Pascal Fries

List of Publications by Year
in descending order

136 papers	43,706 citations	12330 69 h-index	14759 127 g-index
170 all docs	170 docs citations	170 times ranked	22702 citing authors

#	Article	IF	Citations
1	Predictive coding of natural images by V1 firing rates and rhythmic synchronization. Neuron, 2022, 110, 1240-1257.e8.	8.1	28
2	Spontaneous variability in gamma dynamics described by a damped harmonic oscillator driven by noise. Nature Communications, 2022, 13, 2019.	12.8	21
3	What to Do If N Is Two?. Journal of Cognitive Neuroscience, 2022, 34, 1114-1118.	2.3	9
4	Human visual gamma for color stimuli. ELife, 2022, 11, .	6.0	7
5	Hemispheres in harmony. Neuron, 2021, 109, 916-917.	8.1	0
6	Right inferior frontal gyrus implements motor inhibitory control via beta-band oscillations in humans. ELife, 2021, 10, .	6.0	42
7	Visual Neuroscience Methods for Marmosets: Efficient Receptive Field Mapping and Head-Free Eye Tracking. ENeuro, 2021, 8, ENEURO.0489-20.2021.	1.9	8
8	Cortical gamma-band resonance preferentially transmits coherent input. Cell Reports, 2021, 35, 109083.	6.4	26
9	Stimulus-specific plasticity in human visual gamma-band activity and functional connectivity. ELife, 2021, 10, .	6.0	14
10	Visual exposure enhances stimulus encoding and persistence in primary cortex. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	12
11	Brain rhythms define distinct interaction networks with differential dependence on anatomy. Neuron, 2021, 109, 3862-3878.e5.	8.1	60
12	Stimulus-specific plasticity of macaque V1 spike rates and gamma. Cell Reports, 2021, 37, 110086.	6.4	14
13	A Distinct Class of Bursting Neurons with Strong Gamma Synchronization and Stimulus Selectivity in Monkey V1. Neuron, 2020, 105, 180-197.e5.	8.1	45
14	Magnetoresistive Sensor in Two-Dimension on a 25 Î¼m Thick Silicon Substrate for In Vivo Neuronal Measurements. ACS Sensors, 2020, 5, 3493-3500.	7.8	12
15	Movement-related coupling of human subthalamic nucleus spikes to cortical gamma. ELife, 2020, 9, .	6.0	21
16	Human visual cortical gamma reflects natural image structure. NeuroImage, 2019, 200, 635-643.	4.2	21
17	Entanglement and relative entropy of a chiral fermion on the torus. Physical Review D, 2019, 100, .	4.7	16
18	Entanglement Spectrum of Chiral Fermions on the Torus. Physical Review Letters, 2019, 123, 211603.	7.8	31

#	Article	IF	Citations
19	Cortical layers, rhythms and BOLD signals. NeuroImage, 2019, 197, 689-698.	4.2	74
20	Surface color and predictability determine contextual modulation of V1 firing and gamma oscillations. ELife, 2019, 8, .	6.0	70
21	Gamma Synchronization between V1 and V4 Improves Behavioral Performance. Neuron, 2018, 100, 953-963.e3.	8.1	81
22	Investigating large-scale brain dynamics using field potential recordings: analysis and interpretation. Nature Neuroscience, 2018, 21, 903-919.	14.8	299
23	A theta rhythm in macaque visual cortex and its attentional modulation. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E5614-E5623.	7.1	142
24	Cortical volume and sex influence visual gamma. NeuroImage, 2018, 178, 702-712.	4.2	27
25	Source-reconstruction of the sensorimotor network from resting-state macaque electrocorticography. NeuroImage, 2018, 181, 347-358.	4.2	9
26	Finite speed heat transport in a quantum spin chain after quenched local cooling. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 145302.	2.1	0
27	Top-Down Beta Enhances Bottom-Up Gamma. Journal of Neuroscience, 2017, 37, 6698-6711.	3.6	138
28	Implementing the sine transform of fermionic modes as a tensor network. Physical Review A, 2017, 96, .	2.5	1
29	InÂVivo Magnetic Recording of Neuronal Activity. Neuron, 2017, 95, 1283-1291.e4.	8.1	48
30	Linear distributed source modeling of local field potentials recorded with intra-cortical electrode arrays. PLoS ONE, 2017, 12, e0187490.	2.5	4
31	Alpha power indexes task-related networks on large and small scales: A multimodal ECoG study in humans and a non-human primate. NeuroImage, 2016, 134, 122-131.	4.2	77
32	Areas V1 and V2 show microsaccadeâ€related 3â€“4â€Hz covariation in gamma power and frequency. European Journal of Neuroscience, 2016, 43, 1286-1296.	2.6	58
33	Gamma-Rhythmic Gain Modulation. Neuron, 2016, 92, 240-251.	8.1	111
34	Selective Neural Synchrony Suppression as a Forward Gatekeeper to Piecemeal Conscious Perception. Cerebral Cortex, 2016, 26, 3010-3022.	2.9	10
35	Dissociable attentional and inhibitory networks of dorsal and ventral areas of the right inferior frontal cortex: a combined task-specific and coordinate-based meta-analytic fMRI study. Brain Structure and Function, 2016, 221, 1635-1651.	2.3	67
36	Alpha-Beta and Gamma Rhythms Subserve Feedback and Feedforward Influences among Human Visual Cortical Areas. Neuron, 2016, 89, 384-397.	8.1	582

#	Article	IF	Citations
37	Stimulus-induced visual cortical networks are recapitulated by spontaneous local and interareal synchronization. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E606-15.	7.1	56
38	Diverse Phase Relations among Neuronal Rhythms and Their Potential Function. Trends in Neurosciences, 2016, 39, 86-99.	8.6	108
39	Neuronal Oscillations, Coherence, and Consciousness. , 2016, , 49-60.		15
40	Both ongoing alpha and visually induced gamma oscillations show reliable diversity in their across-site phase-relations. Journal of Neurophysiology, 2015, 113, 1556-1563.	1.8	25
41	Visual Areas Exert Feedforward and Feedback Influences through Distinct Frequency Channels. Neuron, 2015, 85, 390-401.	8.1	1,036
42	How to detect the Granger-causal flow direction in the presence of additive noise?. NeuroImage, 2015, 108, 301-318.	4.2	115
43	A DCM study of spectral asymmetries in feedforward and feedback connections between visual areas V1 and V4 in the monkey. NeuroImage, 2015, 108, 460-475.	4.2	129
44	A jackknife approach to quantifying single-trial correlation between covariance-based metrics undefined on a single-trial basis. NeuroImage, 2015, 114, 57-70.	4.2	47
45	A Statistical Framework to Infer Delay and Direction of Information Flow from Measurements of Complex Systems. Neural Computation, 2015, 27, 1555-1608.	2.2	18
46	Visual Cortical Gamma-Band Activity During Free Viewing of Natural Images. Cerebral Cortex, 2015, 25, 918-926.	2.9	107
47	Distributed Attention Is Implemented through Theta-Rhythmic Gamma Modulation. Current Biology, 2015, 25, 2332-2337.	3.9	232
48	Rhythms for Cognition: Communication through Coherence. Neuron, 2015, 88, 220-235.	8.1	1,949
49	Recording of brain activity across spatial scales. Current Opinion in Neurobiology, 2015, 32, 68-77.	4.2	69
50	Communication through coherence with inter-areal delays. Current Opinion in Neurobiology, 2015, 31, 173-180.	4.2	203
51	Beta Oscillation Dynamics in Extrastriate Cortex after Removal of Primary Visual Cortex. Journal of Neuroscience, 2014, 34, 11857-11864.	3.6	42
52	Stimulus repetition modulates gamma-band synchronization in primate visual cortex. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 3626-3631.	7.1	112
53	Gamma or no gamma, that is the question. Trends in Cognitive Sciences, 2014, 18, 507-509.	7.8	55
54	Contrast gain control and horizontal interactions in V1: A DCM study. NeuroImage, 2014, 92, 143-155.	4.2	64

#	Article	IF	Citations
55	Attentional Modulation of Cell-Class-Specific Gamma-Band Synchronization in Awake Monkey Area V4. Neuron, 2013, 80, 1077-1089.	8.1	174
56	Gamma oscillations: precise temporal coordination without a metronome. Trends in Cognitive Sciences, 2013, 17, 54-55.	7.8	90
57	Adding dynamics to the Human Connectome Project with MEG. NeuroImage, 2013, 80, 190-201.	4.2	189
58	Reduced Occipital Alpha Power Indexes Enhanced Excitability Rather than Improved Visual Perception. Journal of Neuroscience, 2013, 33, 3212-3220.	3.6	184
59	Rhythmic neuronal synchronization in visual cortex entails spatial phase relation diversity that is modulated by stimulation and attention. NeuroImage, 2013, 74, 99-116.	4.2	36
60	Alpha-band suppression in the visual word form area as a functional bottleneck to consciousness. NeuroImage, 2013, 78, 33-45.	4.2	21
61	Visual stimulus eccentricity affects human gamma peak frequency. NeuroImage, 2013, 78, 439-447.	4.2	49
62	Robust Gamma Coherence between Macaque V1 and V2 by Dynamic Frequency Matching. Neuron, 2013, 78, 523-536.	8.1	234
63	Oscillatory activity in the monkey hippocampus during visual exploration and memory formation. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13144-13149.	7.1	234
64	Orientation selectivity and noise correlation in awake monkey area V1 are modulated by the gamma cycle. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 4302-4307.	7.1	108
65	Thalamic Coordination of Cortical Communication. Neuron, 2012, 75, 551-552.	8.1	27
66	Canonical Microcircuits for Predictive Coding. Neuron, 2012, 76, 695-711.	8.1	1,876
67	Attentional Stimulus Selection through Selective Synchronization between Monkey Visual Areas. Neuron, 2012, 75, 875-888.	8.1	665
68	DCM for complex-valued data: Cross-spectra, coherence and phase-delays. NeuroImage, 2012, 59, 439-455.	4.2	120
69	Magnetoencephalography in Twins Reveals a Strong Genetic Determination of the Peak Frequency of Visually Induced Gamma-Band Synchronization. Journal of Neuroscience, 2012, 32, 3388-3392.	3.6	108
70	Attention Samples Stimuli Rhythmically. Current Biology, 2012, 22, 1000-1004.	3.9	509
71	Perception of the touch-induced visual double-flash illusion correlates with changes of rhythmic neuronal activity in human visual and somatosensory areas. NeuroImage, 2011, 54, 1395-1405.	4.2	40
72	FieldTrip: Open Source Software for Advanced Analysis of MEG, EEG, and Invasive Electrophysiological Data. Computational Intelligence and Neuroscience, 2011, 2011, 1-9.	1.7	7,466

#	Article	IF	Citations
73	Neuronal Dynamics Underlying High- and Low-Frequency EEG Oscillations Contribute Independently to the Human BOLD Signal. Neuron, 2011, 69, 572-583.	8.1	408
74	Selective Movement Preparation Is Subserved by Selective Increases in Corticomuscular Gamma-Band Coherence. Journal of Neuroscience, 2011, 31, 6750-6758.	3.6	93
75	Laminar differences in gamma and alpha coherence in the ventral stream. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 11262-11267.	7.1	547
76	Rhythmic Neuronal Synchronization Subserves Selective Attentional Processing. Research and Perspectives in Neurosciences, 2011, , 109-132.	0.4	6
77	Beta-band oscillations â€" signalling the status quo?. Current Opinion in Neurobiology, 2010, 20, 156-165.	4.2	2,121
78	A backward progression of attentional effects in the ventral stream. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 361-365.	7.1	252
79	Neuronal Synchronization in Human Posterior Parietal Cortex during Reach Planning. Journal of Neuroscience, 2010, 30, 1402-1412.	3.6	73
80	Gamma-Phase Shifting in Awake Monkey Visual Cortex. Journal of Neuroscience, 2010, 30, 1250-1257.	3.6	165
81	Corticospinal Beta-Band Synchronization Entails Rhythmic Gain Modulation. Journal of Neuroscience, 2010, 30, 4481-4488.	3.6	105
82	The pairwise phase consistency: A bias-free measure of rhythmic neuronal synchronization. NeuroImage, 2010, 51, 112-122.	4.2	406
83	Visually induced gamma-band activity predicts speed of change detection in humans. NeuroImage, 2010, 51, 1162-1167.	4.2	86
84	A MEMS-based flexible multichannel ECoG-electrode array. Journal of Neural Engineering, 2009, 6, 036003.	3.5	354
85	Gamma-Band Synchronization in the Macaque Hippocampus and Memory Formation. Journal of Neuroscience, 2009, 29, 12521-12531.	3.6	159
86	Stimulus-Induced and State-Dependent Sustained Gamma Activity Is Tightly Coupled to the Hemodynamic Response in Humans. Journal of Neuroscience, 2009, 29, 13962-13970.	3.6	77
87	Inverse Mapping the Neuronal Substrates of Face Categorizations. Cerebral Cortex, 2009, 19, 2428-2438.	2.9	35
88	A Microsaccadic Rhythm Modulates Gamma-Band Synchronization and Behavior. Journal of Neuroscience, 2009, 29, 9471-9480.	3.6	202
89	Tactile stimulation accelerates behavioral responses to visual stimuli through enhancement of occipital gamma-band activity. Vision Research, 2009, 49, 931-942.	1.4	28
90	Buildup of Choice-Predictive Activity in Human Motor Cortex during Perceptual Decision Making. Current Biology, 2009, 19, 1581-1585.	3.9	434

#	Article	IF	Citations
91	The Model- and the Data-Gamma. Neuron, 2009, 64, 601-602.	8.1	38
92	Neuronal Gamma-Band Synchronization as a Fundamental Process in Cortical Computation. Annual Review of Neuroscience, 2009, 32, 209-224.	10.7	1,441
93	Biased competition through variations in amplitude of Î³-oscillations. Journal of Computational Neuroscience, 2008, 25, 89-107.	1.0	33
94	Finding Gamma. Neuron, 2008, 58, 303-305.	8.1	126
95	Neuronal Synchronization along the Dorsal Visual Pathway Reflects the Focus of Spatial Attention. Neuron, 2008, 60, 709-719.	8.1	448
96	Imaging the human motor systemâ€™s beta-band synchronization during isometric contraction. NeuroImage, 2008, 41, 437-447.	4.2	96
97	Gamma-Band Activity in Human Posterior Parietal Cortex Encodes the Motor Goal during Delayed Prosaccades and Antisaccades. Journal of Neuroscience, 2008, 28, 8397-8405.	3.6	108
98	The Effects of Visual Stimulation and Selective Visual Attention on Rhythmic Neuronal Synchronization in Macaque Area V4. Journal of Neuroscience, 2008, 28, 4823-4835.	3.6	379
99	High-Frequency Activity in Human Visual Cortex Is Modulated by Visual Motion Strength. Cerebral Cortex, 2007, 17, 732-741.	2.9	131
100	Oscillatory Activity in Human Parietal and Occipital Cortex Shows Hemispheric Lateralization and Memory Effects in a Delayed Double-Step Saccade Task. Cerebral Cortex, 2007, 17, 2364-2374.	2.9	149
101	The gamma cycle. Trends in Neurosciences, 2007, 30, 309-316.	8.6	943
102	Modulation of Neuronal Interactions Through Neuronal Synchronization. Science, 2007, 316, 1609-1612.	12.6	1,197
103	Inability to directly detect magnetic field changes associated with neuronal activity. Magnetic Resonance in Medicine, 2007, 57, 411-416.	3.0	62
104	The role of neuronal synchronization in selective attention. Current Opinion in Neurobiology, 2007, 17, 154-160.	4.2	434
105	Nonparametric statistical testing of coherence differences. Journal of Neuroscience Methods, 2007, 163, 161-175.	2.5	246
106	Population Activity in the Human Dorsal Pathway Predicts the Accuracy of Visual Motion Detection. Journal of Neurophysiology, 2007, 98, 345-359.	1.8	141
107	Localizing human visual gamma-band activity in frequency, time and space. NeuroImage, 2006, 29, 764-773.	4.2	439
108	Cortical responses to contextual influences in amodal completion. NeuroImage, 2006, 32, 1815-1825.	4.2	19

#	Article	IF	Citations
109	Gamma-band synchronization in visual cortex predicts speed of change detection. Nature, 2006, 439, 733-736.	27.8	690
110	Neuronal coherence during selective attentional processing and sensoryâ€“motor integration. Journal of Physiology (Paris), 2006, 100, 182-193.	2.1	131
111	Tactile Spatial Attention Enhances Gamma-Band Activity in Somatosensory Cortex and Reduces Low-Frequency Activity in Parieto-Occipital Areas. Journal of Neuroscience, 2006, 26, 490-501.	3.6	417
112	Assessing Neuronal Coherence with Single-Unit, Multi-Unit, and Local Field Potentials. Neural Computation, 2006, 18, 2256-2281.	2.2	84
113	Empirical mode decomposition: a method for analyzing neural data. Neurocomputing, 2005, 65-66, 801-807.	5.9	104
114	Empirical mode decomposition of field potentials from macaque V4 in visual spatial attention. Biological Cybernetics, 2005, 92, 380-392.	1.3	73
115	Neuronal Coherence as a Mechanism of Effective Corticospinal Interaction. Science, 2005, 308, 111-113.	12.6	460
116	A mechanism for cognitive dynamics: neuronal communication through neuronal coherence. Trends in Cognitive Sciences, 2005, 9, 474-480.	7.8	3,545
117	Selective Visual Attention Modulates Oscillatory Neuronal Synchronization. , 2005, , 520-525.		3
118	Reduced BOLD response to periodic visual stimulation. NeuroImage, 2004, 21, 236-243.	4.2	43
119	Temporal dynamics of attention-modulated neuronal synchronization in macaque V4. Neurocomputing, 2003, 52-54, 481-487.	5.9	15
120	Is synchronized neuronal gamma activity relevant for selective attention?. Brain Research Reviews, 2003, 42, 265-272.	9.0	228
121	When neurons form memories. Trends in Neurosciences, 2003, 26, 123-124.	8.6	36
122	Ocular dominance in extrastriate cortex of strabismic amblyopic cats. Vision Research, 2002, 42, 29-39.	1.4	55
123	Response: The birth of a memory. Trends in Neurosciences, 2002, 25, 281-282.	8.6	7
124	Oscillatory Neuronal Synchronization in Primary Visual Cortex as a Correlate of Stimulus Selection. Journal of Neuroscience, 2002, 22, 3739-3754.	3.6	273
125	Modulation of Oscillatory Neuronal Synchronization by Selective Visual Attention. Science, 2001, 291, 1560-1563.	12.6	2,496
126	Conditions of perceptual selection and suppression during interocular rivalry in strabismic and normal cats. Vision Research, 2001, 41, 771-783.	1.4	12

#	Article	IF	Citations
127	Rapid feature selective neuronal synchronization through correlated latency shifting. Nature Neuroscience, 2001, 4, 194-200.	14.8	309
128	Dynamic predictions: Oscillations and synchrony in topâ€“down processing. Nature Reviews Neuroscience, 2001, 2, 704-716.	10.2	3,053
129	Temporal Binding, Binocular Rivalry, and Consciousness. Consciousness and Cognition, 1999, 8, 128-151.	1.5	411
130	Does Time Help to Understand Consciousness?. Consciousness and Cognition, 1999, 8, 260-268.	1.5	13
131	Synchronization of oscillatory responses in visual cortex correlates with perception in interocular rivalry. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 12699-12704.	7.1	449
132	Precise spike synchronization in the gamma band increases information gain in awake monkey V1. Frontiers in Systems Neuroscience, 0, 3, .	2.5	0
133	Improved (I)CA-noise elimination of electrophysiological data using band-pass filtered components. Frontiers in Systems Neuroscience, 0, 3, .	2.5	0
134	252-site subdural LFP recordings in monkey reveal large-scale effects of selection attention.. Frontiers in Neuroscience, 0, 4, .	2.8	0
135	Brain-wide synchronization networks subserve attention. Frontiers in Human Neuroscience, 0, 5, .	2.0	0
136	Stimulus-Specific Plasticity of Macaque V1 Spike Rates and Gamma. SSRN Electronic Journal, 0, , .	0.4	1