Hanspeter Herzel

List of Publications by Year
in descending order

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88 papers	7,576 citations	47006 47 h-index	54911 84 g-index
98 all docs	98 docs citations	98 times ranked	6048 citing authors

#	Article	IF	Citations
1	Calls out of chaos: the adaptive significance of nonlinear phenomena in mammalian vocal production. Animal Behaviour, 2002, 63, 407-418.	1.9	451
2	Spontaneous Synchronization of Coupled Circadian Oscillators. Biophysical Journal, 2005, 89, 120-129.	0.5	401
3	Differential effects of PER2 phosphorylation: molecular basis for the human familial advanced sleep phase syndrome (FASPS). Genes and Development, 2006, 20, 2660-2672.	5.9	339
4	Coupling governs entrainment range of circadian clocks. Molecular Systems Biology, 2010, 6, 438.	7.2	297
5	Bifurcations in an asymmetric vocalâ€fold model. Journal of the Acoustical Society of America, 1995, 97, 1874-1884.	1.1	286
6	Regulation of Clock-Controlled Genes in Mammals. PLoS ONE, 2009, 4, e4882.	2.5	251
7	Molecular insights into human daily behavior. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 1602-1607.	7.1	238
8	Mathematical Modeling Identifies Inhibitors of Apoptosis as Mediators of Positive Feedback and Bistability. PLoS Computational Biology, 2006, 2, e120.	3.2	217
9	Interpretation of biomechanical simulations of normal and chaotic vocal fold oscillations with empirical eigenfunctions. Journal of the Acoustical Society of America, 1994, 95, 3595-3604.	1.1	205
10	Analysis of Vocal Disorders With Methods From Nonlinear Dynamics. Journal of Speech, Language, and Hearing Research, 1994, 37, 1008-1019.	1.6	194
11	Is There a Bias in Proteome Research?. Genome Research, 2001, 11, 1971-1973.	5.5	189
12	Synchronization-Induced Rhythmicity of Circadian Oscillators in the Suprachiasmatic Nucleus. PLoS Computational Biology, 2007, 3, e68.	3.2	184
13	Tuning the Mammalian Circadian Clock: Robust Synergy of Two Loops. PLoS Computational Biology, 2011, 7, e1002309.	3.2	179
14	Measuring correlations in symbol sequences. Physica A: Statistical Mechanics and Its Applications, 1995, 216, 518-542.	2.6	164
15	Î²-TrCP1-Mediated Degradation of PERIOD2 Is Essential for Circadian Dynamics. Journal of Biological Rhythms, 2007, 22, 375-386.	2.6	156
16	Modeling Feedback Loops of the Mammalian Circadian Oscillator. Biophysical Journal, 2004, 87, 3023-3034.	0.5	151
17	Bifurcations in excised larynx experiments. Journal of Voice, 1996, 10, 129-138.	1.5	147
18	Biological profiling of gene groups utilizing Gene Ontology. Genome Informatics, 2005, 16, 106-15.	0.4	141

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19	Ras-Mediated Deregulation of the Circadian Clock in Cancer. PLoS Genetics, 2014, 10, e1004338.	3.5	140
20	Nonlinear dynamics of the voice: Signal analysis and biomechanical modeling. Chaos, 1995, 5, 30-34.	2.5	138
21	Species independence of mutual information in coding and noncoding DNA. Physical Review E, 2000, 61, 5624-5629.	2.1	120
22	The choroid plexus is an important circadian clock component. Nature Communications, 2018, 9, 1062.	12.8	118
23	Spatio-temporal analysis of irregular vocal fold oscillations: Biphonation due to desynchronization of spatial modes. Journal of the Acoustical Society of America, 2001, 110, 3179-3192.	1.1	114
24	Correlations in DNA sequences: The role of protein coding segments. Physical Review E, 1997, 55, 800-810.	2.1	98
25	Nonlinear analysis of irregular animal vocalizations. Journal of the Acoustical Society of America, 2002, 111, 2908-2919.	1.1	98
26	Timing of circadian genes in mammalian tissues. Scientific Reports, 2014, 4, 5782.	3.3	97
27	Human Chronotypes from a Theoretical Perspective. PLoS ONE, 2013, 8, e59464.	2.5	92
28	Entropies of biosequences: The role of repeats. Physical Review E, 1994, 50, 5061-5071.	2.1	90
29	Quantification of Circadian Rhythms in Single Cells. PLoS Computational Biology, 2009, 5, e1000580.	3.2	88
30	Tuning the phase of circadian entrainment. Journal of the Royal Society Interface, 2015, 12, 20150282.	3.4	85
31	Modeling the role of nonhuman vocal membranes in phonation. Journal of the Acoustical Society of America, 1999, 105, 2020-2028.	1.1	83
32	Functioning and robustness of a bacterial circadian clock. Molecular Systems Biology, 2007, 3, 90.	7.2	83
33	Global parameter search reveals design principles of the mammalian circadian clock. BMC Systems Biology, 2008, 2, 22.	3.0	82
34	Identification of Y-Box Binding Protein 1 As a Core Regulator of MEK/ERK Pathway-Dependent Gene Signatures in Colorectal Cancer Cells. PLoS Genetics, 2010, 6, e1001231.	3.5	80
35	Competing Docking Interactions can Bring About Bistability in the MAPK Cascade. Biophysical Journal, 2007, 93, 2279-2288.	0.5	78
36	Bifurcations and Chaos in Voice Signals. Applied Mechanics Reviews, 1993, 46, 399-413.	10.1	77

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37	Feedback Loops of the Mammalian Circadian Clock Constitute Repressilator. PLoS Computational Biology, 2016, 12, e1005266.	3.2	75
38	Positive Feedback Promotes Oscillations in Negative Feedback Loops. PLoS ONE, 2014, 9, e104761.	2.5	74
39	Small RNAs Establish Delays and Temporal Thresholds in Gene Expression. Biophysical Journal, 2008, 95, 3232-3238.	0.5	72
40	The Interplay of cis-Regulatory Elements Rules Circadian Rhythms in Mouse Liver. PLoS ONE, 2012, 7, e46835.	2.5	68
41	Modelling biphonation â€" The role of the vocal tract. Speech Communication, 1997, 22, 141-154.	2.8	67
42	Nonlinear phenomena in the natural howling of a dogâ€"wolf mix. Journal of the Acoustical Society of America, 2000, 108, 1435-1442.	1.1	66
43	Comparison of biomechanical modeling of register transitions and voice instabilities with excised larynx experiments. Journal of the Acoustical Society of America, 2007, 122, 519-531.	1.1	63
44	Correlations in Protein Sequences and Property Codes. Journal of Theoretical Biology, 1998, 190, 341-353.	1.7	60
45	How to Achieve Fast Entrainment? The Timescale to Synchronization. PLoS ONE, 2009, 4, e7057.	2.5	56
46	Measuring similarities between transcription factor binding sites. BMC Bioinformatics, 2005, 6, 237.	2.6	55
47	Co-existing feedback loops generate tissue-specific circadian rhythms. Life Science Alliance, 2018, 1, e201800078.	2.8	55
48	Statistical analysis of the DNA sequence of human chromosome 22. Physical Review E, 2001, 64, 041917.	2.1	53
49	A Theoretical Study on Seasonality. Frontiers in Neurology, 2015, 6, 94.	2.4	50
50	Periodicities of 10â€"11bp as Indicators of the Supercoiled State of Genomic DNA. Journal of Molecular Biology, 2004, 343, 891-901.	4.2	47
51	Tumor Growth Rate Determines the Timing of Optimal Chronomodulated Treatment Schedules. PLoS Computational Biology, 2010, 6, e1000712.	3.2	45
52	Nonlinear phenomena in contemporary vocal music. Journal of Voice, 2004, 18, 1-12.	1.5	44
53	Biomechanical modeling of register transitions and the role of vocal tract resonators. Journal of the Acoustical Society of America, 2010, 127, 1528-1536.	1.1	44
54	Assembly of a Comprehensive Regulatory Network for the Mammalian Circadian Clock: A Bioinformatics Approach. PLoS ONE, 2015, 10, e0126283.	2.5	43

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55	Measuring Relative Coupling Strength in Circadian Systems. Journal of Biological Rhythms, 2018, 33, 84-98.	2.6	43
56	Phonation onset: Vocal fold modeling and high-speed glottography. Journal of the Acoustical Society of America, 1998, 104, 464-470.	1.1	42
57	Timing of Neuropeptide Coupling Determines Synchrony and Entrainment in the Mammalian Circadian Clock. PLoS Computational Biology, 2014, 10, e1003565.	3.2	38
58	Biomechanics and control of vocalization in a non-songbird. Journal of the Royal Society Interface, 2008, 5, 691-703.	3.4	37
59	Intercellular coupling between peripheral circadian oscillators by TGF-Î² signaling. Science Advances, 2021, 7, .	10.3	37
60	Clocks in the Wild: Entrainment to Natural Light. Frontiers in Physiology, 2020, 11, 272.	2.8	33
61	Analysing and Understanding the Singing Voice: Recent Progress and Open Questions. Current Bioinformatics, 2011, 6, 362-374.	1.5	31
62	Amplitude Effects Allow Short Jet Lags and Large Seasonal Phase Shifts in Minimal Clock Models. Journal of Molecular Biology, 2020, 432, 3722-3737.	4.2	31
63	Visualization of system dynamics using phasegrams. Journal of the Royal Society Interface, 2013, 10, 20130288.	3.4	30
64	Detecting synchronizations in an asymmetric vocal fold model from time series data. Chaos, 2005, 15, 013702.	2.5	26
65	Bifurcations and chaos in register transitions of excised larynx experiments. Chaos, 2008, 18, 013102.	2.5	23
66	Coupling Controls the Synchrony of Clock Cells in Development and Knockouts. Biophysical Journal, 2015, 109, 2159-2170.	0.5	22
67	A Robust Model for Circadian Redox Oscillations. International Journal of Molecular Sciences, 2019, 20, 2368.	4.1	18
68	Promoter analysis of Mammalian clock controlled genes. Genome Informatics, 2007, 18, 65-74.	0.4	16
69	An Inactivation Switch Enables Rhythms in a Neurospora Clock Model. International Journal of Molecular Sciences, 2019, 20, 2985.	4.1	15
70	Conceptual Models of Entrainment, Jet Lag, and Seasonality. Frontiers in Physiology, 2020, 11, 334.	2.8	15
71	Coherency of circadian rhythms in the SCN is governed by the interplay of two coupling factors. PLoS Computational Biology, 2018, 14, e1006607.	3.2	13
72	Phasegram Analysis of Vocal Fold Vibration Documented With Laryngeal High-speed Video Endoscopy. Journal of Voice, 2016, 30, 771.e1-771.e15.	1.5	12

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73	Nonlinear phenomena in models of the circadian clock. Journal of the Royal Society Interface, 2020, 17, 20200556.	3.4	12
74	Chaos and Bifurcations during Voiced Speech. NATO ASI Series Series B: Physics, 1991, , 41-50.	0.2	12
75	Principles underlying the complex dynamics of temperature entrainment by a circadian clock. IScience, 2021, 24, 103370.	4.1	12
76	Quantitative analysis of circadian single cell oscillations in response to temperature. PLoS ONE, 2018, 13, e0190004.	2.5	11
77	Multiple random phosphorylations in clock proteins provide long delays and switches. Scientific Reports, 2020, 10, 22224.	3.3	9
78	SPOTTED HYAENA WHOOPS: FREQUENT INCIDENCE OF VOCAL INSTABILITIES IN A MAMMALIAN LOUD CALL. Bioacoustics, 2004, 14, 99-109.	1.7	8
79	SIMULATIONS OF VOCAL FOLDS WITH AN ANALOG CIRCUIT. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1999, 09, 1075-1088.	1.7	7
80	Synergies of Multiple Zeitgebers Tune Entrainment. Frontiers in Network Physiology, 2022, 1, .	1.8	7
81	Detecting Bifurcations in Voice Signals. , 1998, , 325-344.		6
82	Hochgeschwindigkeitsaufnahmen von Schwingungsmoden der Stimmlippen. Oto-rhino-laryngologia Nova, 1994, 4, 307-312.	0.0	4
83	Mathematical Modeling in Circadian Rhythmicity. Methods in Molecular Biology, 2022, , 55-80.	0.9	4
84	Quantification of transients using empirical orthogonal functions. Chaos, Solitons and Fractals, 1997, 8, 1911-1920.	5.1	3
85	NeitherÂper, nor tim1, nor cry2 alone are essential components of the molecular circadian clockwork in the Madeira cockroach. PLoS ONE, 2020, 15, e0235930.	2.5	3
86	Simple Kinetic Models in Molecular Chronobiology. Methods in Molecular Biology, 2021, 2130, 87-100.	0.9	1
87	Information Transfer in the Mammalian Circadian Clock. Lecture Notes in Bioengineering, 2018, , 247-257.	0.4	0
88	Optimizing Property Codes in Protein Data Reveals Structural Characteristics. Lecture Notes in Computer Science, 2003, , 245-252.	1.3	0