Hiroya Nakao

List of Publications by Year
in descending order

91 papers	2,561 citations	186209 28 h-index	206029 48 g-index
92 all docs	92 docs citations	92 times ranked	1416 citing authors

#	Article	IF	Citations
1	Phase dynamics of noise-induced coherent oscillations in excitable systems. Physical Review Research, 2022, 4, .	1.3	6
2	A definition of the asymptotic phase for quantum nonlinear oscillators from the Koopman operator viewpoint. Chaos, 2022, 32, .	1.0	5
3	Estimating asymptotic phase and amplitude functions of limit-cycle oscillators from time series data. Physical Review E, 2022, 106, .	0.8	2
4	Instantaneous phase synchronization of two decoupled quantum limit-cycle oscillators induced by conditional photon detection. Physical Review Research, 2021, 3, .	1.3	4
5	Phase and Amplitude Description of Complex Oscillatory Patterns in Reaction-Diffusion Systems. Understanding Complex Systems, 2021, , 11-27.	0.3	1
6	Phase-reduction for synchronization of oscillating flow by perturbation on surrounding structure. Journal of Fluid Mechanics, 2021, 911, .	1.4	6
7	Quantum coherence resonance. New Journal of Physics, 2021, 23, 043018.	1.2	12
8	Sparse optimization of mutual synchronization in collectively oscillating networks. Chaos, 2021, 31, 063113.	1.0	2
9	Optimization of periodic input waveforms for global entrainment of weakly forced limit-cycle oscillators. Nonlinear Dynamics, 2021, 105, 2247-2263.	2.7	7
10	Stochastic periodic orbits in fast-slow systems with self-induced stochastic resonance. Physical Review Research, 2021, 3, .	1.3	7
11	Asymptotic Phase and Amplitude for Classical and Semiclassical Stochastic Oscillators via Koopman Operator Theory. Mathematics, 2021, 9, 2188.	1.1	8
12	Fast optimal entrainment of limit-cycle oscillators by strong periodic inputs via phase-amplitude reduction and Floquet theory. Chaos, 2021, 31, 093124.	1.0	9
13	Enhancement of quantum synchronization via continuous measurement and feedback control. New Journal of Physics, 2021, 23, 013007.	1.2	12
14	Koopman spectral analysis of elementary cellular automata. Chaos, 2021, 31, 103121.	1.0	1
15	Spectral analysis of the Koopman operator for partial differential equations. Chaos, 2020, 30, 113131.	1.0	12
16	Semiclassical optimization of entrainment stability and phase coherence in weakly forced quantum limit-cycle oscillators. Physical Review E, 2020, 101, 012210.	0.8	13
17	Turing patterns in a network-reduced FitzHugh-Nagumo model. Physical Review E, 2020, 101, 022203.	0.8	16
18	Phase-Amplitude Reduction of Limit Cycling Systems. Lecture Notes in Control and Information Sciences, 2020, , 383-417.	0.6	4

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19	Nonlinear phase-amplitude reduction of delay-induced oscillations. Physical Review Research, 2020, 2, .	1.3	12
20	Continuous Measurement and Feedback Control for Enhancement of Quantum Synchronization. , 2020, , .		0
21	On the concept of dynamical reduction: the case of coupled oscillators. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20190041.	1.6	31
22	Modeling cochlear two-tone suppression using a system of nonlinear oscillators with feed-forward coupling. Nonlinear Theory and Its Applications IEICE, 2019, 10, 90-99.	0.4	1
23	Suppression of Macroscopic Oscillations in Mixed Populations of Active and Inactive Oscillators Coupled through Lattice Laplacian. Journal of the Physical Society of Japan, 2019, 88, 054004.	0.7	2
24	Optimal Waveform for Fast Entrainment of Weakly Forced Quantum Nonlinear Dissipative Oscillators. , 2019, , .		0
25	Optimization of linear and nonlinear interaction schemes for stable synchronization of weakly coupled limit-cycle oscillators. Physical Review E, 2019, 100, 042205.	0.8	9
26	Semiclassical phase reduction theory for quantum synchronization. Physical Review Research, 2019, 1, .	1.3	31
27	Phase reduction and synchronization of a network of coupled dynamical elements exhibiting collective oscillations. Chaos, 2018, 28, 045103.	1.0	18
28	Phase-response analysis of synchronization for periodic flows. Journal of Fluid Mechanics, 2018, 846, .	1.4	32
29	Phase-amplitude reduction of transient dynamics far from attractors for limit-cycling systems. Chaos, 2017, 27, 023119.	1.0	60
30	Phase reduction theory for hybrid nonlinear oscillators. Physical Review E, 2017, 95, 012212.	0.8	26
31	Optimizing stability of mutual synchronization between a pair of limit-cycle oscillators with weak cross coupling. Physical Review E, 2017, 96, 012223.	0.8	16
32	Optimizing mutual synchronization of rhythmic spatiotemporal patterns in reaction-diffusion systems. Physical Review E, 2017, 96, 012224.	0.8	11
33	Localization of Laplacian eigenvectors on random networks. Scientific Reports, 2017, 7, 1121.	1.6	21
34	Optimization of noise-induced synchronization of oscillator networks. Physical Review E, 2016, 94, 032201.	0.8	11
35	Phase reduction approach to synchronisation of nonlinear oscillators. Contemporary Physics, 2016, 57, 188-214.	0.8	151
36	A criterion for timescale decomposition of external inputs for generalized phase reduction of limit-cycle oscillators. Nonlinear Theory and Its Applications IEICE, 2015, 6, 171-180.	0.4	8

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37	Phase description of oscillatory convection with a spatially translational mode. Physica D: Nonlinear Phenomena, 2015, 295-296, 11-29.	1.3	19
38	Complex Ginzburg-Landau equation on networks and its non-uniform dynamics. European Physical Journal: Special Topics, 2014, 223, 2411-2421.	1.2	30
39	Sufficient conditions for wave instability in three-component reaction-diffusion systems. Progress of Theoretical and Experimental Physics, 2014, 2014, 13A01-0.	1.8	16
40	Linear Analysis of the Corticothalamic Model with Time Delay. Electronics and Communications in Japan, 2014, 97, 32-44.	0.3	5
41	Noise-induced synchronization of oscillatory convection and its optimization. Physical Review E, 2014, 89, 012912.	0.8	9
42	Phase-Reduction Approach to Synchronization of Spatiotemporal Rhythms in Reaction-Diffusion Systems. Physical Review X, 2014, 4, .	2.8	41
43	Advection of passive particles over flow networks. Physical Review E, 2014, 89, 020801.	0.8	5
44	Design and control of noise-induced synchronization patterns. Europhysics Letters, 2014, 107, 10009.	0.7	3
45	Enhancement of noise correlation for noise-induced synchronization of limit-cycle oscillators by threshold filtering. Nonlinear Theory and Its Applications IEICE, 2014, 5, 157-171.	0.4	1
46	Dispersal-induced destabilization of metapopulations and oscillatory Turing patterns in ecological networks. Scientific Reports, 2014, 4, 3585.	1.6	42
47	Ginzburg-Landau Equations Reduced from Coupled Delay Differential Equations. IEICE Proceeding Series, 2014, 1, 915-918.	0.0	1
48	Phase Reduction Method for Strongly Perturbed Limit Cycle Oscillators. Physical Review Letters, 2013, 111, 214101.	2.9	50
49	Collective phase description of oscillatory convection. Chaos, 2013, 23, 043129.	1.0	28
50	Phase ordering in coupled noisy bistable systems on scale-free networks. Physical Review E, 2013, 88, 052806.	0.8	16
51	Persistent fluctuations in synchronization rate in globally coupled oscillators with periodic external forcing. Physical Review E, 2012, 85, 056207.	0.8	7
52	Phase Description of Stable Limit-cycle Solutions in Reaction-diffusion Systems. Procedia IUTAM, 2012, 5, 227-233.	1.2	12
53	Adjoint Method Provides Phase Response Functions for Delay-Induced Oscillations. Physical Review Letters, 2012, 109, 044101.	2.9	47
54	Global feedback control of Turing patterns in network-organized activator-inhibitor systems. Europhysics Letters, 2012, 98, 64004.	0.7	32

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55	Linear Analysis of the Corticothalamic Model with Time Delay. IEEJ Transactions on Electronics, Information and Systems, 2012, 132, 1787-1797.	0.1	1
56	Corticothalamic Model with Time Delay Reduced to a Real Ginzburg-Landau Equation. IEEJ Transactions on Electronics, Information and Systems, 2012, 132, 1563-1574.	0.1	1
57	Collective phase description of globally coupled excitable elements. Physical Review E, 2011, 84, 046211.	0.8	30
58	Reduction Theories Elucidate the Origins of Complex Biological Rhythms Generated by Interacting Delay-Induced Oscillations. PLoS ONE, 2011, 6, e26497.	1.1	20
59	Optimal phase response curves for stochastic synchronization of limit-cycle oscillators by common Poisson noise. Physical Review E, 2011, 84, 016229.	0.8	20
60	Effective long-time phase dynamics of limit-cycle oscillators driven by weak colored noise. Chaos, 2010, 20, 033126.	1.0	30
61	Turing patterns in network-organized activatorâ€“inhibitor systems. Nature Physics, 2010, 6, 544-550.	6.5	305
62	Phase synchronization between collective rhythms of globally coupled oscillator groups: Noiseless nonidentical case. Chaos, 2010, 20, 043110.	1.0	36
63	Phase synchronization between collective rhythms of globally coupled oscillator groups: Noisy identical case. Chaos, 2010, 20, 043109.	1.0	28
64	Dynamics of Limit-Cycle Oscillators Subject to General Noise. Physical Review Letters, 2010, 105, 154101.	2.9	102
65	Synchronization of uncoupled oscillators by common gamma impulses: From phase locking to noise-induced synchronization. Physical Review E, 2010, 82, 036206.	0.8	10
66	Experimental synchronization of circuit oscillations induced by common telegraph noise. Physical Review E, 2009, 79, 036205.	0.8	15
67	Diffusion-induced instability and chaos in random oscillator networks. Physical Review E, 2009, 79, 036214.	0.8	30
68	Collective-phase description of coupled oscillators with general network structure. Physical Review E, 2009, 80, 036207.	0.8	54
69	Stochastic Phase Reduction for a General Class of Noisy Limit Cycle Oscillators. Physical Review Letters, 2009, 102, 194102.	2.9	92
70	Self-organizing timing allocation mechanism in distributed wireless sensor networks. IEICE Electronics Express, 2009, 6, 1562-1568.	0.3	7
71	Collective Phase Sensitivity. Physical Review Letters, 2008, 101, 024101.	2.9	83
72	Averaging approach to phase coherence of uncoupled limit-cycle oscillators receiving common random impulses. Physical Review E, 2008, 78, 066220.	0.8	5

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73	Phase coherence in an ensemble of uncoupled limit-cycle oscillators receiving common Poisson impulses. Physical Review E, 2008, 77, 036218.	0.8	34
74	Noise-induced turbulence in nonlocally coupled oscillators. Physical Review E, 2007, 75, 036209.	0.8	49
75	Noise-Induced Synchronization and Clustering in Ensembles of Uncoupled Limit-Cycle Oscillators. Physical Review Letters, 2007, 98, 184101.	2.9	159
76	Population Coding by Globally Coupled Phase Oscillators. Journal of the Physical Society of Japan, 2006, 75, 034001.	0.7	0
77	Reproducibility of a Noisy Limit-Cycle Oscillator Induced by a Fluctuating Input. Progress of Theoretical Physics Supplement, 2006, 161, 294-297.	0.2	6
78	Universal finite-sample effect on the perturbation growth in chaotic dynamical systems. Physical Review E, 2006, 74, 026213.	0.8	3
79	Independent Component Analysis of Spatiotemporal Chaos. Journal of the Physical Society of Japan, 2005, 74, 1661-1665.	0.7	2
80	Synchrony of limit-cycle oscillators induced by random external impulses. Physical Review E, 2005, 72, 026220.	0.8	64
81	Synchrony of neural Oscillators induced by random telegraphic currents. Physical Review E, 2005, 71, 036217.	0.8	26
82	Statistics of rare strong bursts in autocatalytic stochastic growth with diffusion. Chaos, 2003, 13, 953-961.	1.0	11
83	VISUALIZATION OF CORRELATION CASCADE IN SPATIOTEMPORAL CHAOS USING WAVELETS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2001, 11, 1483-1493.	0.7	8
84	Multi-scaling properties of truncated LÃ©vy flights. Physics Letters, Section A: General, Atomic and Solid State Physics, 2000, 266, 282-289.	0.9	84
85	Multi-scaled turbulence in large populations of oscillators in a diffusive medium. Physica A: Statistical Mechanics and Its Applications, 2000, 288, 244-264.	1.2	24
86	Anomalous spatio-temporal chaos in a two-dimensional system of nonlocally coupled oscillators. Chaos, 1999, 9, 902-909.	1.0	17
87	Asymptotic power law of moments in a random multiplicative process with weak additive noise. Physical Review E, 1998, 58, 1591-1600.	0.8	53
88	Multiaffine Chemical Turbulence. Physical Review Letters, 1998, 81, 3543-3546.	2.9	67
89	Scaling Properties in Large Assemblies of Simple Dynamical Units Driven by Long-Wave Random Forcing. Physical Review Letters, 1997, 78, 4039-4042.	2.9	24
90	Power-law spatial correlations and the onset of individual motions in self-oscillatory media with non-local coupling. Physica D: Nonlinear Phenomena, 1997, 103, 294-313.	1.3	54

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91	Origin of Power-Law Spatial Correlations in Distributed Oscillators and Maps with Nonlocal Coupling. Physical Review Letters, 1996, 76, 4352-4355.	2.9	75