chaos, Solitons and Fractals: X, 2019, 2, 100012.	1.0	9
14	Discrete Anatomical Coordinates for Speech Production and Synthesis. Frontiers in Communication, 2019, 4, .	0.6	5
15	Observable for a Large System of Globally Coupled Excitable Units. Mathematical and Computational Applications, 2019, 24, 37.	0.7	4
16	Significant Instances in Motor Gestures of Different Songbird Species. Frontiers in Physics, 2019, 7, .	1.0	1
17	From electromyographic activity to frequency modulation in zebra finch song. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2018, 204, 209-217.	0.7	7
18	Syringeal EMGs and synthetic stimuli reveal a switch-like activation of the songbirdâ€™s vocal motor program. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 8436-8441.	3.3	7

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19	Gating related activity in a syringeal muscle allows the reconstruction of zebra finches songs. Chaos, 2018, 28, 075517.	1.0	5
20	Anticipated Synchronization and Zero-Lag Phases in Population Neural Models. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2018, 28, 1830025.	0.7	12
21	Modeling temperature manipulations in a circular model of birdsong production. Papers in Physics, 2018, 10, .	0.2	3
22	Towards an integrated view of vocal development. PLoS Biology, 2018, 16, e2005544.	2.6	1
23	From perception to action in songbird production: Dynamics of a whole loop. Current Opinion in Systems Biology, 2017, 3, 30-35.	1.3	7
24	Avian vocal production beyond low dimensional models. Journal of Statistical Mechanics: Theory and Experiment, 2017, 2017, 024005.	0.9	1
25	Evolution of Vocal Diversity through Morphological Adaptation without Vocal Learning or Complex Neural Control. Current Biology, 2017, 27, 2677-2683.e3.	1.8	30
26	Nonlinear dynamics in the study of birdsong. Chaos, 2017, 27, 092101.	1.0	21
27	A Diagrammatic Representation of Phase Portraits and Bifurcation Diagrams of Two-Dimensional Dynamical Systems. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2017, 27, 1730045.	0.7	0
28	Temperature manipulation of neuronal dynamics in a forebrain motor control nucleus. PLoS Computational Biology, 2017, 13, e1005699.	1.5	12
29	Adult zebra finches rehearse highly variable song patterns during sleep. PeerJ, 2017, 5, e4052.	0.9	10
30	An integrated model for motor control of song in Serinus canaria. Journal of Physiology (Paris), 2016, 110, 127-139.	2.1	10
31	Average activity of excitatory and inhibitory neural populations. Chaos, 2016, 26, 093104.	1.0	15
32	Difference between the vocalizations of two sister species of pigeons explained in dynamical terms. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2016, 202, 361-370.	0.7	5
33	A circular model for song motor control in Serinus canaria. Frontiers in Computational Neuroscience, 2015, 9, 41.	1.2	29
34	Automatic reconstruction of physiological gestures used in a model of birdsong production. Journal of Neurophysiology, 2015, 114, 2912-2922.	0.9	13
35	Motor control of sound frequency in birdsong involves the interaction between air sac pressure and labial tension. Physical Review E, 2014, 89, 032706.	0.8	14
36	Low dimensional dynamics in birdsong production. European Physical Journal B, 2014, 87, 1.	0.6	8

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37	Average dynamics of a finite set of coupled phase oscillators. Chaos, 2014, 24, 023112.	1.0	0
38	The physics of birdsong production. Contemporary Physics, 2013, 54, 91-96.	0.8	7
39	Evidence and control of bifurcations in a respiratory system. Chaos, 2013, 23, 043138.	1.0	6
40	Elemental gesture dynamics are encoded by song premotor cortical neurons. Nature, 2013, 495, 59-64.	13.7	159
41	Temperature Induced Syllable Breaking Unveils Nonlinearly Interacting Timescales in Birdsong Motor Pathway. PLoS ONE, 2013, 8, e67814.	1.1	33
42	Discrete Motor Coordinates for Vowel Production. PLoS ONE, 2013, 8, e80373.	1.1	17
43	Prosthetic Avian Vocal Organ Controlled by a Freely Behaving Bird Based on a Low Dimensional Model of the Biomechanical Periphery. PLoS Computational Biology, 2012, 8, e1002546.	1.5	13
44	Interaction between telencephalic signals and respiratory dynamics in songbirds. Journal of Neurophysiology, 2012, 107, 2971-2983.	0.9	15
45	NONLINEAR DYNAMICS AND THE SYNTHESIS OF ZEBRA FINCH SONG. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2012, 22, 1250235.	0.7	4
46	AN EXCITABLE ELECTRONIC CIRCUIT AS A SENSORY NEURON MODEL. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2012, 22, 1250244.	0.7	3
47	Acoustic signatures of sound source-tract coupling. Physical Review E, 2011, 83, 041920.	0.8	5
48	Reconstruction of physiological instructions from Zebra finch song. Physical Review E, 2011, 84, 051909.	0.8	42
49	Average dynamics of a driven set of globally coupled excitable units. Chaos, 2011, 21, 023102.	1.0	19
50	Dynamical origin of complex motor patterns. European Physical Journal D, 2010, 60, 361-367.	0.6	13
51	Hormonal acceleration of song development illuminates motor control mechanism in canaries. Developmental Neurobiology, 2010, 70, 943-960.	1.5	24
52	Smooth Operator: Avoidance of Subharmonic Bifurcations through Mechanical Mechanisms Simplifies Song Motor Control in Adult Zebra Finches. Journal of Neuroscience, 2010, 30, 13246-13253.	1.7	19
53	Publisher's Note: Physiologically driven avian vocal synthesizer [Phys. Rev. E81, 031927 (2010)]. Physical Review E, 2010, 81, .	0.8	0
54	Physiologically driven avian vocal synthesizer. Physical Review E, 2010, 81, 031927.	0.8	12

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55	Neurophysiological bases of exponential sensory decay and top-down memory retrieval: a model. Frontiers in Computational Neuroscience, 2009, 3, 4.	1.2	34
56	Low-dimensional dynamical model for the diversity of pressure patterns used in canary song. Physical Review E, 2009, 79, 041929.	0.8	27
57	Source-tract coupling in birdsong production. Physical Review E, 2009, 79, 061921.	0.8	15
58	The dynamical origin of physiological instructions used in birdsong production. Pramana - Journal of Physics, 2008, 70, 1077-1085.	0.9	4
59	Frequency Modulation During Song in a Suboscine Does Not Require Vocal Muscles. Journal of Neurophysiology, 2008, 99, 2383-2389.	0.9	52
60	Beyond harmonic sounds in a simple model for birdsong production. Chaos, 2008, 18, 043123.	1.0	39
61	Bilateral source acoustic interaction in a syrinx model of an oscine bird. Physical Review E, 2008, 77, 011912.	0.8	9
62	Lateralization as a symmetry breaking process in birdsong. Physical Review E, 2007, 75, 031908.	0.8	6
63	The constraints to learning in birdsong. European Physical Journal: Special Topics, 2007, 146, 199-204.	1.2	0
64	The generation of respiratory rhythms in birds. Physica A: Statistical Mechanics and Its Applications, 2006, 371, 84-87.	1.2	1
65	Nonlinear Model Predicts Diverse Respiratory Patterns of Birdsong. Physical Review Letters, 2006, 96, 058103.	2.9	41
66	Topological voiceprints for speaker identification. Physica D: Nonlinear Phenomena, 2005, 200, 75-80.	1.3	1
67	Subharmonics in the solutions of a model of the song motor nuclei in songbirds. Physica A: Statistical Mechanics and Its Applications, 2005, 356, 145-150.	1.2	1
68	Modeling source-source and source-filter acoustic interaction in birdsong. Physical Review E, 2005, 72, 036218.	0.8	25
69	Mapping Neural Architectures Onto Acoustic Features of Birdsong. Journal of Neurophysiology, 2004, 92, 96-110.	0.9	17
70	Spike timing and synaptic plasticity in the premotor pathway of birdsong. Biological Cybernetics, 2004, 91, 159-67.	0.6	12
71	Characterization of spatiotemporal chaos in an inhomogeneous active medium. Physica D: Nonlinear Phenomena, 2004, 199, 185-193.	1.3	2
72	Highly Structured Duets in the Song of the South American Hornero. Physical Review Letters, 2003, 91, 258104.	2.9	30

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73	Neuromuscular control of vocalizations in birdsong: A model. Physical Review E, 2002, 65, 051921.	0.8	78
74	Diversity within a Birdsong. Physical Review Letters, 2002, 89, 288102.	2.9	38
75	Coupled optical excitable cells. Physical Review E, 2002, 66, 036227.	0.8	14
76	Instantaneous Phase and Amplitude Correlation in the Solar Cycle. Solar Physics, 2002, 208, 167-179.	1.0	11
77	Simple Motor Gestures for Birdsongs. Physical Review Letters, 2001, 87, 208101.	2.9	115
78	Simple Model of a Stochastically Excited Solar Dynamo. Solar Physics, 2001, 201, 203-223.	1.0	44
79	Nitrogen stars: morphogenesis of a liquid drop. Physica A: Statistical Mechanics and Its Applications, 2000, 283, 261-266.	1.2	21
80	Stochastic Relaxation Oscillator Model for the Solar Cycle. Physical Review Letters, 2000, 85, 5476-5479.	2.9	49
81	Distribution of interspike times in noise-driven excitable systems. Physical Review E, 2000, 61, 6490-6499.	0.8	18
82	Topological Structure of Chaotic Flows from Human Speech Data. Physical Review Letters, 1999, 82, 1450-1453.	2.9	22
83	Interspike Time Distribution in Noise Driven Excitable Systems. Physical Review Letters, 1999, 83, 292-295.	2.9	76
84	Dynamical model to describe low-frequency fluctuations in semiconductor lasers with optical feedback. Physica A: Statistical Mechanics and Its Applications, 1998, 257, 547-556.	1.2	1
85	Low-dimensional dynamics outside the laboratory: The case of roAp stars. Europhysics Letters, 1998, 42, 31-36.	0.7	9
86	Low-frequency fluctuations in semiconductor lasers with optical feedback are induced with noise. Physical Review E, 1998, 58, 2636-2639.	0.8	42
87	Truncating expansions in bi-orthogonal bases: What is preserved?. Physics Letters, Section A: General, Atomic and Solid State Physics, 1997, 236, 301-306.	0.9	3
88	Tori and Klein bottles in four-dimensional chaotic flows. Physica D: Nonlinear Phenomena, 1997, 102, 177-186.	1.3	14
89	Pattern dynamics in a BÃ©nard-Marangoni convection experiment. Physica D: Nonlinear Phenomena, 1996, 96, 200-208.	1.3	11
90	Time delay embeddings and the structure of flows. Physics Letters, Section A: General, Atomic and Solid State Physics, 1996, 221, 181-186.	0.9	6

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91	BÃ©nard-Marangoni convection in square containers. Physical Review E, 1996, 54, 3609-3613.	0.8	6
92	Topologically inequivalent embeddings. Physical Review E, 1995, 52, 1497-1502.	0.8	16
93	COMPARISON OF DATA FROM BÃ‰NARD-MARANGONI CONVECTION IN A SQUARE CONTAINER WITH A MODEL BASED ON SYMMETRY ARGUMENTS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1994, 04, 1121-1133.	0.7	10
94	The chaotic evolution of patterns in Benard-Marangoni convection with square symmetry. Journal of Physics Condensed Matter, 1994, 6, A427-A432.	0.7	15
95	Nonlinear interaction of transverse modes in aCO2laser. Physical Review A, 1994, 49, 4916-4921.	1.0	14
96	Topological analysis of chaotic orbits: Revisiting Hyperion. Astrophysical Journal, 1994, 431, 425.	1.6	12
97	Dynamical patterns in BÃ©nard-Marangoni convection in a square container. Physical Review Letters, 1993, 70, 3892-3895.	2.9	45
98	Horseshoe implications. Physical Review E, 1993, 48, 4297-4304.	0.8	26
99	Mode-mode interaction for aCO2laser with imperfect O(2) symmetry. Physical Review A, 1993, 47, 500-509.	1.0	23
100	Structure of chaos in the laser with saturable absorber. Physical Review Letters, 1992, 68, 1128-1131.	2.9	55
101	Periodic and chaotic alternation in systems with imperfect O(2) symmetry. Physical Review Letters, 1992, 69, 3723-3726.	2.9	27
102	Spatiotemporal dynamics of lasers in the presence of an imperfect O(2) symmetry. Physical Review Letters, 1992, 68, 3702-3705.	2.9	92
103	Topological analysis and synthesis of chaotic time series. Physica D: Nonlinear Phenomena, 1992, 58, 229-242.	1.3	190
104	Topological analysis of chaotic time series data from the Belousov-Zhabotinskii reaction. Journal of Nonlinear Science, 1991, 1, 147-173.	1.0	123
105	An efficient algorithm for fast box counting. Physics Letters, Section A: General, Atomic and Solid State Physics, 1990, 151, 43-46.	0.9	57
106	Spontaneous symmetry breaking in a laser: The experimental side. Physical Review Letters, 1990, 65, 3124-3127.	2.9	100
107	Classification of strange attractors by integers. Physical Review Letters, 1990, 64, 2350-2353.	2.9	140
108	A universal departure from the classical period doubling spectrum. Physica D: Nonlinear Phenomena, 1989, 39, 111-123.	1.3	3