Hans-Peter Herzel

List of Publications by Year
in descending order

95 papers	6,366 citations	76326 40 h-index	74163 75 g-index
107 all docs	107 docs citations	107 times ranked	5596 citing authors

#	Article	IF	Citations
1	Spontaneous Synchronization of Coupled Circadian Oscillators. Biophysical Journal, 2005, 89, 120-129.	0.5	401
2	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
3	Lymphocyte Circadian Clocks Control Lymph Node Trafficking and Adaptive Immune Responses. Immunity, 2017, 46, 120-132.	14.3	324
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	Guidelines for Genome-Scale Analysis of Biological Rhythms. Journal of Biological Rhythms, 2017, 32, 380-393.	2.6	237
8	Mathematical Modeling Identifies Inhibitors of Apoptosis as Mediators of Positive Feedback and Bistability. PLoS Computational Biology, 2006, 2, e120.	3.2	217
9	Synchronization-Induced Rhythmicity of Circadian Oscillators in the Suprachiasmatic Nucleus. PLoS Computational Biology, 2007, 3, e68.	3.2	184
10	Tuning the Mammalian Circadian Clock: Robust Synergy of Two Loops. PLoS Computational Biology, 2011, 7, e1002309.	3.2	179
11	High-accuracy determination of internal circadian time from a single blood sample. Journal of Clinical Investigation, 2018, 128, 3826-3839.	8.2	174
12	Modeling Feedback Loops of the Mammalian Circadian Oscillator. Biophysical Journal, 2004, 87, 3023-3034.	0.5	151
13	Effects of sequestration on signal transduction cascades. FEBS Journal, 2006, 273, 895-906.	4.7	148
14	Ras-Mediated Deregulation of the Circadian Clock in Cancer. PLoS Genetics, 2014, 10, e1004338.	3.5	140
15	Bifurcation analysis of the regulatory modules of the mammalian G1/S transition. Bioinformatics, 2004, 20, 1506-1511.	4.1	125
16	Species independence of mutual information in coding and noncoding DNA. Physical Review E, 2000, 61, 5624-5629.	2.1	120
17	The choroid plexus is an important circadian clock component. Nature Communications, 2018, 9, 1062.	12.8	118
18	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

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19	Correlations in DNA sequences: The role of protein coding segments. Physical Review E, 1997, 55, 800-810.	2.1	98
20	Timing of circadian genes in mammalian tissues. Scientific Reports, 2014, 4, 5782.	3.3	97
21	Human Chronotypes from a Theoretical Perspective. PLoS ONE, 2013, 8, e59464.	2.5	92
22	Quantification of Circadian Rhythms in Single Cells. PLoS Computational Biology, 2009, 5, e1000580.	3.2	88
23	Tuning the phase of circadian entrainment. Journal of the Royal Society Interface, 2015, 12, 20150282.	3.4	85
24	Modeling the role of nonhuman vocal membranes in phonation. Journal of the Acoustical Society of America, 1999, 105, 2020-2028.	1.1	83
25	Modelling transcriptional feedback loops: the role of Gro/TLE1 in Hes1 oscillations. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 1155-1170.	3.4	83
26	Functioning and robustness of a bacterial circadian clock. Molecular Systems Biology, 2007, 3, 90.	7.2	83
27	Global parameter search reveals design principles of the mammalian circadian clock. BMC Systems Biology, 2008, 2, 22.	3.0	82
28	Competing Docking Interactions can Bring About Bistability in the MAPK Cascade. Biophysical Journal, 2007, 93, 2279-2288.	0.5	78
29	Mechanism for 12 Hr Rhythm Generation by the Circadian Clock. Cell Reports, 2013, 3, 1228-1238.	6.4	78
30	Feedback Loops of the Mammalian Circadian Clock Constitute Repressilator. PLoS Computational Biology, 2016, 12, e1005266.	3.2	75
31	Positive Feedback Promotes Oscillations in Negative Feedback Loops. PLoS ONE, 2014, 9, e104761.	2.5	74
32	The Interplay of cis-Regulatory Elements Rules Circadian Rhythms in Mouse Liver. PLoS ONE, 2012, 7, e46835.	2.5	68
33	Correlations in Protein Sequences and Property Codes. Journal of Theoretical Biology, 1998, 190, 341-353.	1.7	60
34	High reproducibility of large-gel two-dimensional electrophoresis. Electrophoresis, 2004, 25, 3040-3047.	2.4	56
35	Co-existing feedback loops generate tissue-specific circadian rhythms. Life Science Alliance, 2018, 1, e201800078.	2.8	55
36	Statistical analysis of the DNA sequence of human chromosome 22. Physical Review E, 2001, 64, 041917.	2.1	53

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37	Identification of Novel Nuclear Factor of Activated T Cell (NFAT)-associated Proteins in T Cells. Journal of Biological Chemistry, 2016, 291, 24172-24187.	3.4	51
38	A Theoretical Study on Seasonality. Frontiers in Neurology, 2015, 6, 94.	2.4	50
39	Quantitative analysis of ultrasensitive responses. FEBS Journal, 2005, 272, 4071-4079.	4.7	49
40	Periodicities of 10â€“11bp as Indicators of the Supercoiled State of Genomic DNA. Journal of Molecular Biology, 2004, 343, 891-901.	4.2	47
41	Assembly of a Comprehensive Regulatory Network for the Mammalian Circadian Clock: A Bioinformatics Approach. PLoS ONE, 2015, 10, e0126283.	2.5	43
42	Measuring Relative Coupling Strength in Circadian Systems. Journal of Biological Rhythms, 2018, 33, 84-98.	2.6	43
43	Phonation onset: Vocal fold modeling and high-speed glottography. Journal of the Acoustical Society of America, 1998, 104, 464-470.	1.1	42
44	Live-cell imaging of circadian clock protein dynamics in CRISPR-generated knock-in cells. Nature Communications, 2021, 12, 3796.	12.8	42
45	Venn diagram analysis overestimates the extent of circadian rhythm reprogramming. FEBS Journal, 2022, 289, 6605-6621.	4.7	40
46	Timing of Neuropeptide Coupling Determines Synchrony and Entrainment in the Mammalian Circadian Clock. PLoS Computational Biology, 2014, 10, e1003565.	3.2	38
47	Sequence Periodicity in Complete Genomes of Archaea Suggests Positive Supercoiling. Journal of Biomolecular Structure and Dynamics, 1998, 16, 341-345.	3.5	37
48	Excitability in the p53 network mediates robust signaling with tunable activation thresholds in single cells. Scientific Reports, 2017, 7, 46571.	3.3	37
49	Intercellular coupling between peripheral circadian oscillators by TGF-Î² signaling. Science Advances, 2021, 7, .	10.3	37
50	Clocks in the Wild: Entrainment to Natural Light. Frontiers in Physiology, 2020, 11, 272.	2.8	33
51	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
52	Moranâ€™s I quantifies spatio-temporal pattern formation in neural imaging data. Bioinformatics, 2017, 33, 3072-3079.	4.1	30
53	Ultrasensitization: Switch-Like Regulation of Cellular Signaling by Transcriptional Induction. PLoS Computational Biology, 2005, 1, e54.	3.2	28
54	Regulation of mammalian cell cycle progression in the regenerating liver. Journal of Theoretical Biology, 2011, 283, 103-112.	1.7	28

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55	Robustness: A Key to Evolutionary Design. Biological Theory, 2006, 1, 90-93.	1.5	26
56	Extracting information from cDNA arrays. Chaos, 2001, 11, 98.	2.5	23
57	Coupling Controls the Synchrony of Clock Cells in Development and Knockouts. Biophysical Journal, 2015, 109, 2159-2170.	0.5	22
58	Circadian rhythms in septic shock patients. Annals of Intensive Care, 2021, 11, 64.	4.6	22
59	Gating Characteristics Control Glutamate Receptor Distribution and Trafficking InÂVivo. Current Biology, 2014, 24, 2059-2065.	3.9	20
60	Are Noncoding Sequences of Rickettsia prowazekii Remnants of ``Neutralized'' Genes?. Journal of Molecular Evolution, 2000, 51, 353-362.	1.8	19
61	Weak coupling between intracellular feedback loops explains dissociation of clock gene dynamics. PLoS Computational Biology, 2019, 15, e1007330.	3.2	19
62	A Robust Model for Circadian Redox Oscillations. International Journal of Molecular Sciences, 2019, 20, 2368.	4.1	18
63	Ultradian Rhythms in the Transcriptome of Neurospora crassa. IScience, 2018, 9, 475-486.	4.1	15
64	An Inactivation Switch Enables Rhythms in a Neurospora Clock Model. International Journal of Molecular Sciences, 2019, 20, 2985.	4.1	15
65	Conceptual Models of Entrainment, Jet Lag, and Seasonality. Frontiers in Physiology, 2020, 11, 334.	2.8	15
66	How to Quantify 'Small-World Networks'?. Fractals, 1998, 06, 301-303.	3.7	14
67	Transcription factor coâ€occupied regions in the murine genome constitute Tâ€helperâ€cell subtypeâ€specific enhancers. European Journal of Immunology, 2015, 45, 3150-3157.	2.9	13
68	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
69	Mining for novel candidate clock genes in the circadian regulatory network. BMC Systems Biology, 2015, 9, 78.	3.0	12
70	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
71	Nonlinear phenomena in models of the circadian clock. Journal of the Royal Society Interface, 2020, 17, 20200556.	3.4	12
72	AVERAGE MUTUAL INFORMATION OF CODING AND NONCODING DNA. , 1999, , 614-23.		12

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73	Principles underlying the complex dynamics of temperature entrainment by a circadian clock. IScience, 2021, 24, 103370.	4.1	12
74	The structural code of cyanobacterial genomes. Nucleic Acids Research, 2014, 42, 8873-8883.	14.5	11
75	Searching Novel Clock Genes Using RNAi-Based Screening. Methods in Molecular Biology, 2021, 2130, 103-114.	0.9	11
76	Quantitative analysis of circadian single cell oscillations in response to temperature. PLoS ONE, 2018, 13, e0190004.	2.5	11
77	Adequate immune response ensured by binary IL-2 and graded CD25 expression in a murine transfer model. ELife, 2016, 5, .	6.0	11
78	A mesoscale model of G1/S phase transition in liver regeneration. Journal of Theoretical Biology, 2008, 252, 465-473.	1.7	10
79	Stable IL-2 Decision Making by Endogenous c-Fos Amounts in Peripheral Memory T-helper Cells. Journal of Biological Chemistry, 2012, 287, 18386-18397.	3.4	10
80	Elucidating the adaptation and temporal coordination of metabolic pathways using in-silico evolution. BioSystems, 2014, 117, 68-76.	2.0	10
81	Multiple random phosphorylations in clock proteins provide long delays and switches. Scientific Reports, 2020, 10, 22224.	3.3	9
82	SPOTTED HYAENA WHOOPS: FREQUENT INCIDENCE OF VOCAL INSTABILITIES IN A MAMMALIAN LOUD CALL. Bioacoustics, 2004, 14, 99-109.	1.7	8
83	Synergies of Multiple Zeitgebers Tune Entrainment. Frontiers in Network Physiology, 2022, 1, .	1.8	7
84	Beyond spikes: Multiscale computational analysis ofin vivolong-term recordings in the cockroach circadian clock. Network Neuroscience, 2019, 3, 944-968.	2.6	6
85	Mathematical modelling identifies conditions for maintaining and escaping feedback control in the intestinal epithelium. Scientific Reports, 2022, 12, 5569.	3.3	6
86	GRAPH-THEORETICAL COMPARISON REVEALS STRUCTURAL DIVERGENCE OF HUMAN PROTEIN INTERACTION NETWORKS. , 2007, , .		5
87	Death of neuronal clusters contributes to variance of age at onset in Huntingtonâ€™s disease. Neurogenetics, 2006, 7, 21-25.	1.4	4
88	Mathematical Modeling in Circadian Rhythmicity. Methods in Molecular Biology, 2022, , 55-80.	0.9	4
89	Flexible web-based integration of distributed large-scale human protein interaction maps. Journal of Integrative Bioinformatics, 2007, 4, 40-50.	1.5	3
90	Functional and Transcriptional Coherency of Modules in the Human Protein Interaction Network. Journal of Integrative Bioinformatics, 2007, 4, 198-207.	1.5	3

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91	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
92	PREDICTION OF REGULATORY TRANSCRIPTION FACTORS IN T HELPER CELL DIFFERENTIATION AND MAINTENANCE. , 2010, , .		2
93	MODELING IL-2 GENE EXPRESSION IN HUMAN REGULATORY T CELLS. , 2008, , .		1
94	Simple Kinetic Models in Molecular Chronobiology. Methods in Molecular Biology, 2021, 2130, 87-100.	0.9	1
95	Modeling IL-2 gene expression in human regulatory T cells. Genome Informatics, 2008, 20, 222-30.	0.4	1