

Catherine A Schevon

List of Publications by Year in descending order

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86
papers

6,997
citations

117625

34
h-index

69250

77
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110
all docs

110
docs citations

110
times ranked

6258
citing authors

#	ARTICLE	IF	CITATIONS
1	Optimization by Simulated Annealing: An Experimental Evaluation; Part I, Graph Partitioning. Operations Research, 1989, 37, 865-892.	1.9	1,099
2	Mechanisms Underlying Selective Neuronal Tracking of Attended Speech at a "Cocktail Party". Neuron, 2013, 77, 980-991.	8.1	732
3	Optimization by Simulated Annealing: An Experimental Evaluation; Part II, Graph Coloring and Number Partitioning. Operations Research, 1991, 39, 378-406.	1.9	672
4	Synchronization and desynchronization in epilepsy: controversies and hypotheses. Journal of Physiology, 2013, 591, 787-797.	2.9	450
5	Evidence of an inhibitory restraint of seizure activity in humans. Nature Communications, 2012, 3, 1060.	12.8	365
6	Tuning of the Human Neocortex to the Temporal Dynamics of Attended Events. Journal of Neuroscience, 2011, 31, 3176-3185.	3.6	234
7	Ictal high frequency oscillations distinguish two types of seizure territories in humans. Brain, 2013, 136, 3796-3808.	7.6	188
8	Impaired consciousness in temporal lobe seizures: role of cortical slow activity. Brain, 2010, 133, 3764-3777.	7.6	181
9	Cortical abnormalities in epilepsy revealed by local EEG synchrony. NeuroImage, 2007, 35, 140-148.	4.2	174
10	Microphysiology of Epileptiform Activity in Human Neocortex. Journal of Clinical Neurophysiology, 2008, 25, 321-330.	1.7	149
11	Update on the mechanisms and roles of high-frequency oscillations in seizures and epileptic disorders. Epilepsia, 2017, 58, 1330-1339.	5.1	145
12	Spatial characterization of interictal high frequency oscillations in epileptic neocortex. Brain, 2009, 132, 3047-3059.	7.6	134
13	Lateralized hippocampal oscillations underlie distinct aspects of human spatial memory and navigation. Nature Communications, 2018, 9, 2423.	12.8	132
14	Functionally distinct high and low theta oscillations in the human hippocampus. Nature Communications, 2020, 11, 2469.	12.8	126
15	The ictal wavefront is the spatiotemporal source of discharges during spontaneous human seizures. Nature Communications, 2016, 7, 11098.	12.8	124
16	How inhibition influences seizure propagation. Neuropharmacology, 2013, 69, 45-54.	4.1	105
17	Pediatric Language Mapping: Sensitivity of Neurostimulation and Wada Testing in Epilepsy Surgery. Epilepsia, 2007, 48, 539-545.	5.1	102
18	Seizure localization using ictal phase-locked high gamma. Neurology, 2015, 84, 2320-2328.	1.1	95

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19	Somatic <i>SLC35A2</i> variants in the brain are associated with intractable neocortical epilepsy. <i>Annals of Neurology</i> , 2018, 83, 1133-1146.	5.3	95
20	Hierarchical Encoding of Attended Auditory Objects in Multi-talker Speech Perception. <i>Neuron</i> , 2019, 104, 1195-1209.e3.	8.1	90
21	Single unit action potentials in humans and the effect of seizure activity. <i>Brain</i> , 2015, 138, 2891-2906.	7.6	81
22	Widespread temporal coding of cognitive control in the human prefrontal cortex. <i>Nature Neuroscience</i> , 2019, 22, 1883-1891.	14.8	77
23	Role of inhibitory control in modulating focal seizure spread. <i>Brain</i> , 2018, 141, 2083-2097.	7.6	75
24	Laser ablation is effective for temporal lobe epilepsy with and without mesial temporal sclerosis if hippocampal seizure onsets are localized by stereoelectroencephalography. <i>Epilepsia</i> , 2018, 59, 595-606.	5.1	72
25	Exemplar Selectivity Reflects Perceptual Similarities in the Human Fusiform Cortex. <i>Cerebral Cortex</i> , 2014, 24, 1879-1893.	2.9	67
26	A model for focal seizure onset, propagation, evolution, and progression. <i>ELife</i> , 2020, 9, .	6.0	62
27	Glioma-Induced Alterations in Neuronal Activity and Neurovascular Coupling during Disease Progression. <i>Cell Reports</i> , 2020, 31, 107500.	6.4	61
28	Star Unfolding of a Polytope with Applications. <i>SIAM Journal on Computing</i> , 1997, 26, 1689-1713.	1.0	59
29	Extraoperative neurostimulation mapping: Results from an international survey of epilepsy surgery programs. <i>Epilepsia</i> , 2014, 55, 933-939.	5.1	58
30	Propagation of Epileptiform Activity on a Submillimeter Scale. <i>Journal of Clinical Neurophysiology</i> , 2010, 27, 406-411.	1.7	56
31	Toward a Mechanistic Understanding of Epileptic Networks. <i>Current Neurology and Neuroscience Reports</i> , 2016, 16, 97.	4.2	53
32	Multiscale recordings reveal the dynamic spatial structure of human seizures. <i>Neurobiology of Disease</i> , 2019, 127, 303-311.	4.4	50
33	INITIAL SURGICAL EXPERIENCE WITH A DENSE CORTICAL MICROARRAY IN EPILEPTIC PATIENTS UNDERGOING CRANIOTOMY FOR SUBDURAL ELECTRODE IMPLANTATION. <i>Neurosurgery</i> , 2009, 64, 540-545.	1.1	49
34	Ignition's glow: Ultra-fast spread of global cortical activity accompanying local "ignitions" in visual cortex during conscious visual perception. <i>Consciousness and Cognition</i> , 2015, 35, 206-224.	1.5	47
35	Cross-scale effects of neural interactions during human neocortical seizure activity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 10761-10766.	7.1	45
36	Modeling Focal Epileptic Activity in the Wilson-Cowan Model with Depolarization Block. <i>Journal of Mathematical Neuroscience</i> , 2015, 5, 7.	2.4	43

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37	Cyclic electrographic seizures in critically ill patients. <i>Epilepsia</i> , 2008, 49, 281-287.	5.1	40
38	Single-Neuron Representations of Spatial Targets in Humans. <i>Current Biology</i> , 2020, 30, 245-253.e4.	3.9	37
39	Multiscale temporal integration organizes hierarchical computation in human auditory cortex. <i>Nature Human Behaviour</i> , 2022, 6, 455-469.	12.0	36
40	Human interictal epileptiform discharges are bidirectional traveling waves echoing ictal discharges. <i>ELife</i> , 2022, 11, .	6.0	31
41	Multiscale Aspects of Generation of High-Gamma Activity during Seizures in Human Neocortex. <i>ENeuro</i> , 2016, 3, ENEURO.0141-15.2016.	1.9	30
42	Memory retrieval modulates spatial tuning of single neurons in the human entorhinal cortex. <i>Nature Neuroscience</i> , 2019, 22, 2078-2086.	14.8	28
43	Postictal clinical and electroencephalographic activity following intracranially recorded bilateral tonic-clonic seizures. <i>Epilepsia</i> , 2019, 60, 74-84.	5.1	28
44	Multivariate regression methods for estimating velocity of ictal discharges from human microelectrode recordings. <i>Journal of Neural Engineering</i> , 2017, 14, 044001.	3.5	24
45	Role of paroxysmal depolarization in focal seizure activity. <i>Journal of Neurophysiology</i> , 2019, 122, 1861-1873.	1.8	22
46	All-cause mortality and SUDEP in a surgical epilepsy population. <i>Epilepsy and Behavior</i> , 2020, 108, 107093.	1.7	22
47	Neuronal Firing and Waveform Alterations through Ictal Recruitment in Humans. <i>Journal of Neuroscience</i> , 2021, 41, 766-779.	3.6	21
48	Characteristics and clinical impact of stimulation-evoked seizures during extraoperative cortical mapping. <i>Epilepsy and Behavior</i> , 2014, 34, 6-8.	1.7	20
49	Features and timing of the response of single neurons to novelty in the substantia nigra. <i>Brain Research</i> , 2014, 1542, 79-84.	2.2	19
50	Wheels Within Wheels: Theory and Practice of Epileptic Networks. <i>Epilepsy Currents</i> , 2021, 21, 243-247.	0.8	19
51	Dual mechanisms of ictal high frequency oscillations in human rhythmic onset seizures. <i>Scientific Reports</i> , 2020, 10, 19166.	3.3	18
52	Methodological standards and functional correlates of depth in vivo electrophysiological recordings in control rodents. A TASK WG 3 report of the AES / ILAE Translational Task Force of the ILAE. <i>Epilepsia</i> , 2017, 58, 28-39.	5.1	17
53	Controversies on the network theory of epilepsy: Debates held during the ICTALS 2019 conference. <i>Seizure: the Journal of the British Epilepsy Association</i> , 2020, 78, 78-85.	2.0	17
54	Intracranial recordings reveal transient response dynamics during information maintenance in human cerebral cortex. <i>Human Brain Mapping</i> , 2015, 36, 3988-4003.	3.6	15

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55	Functional differences among stimulation-identified cortical naming sites in the temporal region. <i>Epilepsy and Behavior</i> , 2016, 60, 124-129.	1.7	15
56	Field effects and ictal synchronization: insights from in homine observations. <i>Frontiers in Human Neuroscience</i> , 2013, 7, 828.	2.0	14
57	Extraoperative Functional Mapping and Staged Resection of Supratentorial Tumors near Eloquent Cortex in Children. <i>Pediatric Neurosurgery</i> , 2009, 45, 175-180.	0.7	12
58	Magnetoencephalography in epilepsy: tailoring interpretation and making inferences. <i>Current Neurology and Neuroscience Reports</i> , 2006, 6, 327-331.	4.2	10
59	Burst suppression uncovers rapid widespread alterations in network excitability caused by an acute seizure focus. <i>Brain</i> , 2019, 142, 3045-3058.	7.6	10
60	Alpha and broadband high-frequency activity track task dynamics and predict performance in controlled decision-making. <i>Psychophysiology</i> , 2022, 59, e13901.	2.4	10
61	Ex vivo multi-electrode analysis reveals spatiotemporal dynamics of ictal behavior at the infiltrated margin of glioma. <i>Neurobiology of Disease</i> , 2020, 134, 104676.	4.4	9
62	Inadequacy of Standard Screen Resolution for Localization of Seizures Recorded from Intracranial Electrodes. <i>Epilepsia</i> , 2004, 45, 1453-1458.	5.1	8
63	Risk of seizures induced by intracranial research stimulation: analysis of 770 stimulation sessions. <i>Journal of Neural Engineering</i> , 2019, 16, 066039.	3.5	8
64	The Relationship Between Ictal Multi-Unit Activity and the Electrocorticogram. <i>International Journal of Neural Systems</i> , 2018, 28, 1850027.	5.2	7
65	Stimulating Solutions for Intractable Epilepsy. <i>Epilepsy Currents</i> , 2021, , 153575972110124.	0.8	6
66	The role of computational modelling in seizure localization. <i>Brain</i> , 2017, 140, 254-256.	7.6	5
67	Highlights From the Annual Meeting of the American Epilepsy Society 2018. <i>Epilepsy Currents</i> , 2019, 19, 152-158.	0.8	5
68	Seizure Activity Across Scales From Neuronal Population Firing to Clonic Motor Semiology. <i>Journal of Clinical Neurophysiology</i> , 2020, 37, 462-464.	1.7	5
69	Tracking Multisite Seizure Propagation Using Ictal High-Gamma Activity. <i>Journal of Clinical Neurophysiology</i> , 2022, 39, 592-601.	1.7	5
70	Single unit analysis and wide-field imaging reveal alterations in excitatory and inhibitory neurons in glioma. <i>Brain</i> , 2022, 145, 3666-3680.	7.6	5
71	Postictal clinical and <scp>EEG</scp> activity following intracranially recorded bilateral tonic-clonic seizures. <i>Epilepsia</i> , 2019, 60, 1746-1747.	5.1	4
72	On the development of closed convex curves on 3-polytopes. <i>Journal of Geometry</i> , 1989, 35, 152-157.	0.4	3

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73	Patient-Specific Seizure Detection from Intra-cranial EEG Using High Dimensional Clustering. , 2010, , .		3
74	Neuronal activity in human anterior cingulate cortex modulates with internal cognitive state during multi-source interference task. , 2017, 2017, 962-965.		3
75	Teaching NeuroImages: Acute stroke captured on EEG in the ICU. Neurology, 2019, 92, e626-e627.	1.1	3
76	Magnetoencephalography is not a substitute for intracranial electroencephalography. Annals of Neurology, 2006, 60, 270-270.	5.3	2
77	Investigating the Function of Deep Cortical and Subcortical Structures Using Stereotactic Electroencephalography: Lessons from the Anterior Cingulate Cortex. Journal of Visualized Experiments, 2015, , .	0.3	2
78	Cortical naming sites and increasing age in adults with refractory epilepsy: More might be less. Epilepsia, 2019, 60, 1619-1626.	5.1	2
79	Epileptogenic Networks: Applying Network Analysis Techniques to Human Seizure Activity. Springer Series in Computational Neuroscience, 2015, , 293-312.	0.3	1
80	Highlights From AES2020, a Virtual American Epilepsy Society Experience. Epilepsy Currents, 2021, , 153575972110182.	0.8	1
81	Electrically stimulated auras as a potential biomarker of the epileptogenic zone. Epilepsy and Behavior, 2021, 122, 108116.	1.7	1
82	High-resolution Electroencephalography Provides New Insights into Epilepsy. US Neurology, 2008, 04, 44.	0.2	1
83	Pediatric Language Mapping: Sensitivity of Neurostimulation and Wada Testing in Epilepsy Surgery. Neurosurgery, 2006, 59, 480-481.	1.1	0
84	A case-study on learning from large-scale intracranial EEG data using multi-core machines and clusters. , 2011, , .		0
85	Commentary on: Corpus callosum low-frequency stimulation suppresses seizures in an acute rat model of focal cortical seizures. Epilepsia, 2019, 60, 1275-1276.	5.1	0
86	Temporal Context Invariance Reveals Neural Processing Timescales in Human Auditory Cortex. , 2019, , .		0