

Emery N Brown

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134
papers

10,122
citations

47
h-index

100
g-index

158
ext. papers

12,831
ext. citations

6.9
avg, IF

6.38
L-index

#	Paper	IF	Citations
134	Sensitivity of the human circadian pacemaker to nocturnal light: melatonin phase resetting and suppression. <i>Journal of Physiology</i> , 2000 , 526 Pt 3, 695-702	3.9	780
133	General anesthesia, sleep, and coma. <i>New England Journal of Medicine</i> , 2010 , 363, 2638-50	59.2	721
132	A point process framework for relating neural spiking activity to spiking history, neural ensemble, and extrinsic covariate effects. <i>Journal of Neurophysiology</i> , 2005 , 93, 1074-89	3.2	702
131	Multiple neural spike train data analysis: state-of-the-art and future challenges. <i>Nature Neuroscience</i> , 2004 , 7, 456-61	25.5	597
130	Electroencephalogram signatures of loss and recovery of consciousness from propofol. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, E1142-51	11.5	444
129	A statistical paradigm for neural spike train decoding applied to position prediction from ensemble firing patterns of rat hippocampal place cells. <i>Journal of Neuroscience</i> , 1998 , 18, 7411-25	6.6	397
128	The time-rescaling theorem and its application to neural spike train data analysis. <i>Neural Computation</i> , 2002 , 14, 325-46	2.9	363
127	Clinical Electroencephalography for Anesthesiologists: Part I: Background and Basic Signatures. <i>Anesthesiology</i> , 2015 , 123, 937-60	4.3	334
126	General anesthesia and altered states of arousal: a systems neuroscience analysis. <i>Annual Review of Neuroscience</i> , 2011 , 34, 601-28	17	298
125	Rapid fragmentation of neuronal networks at the onset of propofol-induced unconsciousness. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, E3377-86	11.5	278
124	Thalamocortical model for a propofol-induced alpha-rhythm associated with loss of consciousness. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 22665-70	11.5	242
123	A point-process model of human heartbeat intervals: new definitions of heart rate and heart rate variability. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2005 , 288, H424-35	5.2	186
122	Multi-sensory Gamma Stimulation Ameliorates Alzheimer's-Associated Pathology and Improves Cognition. <i>Cell</i> , 2019 , 177, 256-271.e22	56.2	181
121	State-dependent architecture of thalamic reticular subnetworks. <i>Cell</i> , 2014 , 158, 808-821	56.2	174
120	Tracking brain states under general anesthesia by using global coherence analysis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 8832-7	11.5	168
119	Optogenetic activation of cholinergic neurons in the PPT or LDT induces REM sleep. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 584-9	11.5	167
118	A review of multitaper spectral analysis. <i>IEEE Transactions on Biomedical Engineering</i> , 2014 , 61, 1555-64	5	145

117	Effects of sevoflurane and propofol on frontal electroencephalogram power and coherence. <i>Anesthesiology</i> , 2014 , 121, 990-8	4.3	142
116	Multimodal General Anesthesia: Theory and Practice. <i>Anesthesia and Analgesia</i> , 2018 , 127, 1246-1258	3.9	134
115	Methylphenidate actively induces emergence from general anesthesia. <i>Anesthesiology</i> , 2011 , 115, 791-803	4.3	127
114	Optogenetic activation of dopamine neurons in the ventral tegmental area induces reanimation from general anesthesia. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 12826-12831	11.5	124
113	The BRAIN Initiative: developing technology to catalyse neuroscience discovery. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2015 , 370,	5.8	119
112	Potential network mechanisms mediating electroencephalographic beta rhythm changes during propofol-induced paradoxical excitation. <i>Journal of Neuroscience</i> , 2008 , 28, 13488-504	6.6	118
111	Corticoamygdala Transfer of Socially Derived Information Gates Observational Learning. <i>Cell</i> , 2018 , 173, 1329-1342.e18	56.2	117
110	The parathyroid hormone circadian rhythm is truly endogenous--a general clinical research center study. <i>Journal of Clinical Endocrinology and Metabolism</i> , 1997 , 82, 281-6	5.6	106
109	Thalamocortical mechanisms for the anteriorization of δ rhythms during propofol-induced unconsciousness. <i>Journal of Neuroscience</i> , 2013 , 33, 11070-5	6.6	105
108	Electrical stimulation of the ventral tegmental area induces reanimation from general anesthesia. <i>Anesthesiology</i> , 2014 , 121, 311-9	4.3	93
107	Electroencephalogram signatures of ketamine anesthesia-induced unconsciousness. <i>Clinical Neurophysiology</i> , 2016 , 127, 2414-22	4.3	88
106	Electrophysiological Source Imaging: A Noninvasive Window to Brain Dynamics. <i>Annual Review of Biomedical Engineering</i> , 2018 , 20, 171-196	12	87
105	Neural oscillations demonstrate that general anesthesia and sedative states are neurophysiologically distinct from sleep. <i>Current Opinion in Neurobiology</i> , 2017 , 44, 178-185	7.6	85
104	Disruption of thalamic functional connectivity is a neural correlate of dexmedetomidine-induced unconsciousness. <i>ELife</i> , 2014 , 3, e04499	8.9	85
103	Active emergence from propofol general anesthesia is induced by methylphenidate. <i>Anesthesiology</i> , 2012 , 116, 998-1005	4.3	85
102	Analysis of heartbeat dynamics by point process adaptive filtering. <i>IEEE Transactions on Biomedical Engineering</i> , 2006 , 53, 4-12	5	84
101	A transition in brain state during propofol-induced unconsciousness. <i>Journal of Neuroscience</i> , 2014 , 34, 839-45	6.6	82
100	Analysis of between-trial and within-trial neural spiking dynamics. <i>Journal of Neurophysiology</i> , 2008 , 99, 2672-93	3.2	81

99	Rapid and Sustained Reductions in Current Suicidal Ideation Following Repeated Doses of Intravenous Ketamine: Secondary Analysis of an Open-Label Study. <i>Journal of Clinical Psychiatry</i> , 2016 , 77, e719-25	4.6	81
98	Activation of D1 dopamine receptors induces emergence from isoflurane general anesthesia. <i>Anesthesiology</i> , 2013 , 118, 30-9	4.3	77
97	What Is Statistics?. <i>American Statistician</i> , 2009 , 63, 105-110	5	74
96	Thalamocortical synchronization during induction and emergence from propofol-induced unconsciousness. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E6660-E6668	11.5	72
95	Age-dependent electroencephalogram (EEG) patterns during sevoflurane general anesthesia in infants. <i>ELife</i> , 2015 , 4, e06513	8.9	71
94	Modeling the dynamical effects of anesthesia on brain circuits. <i>Current Opinion in Neurobiology</i> , 2014 , 25, 116-22	7.6	70
93	Repeat-dose ketamine augmentation for treatment-resistant depression with chronic suicidal ideation: A randomized, double blind, placebo controlled trial. <i>Journal of Affective Disorders</i> , 2019 , 243, 516-524	6.6	68
92	Ketamine augmentation for outpatients with treatment-resistant depression: Preliminary evidence for two-step intravenous dose escalation. <i>Australian and New Zealand Journal of Psychiatry</i> , 2017 , 51, 55-64	2.6	63
91	Analysis of Neural Data. <i>Springer Series in Statistics</i> , 2014 ,	0.3	55
90	Dexmedetomidine Disrupts the Local and Global Efficiencies of Large-scale Brain Networks. <i>Anesthesiology</i> , 2017 , 126, 419-430	4.3	51
89	Spatiotemporal Dynamics of Dexmedetomidine-Induced Electroencephalogram Oscillations. <i>PLoS ONE</i> , 2016 , 11, e0163431	3.7	48
88	Convergence and Stability of a Class of Iteratively Re-weighted Least Squares Algorithms for Sparse Signal Recovery in the Presence of Noise. <i>IEEE Transactions on Signal Processing</i> , 2013 , 62, 183-193	4.8	47
87	Dexmedetomidine promotes biomimetic non-rapid eye movement stage 3 sleep in humans: A pilot study. <i>Clinical Neurophysiology</i> , 2018 , 129, 69-78	4.3	46
86	Burst suppression probability algorithms: state-space methods for tracking EEG burst suppression. <i>Journal of Neural Engineering</i> , 2013 , 10, 056017	5	46
85	Pharmacological Modulation of Noradrenergic Arousal Circuitry Disrupts Functional Connectivity of the Locus Coeruleus in Humans. <i>Journal of Neuroscience</i> , 2017 , 37, 6938-6945	6.6	44
84	Dextroamphetamine (but Not Atomoxetine) Induces Reanimation from General Anesthesia: Implications for the Roles of Dopamine and Norepinephrine in Active Emergence. <i>PLoS ONE</i> , 2015 , 10, e0131914	3.7	44
83	The aging brain and anesthesia. <i>Current Opinion in Anaesthesiology</i> , 2013 , 26, 414-9	2.9	41
82	Toward an In Vivo Neuroimaging Template of Human Brainstem Nuclei of the Ascending Arousal, Autonomic, and Motor Systems. <i>Brain Connectivity</i> , 2015 , 5, 597-607	2.7	39

81	Nitrous oxide-induced slow and delta oscillations. <i>Clinical Neurophysiology</i> , 2016 , 127, 556-564	4.3	37
80	Propofol and sevoflurane induce distinct burst suppression patterns in rats. <i>Frontiers in Systems Neuroscience</i> , 2014 , 8, 237	3.5	36
79	A statistical model of the human core-temperature circadian rhythm. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2000 , 279, E669-83	6	36
78	Dynamics of Propofol-Induced Loss of Consciousness Across Primate Neocortex. <i>Journal of Neuroscience</i> , 2016 , 36, 7718-26	6.6	34
77	Deconvolution of serum cortisol levels by using compressed sensing. <i>PLoS ONE</i> , 2014 , 9, e85204	3.7	34
76	Analysis and design of behavioral experiments to characterize population learning. <i>Journal of Neurophysiology</i> , 2005 , 93, 1776-92	3.2	34
75	The Role of Glutamatergic and Dopaminergic Neurons in the Periaqueductal Gray/Dorsal Raphe: Separating Analgesia and Anxiety. <i>ENeuro</i> , 2019 , 6,	3.9	33
74	In vivo functional connectome of human brainstem nuclei of the ascending arousal, autonomic, and motor systems by high spatial resolution 7-Tesla fMRI. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2016 , 29, 451-62	2.8	33
73	Bayesian decoding of neural spike trains. <i>Annals of the Institute of Statistical Mathematics</i> , 2010 , 62, 37-59		31
72	Electrical stimulation of the parabrachial nucleus induces reanimation from isoflurane general anesthesia. <i>Behavioural Brain Research</i> , 2016 , 306, 20-5	3.4	30
71	GABAA circuit mechanisms are associated with ether anesthesia-induced unconsciousness. <i>Clinical Neurophysiology</i> , 2016 , 127, 2472-81	4.3	30
70	A Subspace Pursuit-based Iterative Greedy Hierarchical solution to the neuromagnetic inverse problem. <i>NeuroImage</i> , 2014 , 87, 427-43	7.9	29
69	Measuring the signal-to-noise ratio of a neuron. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 7141-6	11.5	27
68	Discrete- and continuous-time probabilistic models and algorithms for inferring neuronal UP and DOWN states. <i>Neural Computation</i> , 2009 , 21, 1797-862	2.9	27
67	Characterization of fear conditioning and fear extinction by analysis of electrodermal activity. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2015 , 2015, 7814-8	0.9	26
66	Thalamocortical control of propofol phase-amplitude coupling. <i>PLoS Computational Biology</i> , 2017 , 13, e1005879	5	23
65	Multi-neuron intracellular recording in vivo via interacting autopatching robots. <i>ELife</i> , 2018 , 7,	8.9	23
64	Reference-free removal of EEG-fMRI ballistocardiogram artifacts with harmonic regression. <i>NeuroImage</i> , 2016 , 128, 398-412	7.9	22

63	Controversy in statistical analysis of functional magnetic resonance imaging data. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E3368-E3369	11.5	22
62	Disruption of the ascending arousal network in acute traumatic disorders of consciousness. <i>Neurology</i> , 2019 , 93, e1281-e1287	6.5	22
61	Lack of Responsiveness during the Onset and Offset of Sevoflurane Anesthesia Is Associated with Decreased Awake-Alpha Oscillation Power. <i>Frontiers in Systems Neuroscience</i> , 2017 , 11, 38	3.5	22
60	Cerebral Microvascular Injury in Severe COVID-19 2020 ,		22
59	A probabilistic template of human mesopontine tegmental nuclei from in vivo 7T MRI. <i>NeuroImage</i> , 2018 , 170, 222-230	7.9	21
58	The human burst suppression electroencephalogram of deep hypothermia. <i>Clinical Neurophysiology</i> , 2015 , 126, 1901-1914	4.3	20
57	State-space multitaper time-frequency analysis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, E5-E14	11.5	20
56	A Pharmacokinetic Model of a Tissue Implantable Cortisol Sensor. <i>Advanced Healthcare Materials</i> , 2016 , 5, 3004-3015	10.1	20
55	Robust spectrotemporal decomposition by iteratively reweighted least squares. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, E5336-45	11.5	20
54	Delta oscillations phase limit neural activity during sevoflurane anesthesia. <i>Communications Biology</i> , 2019 , 2, 415	6.7	19
53	Sevoflurane Induces Coherent Slow-Delta Oscillations in Rats. <i>Frontiers in Neural Circuits</i> , 2017 , 11, 36	3.5	18
52	Low Frontal Alpha Power Is Associated With the Propensity for Burst Suppression: An Electroencephalogram Phenotype for a "Vulnerable Brain". <i>Anesthesia and Analgesia</i> , 2020 , 131, 1529-1539	3.9	18
51	Accurate, fast, data efficient and interpretable glaucoma diagnosis with automated spatial analysis of the whole cup to disc profile. <i>PLoS ONE</i> , 2019 , 14, e0209409	3.7	16
50	An optimization formulation for characterization of pulsatile cortisol secretion. <i>Frontiers in Neuroscience</i> , 2015 , 9, 228	5.1	16
49	Model-based physiological noise removal in fast fMRI. <i>NeuroImage</i> , 2020 , 205, 116231	7.9	16
48	A parallel point-process filter for estimation of goal-directed movements from neural signals 2010 ,		14
47	Minimizing ICU Neurological Dysfunction with Dexmedetomidine-induced Sleep (MINDDS): protocol for a randomised, double-blind, parallel-arm, placebo-controlled trial. <i>BMJ Open</i> , 2018 , 8, e020316	3.6	13
46	A transient cortical state with sleep-like sensory responses precedes emergence from general anesthesia in humans. <i>ELife</i> , 2018 , 7,	8.9	13

45	Algorithms for the analysis of ensemble neural spiking activity using simultaneous-event multivariate point-process models. <i>Frontiers in Computational Neuroscience</i> , 2014 , 8, 6	3.5	12
44	Statistical modeling of behavioral dynamics during propofol-induced loss of consciousness. <i>Journal of Neuroscience Methods</i> , 2014 , 227, 65-74	3	11
43	Neural effects of propofol-induced unconsciousness and its reversal using thalamic stimulation. <i>ELife</i> , 2021 , 10,	8.9	11
42	Quantitative Electroencephalogram Trends Predict Recovery in Hypoxic-Ischemic Encephalopathy. <i>Critical Care Medicine</i> , 2019 , 47, 1416-1423	1.4	11
41	Application of dynamic point process models to cardiovascular control. <i>BioSystems</i> , 2008 , 93, 120-5	1.9	10
40	A Point Process Characterization Of Electrodermal Activity. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2018 , 2018, 37-40	0.9	10
39	A PK-PD model of ketamine-induced high-frequency oscillations. <i>Journal of Neural Engineering</i> , 2015 , 12, 056006	5	9
38	A Systematic Method for Preprocessing and Analyzing Electrodermal Activity. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2019 , 2019, 6902-6905	0.9	9
37	Instantaneous monitoring of heart beat dynamics during anesthesia and sedation. <i>Journal of Computational Surgery</i> , 2014 , 1,		8
36	State-space analysis on time-varying correlations in parallel spike sequences 2009 ,		8
35	Framework for advancing rigorous research. <i>ELife</i> , 2020 , 9,	8.9	8
34	Mechanisms Underlying Disorders of Consciousness: Bridging Gaps to Move Toward an Integrated Translational Science. <i>Neurocritical Care</i> , 2021 , 35, 37-54	3.3	7
33	Age-Dependent Changes in the Propofol-Induced Electroencephalogram in Children With Autism Spectrum Disorder. <i>Frontiers in Systems Neuroscience</i> , 2018 , 12, 23	3.5	5
32	Professional actors demonstrate variability, not stereotypical expressions, when portraying emotional states in photographs. <i>Nature Communications</i> , 2021 , 12, 5037	17.4	5
31	Influence of midazolam premedication on intraoperative EEG signatures in elderly patients. <i>Clinical Neurophysiology</i> , 2019 , 130, 1673-1681	4.3	4
30	Adaptation to elastic loads and BMI robot controls during rat locomotion examined with point-process GLMs. <i>Frontiers in Systems Neuroscience</i> , 2015 , 9, 62	3.5	4
29	Robust time-varying multivariate coherence estimation: application to electroencephalogram recordings during general anesthesia. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2011 , 2011, 4725-8	0.9	4
28	Reply to Grace: Role of cholinergic neurons in rapid eye movement (REM) sleep control. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, E3756	11.5	3

27	Sensory gamma frequency stimulation in cognitively healthy and AD individuals safely induces highly coordinated 40 hz neural oscillation: A preliminary study of non-invasive sensory stimulation for treating Alzheimer's disease. <i>Alzheimer's and Dementia</i> , 2020 , 16, e041146	1.2	3
26	Point process temporal structure characterizes electrodermal activity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 26422-26428	11.5	3
25	State-Space Global Coherence to Estimate the Spatio-Temporal Dynamics of the Coordinated Brain Activity. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2019 , 2019, 5794-5798	0.9	2
24	A Multitaper Frequency-Domain Bootstrap Method. <i>IEEE Signal Processing Letters</i> , 2018 , 25, 1805-1809	3.2	2
23	A Smoother State Space Multitaper Spectrogram. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2018 , 2018, 33-36	0.9	2
22	A hidden Markov model reliably characterizes ketamine-induced spectral dynamics in macaque local field potentials and human electroencephalograms. <i>PLoS Computational Biology</i> , 2021 , 17, e1009280	5.0	2
21	A Model-Based Framework for Assessing the Physiologic Structure of Electrodermal Activity. <i>IEEE Transactions on Biomedical Engineering</i> , 2021 , 68, 2833-2845	5	2
20	Left-Lateralized Contributions of Saccades to Cortical Activity During a One-Back Word Recognition Task. <i>Frontiers in Neural Circuits</i> , 2018 , 12, 38	3.5	1
19	Biophysical Modeling of Alpha Rhythms During Halothane-Induced Unconsciousness. <i>International IEEE/EMBS Conference on Neural Engineering: [proceedings]</i> , 2013 , 1104-1107	1.3	1
18	The relative importance in the auditory nerve spiking of a neuron's internal dynamics versus an external input stimulus 2011 ,		1
17	The effect of different spectro-temporal representations of an input auditory stimulus on the fitting of a point process model of auditory neurons 2012 ,		1
16	A unified point process framework for assessing heartbeat dynamics and cardiovascular control 2009 ,		1
15	Adaptive State-Space Multitaper Spectral Estimation. <i>IEEE Signal Processing Letters</i> , 2022 , 29, 523-527	3.2	1
14	Constructing a control-ready model of EEG signal during general anesthesia in humans. <i>IFAC-PapersOnLine</i> , 2020 , 53, 15870-15876	0.7	1
13	Perioperative Multimodal General Anesthesia Focusing on Specific CNS Targets in Patients Undergoing Cardiac Surgeries: The Pathfinder Feasibility Trial. <i>Frontiers in Medicine</i> , 2021 , 8, 719512	4.9	1
12	Implantable brain-computer interface for neuroprosthetic-enabled volitional hand grasp restoration in spinal cord injury. <i>Brain Communications</i> , 2021 , 3, fcab248	4.5	1
11	Electroencephalographic markers of brain development during sevoflurane anesthesia in children aged 0 to 3 years old		1
10	Machine learning of EEG spectra classifies unconsciousness during GABAergic anesthesia. <i>PLoS ONE</i> , 2021 , 16, e0246165	3.7	1

9	Robust point-process Granger causality analysis in presence of exogenous temporal modulations and trial-by-trial variability in spike trains. <i>PLoS Computational Biology</i> , 2021 , 17, e1007675	5	1
8	Quantitative assessment of the relationship between behavioral and autonomic dynamics during propofol-induced unconsciousness. <i>PLoS ONE</i> , 2021 , 16, e0254053	3.7	1
7	Continuous action deep reinforcement learning for propofol dosing during general anesthesia.. <i>Artificial Intelligence in Medicine</i> , 2022 , 123, 102227	7.4	0
6	Elementary integrate-and-fire process underlies pulse amplitudes in Electrodermal activity. <i>PLoS Computational Biology</i> , 2021 , 17, e1009099	5	0
5	Perioperative Electroencephalogram Spectral Dynamics Related to Postoperative Delirium in Older Patients. <i>Anesthesia and Analgesia</i> , 2021 , 133, 1598-1607	3.9	0
4	Propofol Anesthesia Alters Cortical Traveling Waves.. <i>Journal of Cognitive Neuroscience</i> , 2022 , 1-13	3.1	0
3	Special Issue on Statistical Analysis of Neuronal Data <i>Statistics in Medicine</i> , 2007 , 26, 3827-3829	2.3	
2	In Response. <i>Anesthesia and Analgesia</i> , 2019 , 128, e131	3.9	
1	Neurologic Examination for Anesthesiologists: Reply. <i>Anesthesiology</i> , 2019 , 131, 946	4.3	