Kaspar Anton Schindler

List of Publications by Year
in descending order

126 papers	**4,581** citations
159358 **30** h-index	123241 **61** g-index
135 all docs	**135** docs citations
135 times ranked	**4291** citing authors

#	Article	IF	Citations
1	Synchronization and desynchronization in epilepsy: controversies and hypotheses. Journal of Physiology, 2013, 591, 787-797.	1.3	450
2	Nonrandomness, nonlinear dependence, and nonstationarity of electroencephalographic recordings from epilepsy patients. Physical Review E, 2012, 86, 046206.	0.8	297
3	Assessing seizure dynamics by analysing the correlation structure of multichannel intracranial EEG. Brain, 2006, 130, 65-77.	3.7	292
4	Evolving functional network properties and synchronizability during human epileptic seizures. Chaos, 2008, 18, 033119.	1.0	251
5	EEG in Creutzfeldt–Jakob disease. Clinical Neurophysiology, 2006, 117, 935-951.	0.7	234
6	Increasing synchronization may promote seizure termination: Evidence from status epilepticus. Clinical Neurophysiology, 2007, 118, 1955-1968.	0.7	144
7	Estimation of brain network ictogenicity predicts outcome from epilepsy surgery. Scientific Reports, 2016, 6, 29215.	1.6	134
8	All together now: Analogies between chimera state collapses and epileptic seizures. Scientific Reports, 2016, 6, 23000.	1.6	133
9	Intermittent spike–wave dynamics in a heterogeneous, spatially extended neural mass model. NeuroImage, 2011, 55, 920-932.	2.1	97
10	An optimal strategy for epilepsy surgery: Disruption of the rich-club?. PLoS Computational Biology, 2017, 13, e1005637.	1.5	82
11	Continuous vs Routine Electroencephalogram in Critically Ill Adults With Altered Consciousness and No Recent Seizure. JAMA Neurology, 2020, 77, 1225.	4.5	81
12	Application of a multivariate seizure detection and prediction method to non-invasive and intracranial long-term EEG recordings. Clinical Neurophysiology, 2008, 119, 197-211.	0.7	77
13	Self-organised transients in a neural mass model of epileptogenic tissue dynamics. NeuroImage, 2012, 59, 2644-2660.	2.1	74
14	Localization of Epileptogenic Zone on Pre-surgical Intracranial EEG Recordings: Toward a Validation of Quantitative Signal Analysis Approaches. Brain Topography, 2015, 28, 832-837.	0.8	58
15	Mesial Frontal Epilepsy and Ictal Body Turning Along the Horizontal Body Axis. Archives of Neurology, 2008, 65, 71-7.	4.9	55
16	One-shot Learning for iEEG Seizure Detection Using End-to-end Binary Operations: Local Binary Patterns with Hyperdimensional Computing. , 2018, , .		55
17	EEG analysis with simulated neuronal cell models helps to detect pre-seizure changes. Clinical Neurophysiology, 2002, 113, 604-614.	0.7	52
18	How generalised are secondarily "generalised" tonic clonic seizures?. Journal of Neurology, Neurosurgery and Psychiatry, 2007, 78, 993-996.	0.9	49

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19	Detecting Functional Hubs of Ictogenic Networks. Brain Topography, 2015, 28, 305-317.	0.8	49
20	Adverse Effect of Early Epileptic Seizures in Patients Receiving Endovascular Therapy for Acute Stroke. Stroke, 2012, 43, 1584-1590.	1.0	48
21	Forbidden ordinal patterns of periictal intracranial EEG indicate deterministic dynamics in human epileptic seizures. Epilepsia, 2011, 52, 1771-1780.	2.6	47
22	Neurology and psychiatry: waking up to opportunities of sleep. : State of the art and clinical/research priorities for the next decade. European Journal of Neurology, 2015, 22, 1337-1354.	1.7	46
23	Detection of regional blood perfusion changes in epileptic seizures with dynamic brain perfusion CTâ€"A pilot study. Epilepsy Research, 2006, 72, 102-110.	0.8	45
24	Hyperdimensional Computing With Local Binary Patterns: One-Shot Learning of Seizure Onset and Identification of Ictogenic Brain Regions Using Short-Time iEEG Recordings. IEEE Transactions on Biomedical Engineering, 2020, 67, 601-613.	2.5	45
25	A role for spindles in the onset of rapid eye movement sleep. Nature Communications, 2020, 11, 5247.	5.8	45
26	Hyperperfusion of anterior cingulate gyrus in a case of paroxysmal nocturnal dystonia. Neurology, 2001, 57, 917-920.	1.5	44
27	Resected Brain Tissue, Seizure Onset Zone and Quantitative EEG Measures: Towards Prediction of Post-Surgical Seizure Control. PLoS ONE, 2015, 10, e0141023.	1.1	43
28	Suppression of interictal spikes during phasic rapid eye movement sleep: a quantitative stereoâ€electroencephalography study. Journal of Sleep Research, 2017, 26, 606-613.	1.7	42
29	Asystole induced by electrical stimulation of the left cingulate gyrus. Epileptic Disorders, 2007, 9, 77-81.	0.7	42
30	Dynamic modulation of thetaâ€"gamma coupling during rapid eye movement sleep. Sleep, 2019, 42, .	0.6	39
31	Laelaps: An Energy-Efficient Seizure Detection Algorithm from Long-term Human iEEG Recordings without False Alarms. , 2019, , .		39
32	Analyzing spatio-temporal patterns of genuine cross-correlations. Journal of Neuroscience Methods, 2010, 191, 94-100.	1.3	38
33	Demographic, Clinical and Polysomnographic Characteristics of Childhood- and Adult-Onset Sleepwalking in Adults. European Neurology, 2017, 78, 307-311.	0.6	38
34	Chance and risk in epilepsy. Current Opinion in Neurology, 2020, 33, 163-172.	1.8	33
35	A Systems-Level Approach to Human Epileptic Seizures. Neuroinformatics, 2013, 11, 159-173.	1.5	32
36	Using simulated neuronal cell models for detection of epileptic seizures in foramen ovale and scalp EEG. Clinical Neurophysiology, 2001, 112, 1006-1017.	0.7	31

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37	Ictal time-irreversible intracranial EEG signals as markers of the epileptogenic zone. Clinical Neurophysiology, 2016, 127, 3051-3058.	0.7	30
38	Elevated Ictal Brain Network Ictogenicity Enables Prediction of Optimal Seizure Control. Frontiers in Neurology, 2018, 9, 98.	1.1	30
39	Adult Onset Metachromatic Leukodystrophy Without Electroclinical Peripheral Nervous System Involvement. Archives of Neurology, 2005, 62, 309.	4.9	29
40	Changes of EEG synchronization during low-frequency electric stimulation of the seizure onset zone. Epilepsy Research, 2007, 77, 108-119.	0.8	29
41	PureEEG: Automatic EEG artifact removal for epilepsy monitoring. Neurophysiologie Clinique, 2014, 44, 479-490.	1.0	29
42	Quantification and Selection of Ictogenic Zones in Epilepsy Surgery. Frontiers in Neurology, 2019, 10, 1045.	1.1	29
43	Peri-ictal correlation dynamics of high-frequency (80–200Hz) intracranial EEG. Epilepsy Research, 2010, 89, 72-81.	0.8	28
44	Focal hemodynamic patterns of status epilepticus detected by susceptibility weighted imaging (SWI). European Radiology, 2014, 24, 2980-2988.	2.3	28
45	Theta burst transcranial magnetic stimulation is associated with increased EEG synchronization in the stimulated relative to unstimulated cerebral hemisphere. Neuroscience Letters, 2008, 436, 31-34.	1.0	27
46	Uniform approach to linear and nonlinear interrelation patterns in multivariate time series. Physical Review E, 2011, 83, 066215.	0.8	27
47	An Ensemble of Hyperdimensional Classifiers: Hardware-Friendly Short-Latency Seizure Detection With Automatic iEEG Electrode Selection. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 935-946.	3.9	27
48	Estimating the strength of genuine and random correlations in non-stationary multivariate time series. Europhysics Letters, 2008, 84, 10009.	0.7	26
49	EEG synchronization measures are early outcome predictors in comatose patients after cardiac arrest. Clinical Neurophysiology, 2017, 128, 635-642.	0.7	26
50	Diffusion and perfusion MRI for the localisation of epileptogenic foci in drug-resistant epilepsy. Neuroradiology, 2002, 44, 475-480.	1.1	25
51	On seeing the trees and the forest: Single‐signal and multisignal analysis of periictal intracranial EEG. Epilepsia, 2012, 53, 1658-1668.	2.6	25
52	Neocortical networks of pyramidal neurons: from local locking and chaos to macroscopic chaos and synchronization. Nonlinearity, 2000, 13, 1515-1529.	0.6	24
53	When pyramidal neurons lock, when they respond chaotically, and when they like to synchronize. Neuroscience Research, 2000, 36, 81-91.	1.0	24
54	Improvement of non-paraneoplastic voltage-gated potassium channel antibody-associated limbic encephalitis without immunosuppressive therapy. Epilepsy and Behavior, 2010, 17, 555-557.	0.9	24

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55	Seizure Termination. International Review of Neurobiology, 2014, 114, 187-207.	0.9	24
56	A Fully Integrated IC With 0.85-μW/Channel Consumption for Epileptic iEEG Detection. IEEE Transactions on Circuits and Systems II: Express Briefs, 2015, 62, 114-118.	2.2	24
57	Under-sampling in epilepsy: Limitations of conventional EEG. Clinical Neurophysiology Practice, 2021, 6, 41-49.	0.6	22
58	Brain areas involved in medial temporal lobe seizures: A principal component analysis of ictal SPECT data. Human Brain Mapping, 2006, 27, 520-534.	1.9	21
59	Wavelet-denoising of electroencephalogram and the absolute slope method: A new tool to improve electroencephalographic localization and lateralization. Clinical Neurophysiology, 2009, 120, 1273-1281.	0.7	21
60	Correlating Interictal Spikes with Sigma and Delta Dynamics during Non-Rapid-Eye-Movement-Sleep. Frontiers in Neurology, 2017, 8, 288.	1.1	21
61	Neuroimaging of Epilepsy: Lesions, Networks, Oscillations. Clinical Neuroradiology, 2014, 24, 5-15.	1.0	20
62	Prognostic and diagnostic value of EEG signal coupling measures in coma. Clinical Neurophysiology, 2016, 127, 2942-2952.	0.7	20
63	Ictal vomiting in a left hemisphere language-dominant patient with left-sided temporal lobe epilepsy. Epilepsy and Behavior, 2006, 8, 323-327.	0.9	19
64	Does Continuous Video-EEG in Patients With Altered Consciousness Improve Patient Outcome? Current Evidence and Randomized Controlled Trial Design. Journal of Clinical Neurophysiology, 2018, 35, 359-364.	0.9	19
65	Mean field phase synchronization between chimera states. Chaos, 2018, 28, 091101.	1.0	19
66	Evolution of Genuine Cross-Correlation Strength of Focal Onset Seizures. Journal of Clinical Neurophysiology, 2011, 28, 450-462.	0.9	19
67	Comparison of voxel-based 3-D MRI analysis and subtraction ictal SPECT coregistered to MRI in focal epilepsy. Epilepsy Research, 2005, 65, 125-133.	0.8	18
68	Ordinal patterns in epileptic brains: Analysis of intracranial EEG and simultaneous EEG-fMRI. European Physical Journal: Special Topics, 2013, 222, 569-585.	1.2	18
69	Common mechanisms of auditory hallucinations—perfusion studies in epilepsy. Psychiatry Research - Neuroimaging, 2013, 211, 268-270.	0.9	16
70	Widespread grey matter changes and hemodynamic correlates to interictal epileptiform discharges in pharmacoresistant mesial temporal epilepsy. Journal of Neurology, 2013, 260, 1601-1610.	1.8	15
71	Computer models to inform epilepsy surgery strategies: prediction of postoperative outcome. Brain, 2017, 140, e30-e30.	3.7	15
72	Linear and nonlinear interrelations show fundamentally distinct network structure in preictal intracranial EEG of epilepsy patients. Human Brain Mapping, 2020, 41, 467-483.	1.9	15

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73	Focal and Generalized Patterns of Cerebral Cortical Veins Due to Non-Convulsive Status Epilepticus or Prolonged Seizure Episode after Convulsive Status Epilepticus â€" A MRI Study Using Susceptibility Weighted Imaging. PLoS ONE, 2016, 11, e0160495.	1.1	15
74	Localizing Seizure-Onset Zones in Presurgical Evaluation of Drug-Resistant Epilepsy by Electroencephalography/fMRI: Effectiveness of Alternative Thresholding Strategies. American Journal of Neuroradiology, 2012, 33, 1818-1824.	1.2	14
75	Standing Waves as an Explanation for Generic Stationary Correlation Patterns in Noninvasive EEG of Focal Onset Seizures. Brain Connectivity, 2014, 4, 131-144.	0.8	14
76	Burst firing of single neurons in the human medial temporal lobe changes before epileptic seizures. Clinical Neurophysiology, 2016, 127, 3329-3334.	0.7	14
77	Detecting determinism with improved sensitivity in time series: Rank-based nonlinear predictability score. Physical Review E, 2014, 90, 032913.	0.8	13
78	Assessing Epileptogenicity Using Phase-Locked High Frequency Oscillations: A Systematic Comparison of Methods. Frontiers in Neurology, 2019, 10, 1132.	1.1	13
79	Predictive modeling of EEG time series for evaluating surgery targets in epilepsy patients. Human Brain Mapping, 2017, 38, 2509-2531.	1.9	12
80	Evaluating resective surgery targets in epilepsy patients: A comparison of quantitative EEG methods. Journal of Neuroscience Methods, 2018, 305, 54-66.	1.3	12
81	Transient MR changes and symptomatic epilepsy following gamma knife treatment of a residual GH-secreting pituitary adenoma in the cavernous sinus. Acta Neurochirurgica, 2006, 148, 903-908.	0.9	11
82	Stroke causes a transient imbalance of interhemispheric information flow in EEG during non-REM sleep. Clinical Neurophysiology, 2018, 129, 1418-1426.	0.7	11
83	Rational design of transcranial alternating current stimulation. Clinical and Translational Neuroscience, 2018, 2, 2514183X1879351.	0.4	11
84	Characteristic Fluctuations Around Stable Attractor Dynamics Extracted from Highly Nonstationary Electroencephalographic Recordings. Brain Connectivity, 2018, 8, 457-474.	0.8	11
85	Standardized visual EEG features predict outcome in patients with acute consciousness impairment of various etiologies. Critical Care, 2020, 24, 680.	2.5	11
86	Topography of MR lesions correlates with standardized EEG pattern in early comatose survivors after cardiac arrest. Resuscitation, 2020, 149, 217-224.	1.3	11
87	Chaotic Spike Patterns Evoked by Periodic Inhibition of Rat Cortical Neurons. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1997, 52, 509-512.	0.7	10
88	EEG correlation and power during maintenance of wakefulness test after sleep-deprivation. Clinical Neurophysiology, 2011, 122, 2025-2031.	0.7	10
89	Focal Epilepsy: MR Imaging of Nonhemodynamic Field Effects by Using a Phase-cycled Stimulus-induced Rotary Saturation Approach with Spin-Lock Preparation. Radiology, 2016, 280, 237-243.	3.6	10
90	Personalized structural image analysis in patients with temporal lobe epilepsy. Scientific Reports, 2017, 7, 10883.	1.6	10

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91	NeuroTec Sitem-Insel Bern: Closing the Last Mile in Neurology. Clinical and Translational Neuroscience, 2021, 5, 13.	0.4	10
92	Continuous versus routine EEG in patients after cardiac arrest. Resuscitation, 2022, 176, 68-73.	1.3	10
93	Complex Response to Periodic Inhibition in Simple and Detailed Neuronal Models. Neural Computation, 1999, 11, 67-74.	1.3	9
94	Automatic Reduction of Artifacts in EEG-Signals. , 2007, , .		9
95	Data-driven estimates of the number of clusters in multivariate time series. Physical Review E, 2008, 78, 066703.	0.8	9
96	Genuine cross-correlations: Which surrogate based measure reproduces analytical results best?. Neural Networks, 2013, 46, 154-164.	3.3	9
97	Fast oscillations trigger bursts of action potentials in neocortical neurons in vitro: A quasi-white-noise analysis study. Brain Research, 2006, 1110, 201-210.	1.1	8
98	Epileptic seizures as condensed sleep: an analysis of network dynamics from electroencephalogram signals. Journal of Sleep Research, 2014, 23, 270-275.	1.7	8
99	On the relationships between epilepsy, sleep, and Alzheimer's disease: A narrative review. Epilepsy and Behavior, 2022, 129, 108609.	0.9	8
100	A Multivariate Approach to Correlation Analysis Based on Random Matrix Theory. , 0, , 209-226.		7
101	Chow–Liu trees are sufficient predictive models for reproducing key features of functional networks of periictal EEG time-series. NeuroImage, 2015, 118, 520-537.	2.1	7
102	Induction of Fear by Intraoperative Stimulation During Awake Craniotomy: Case Presentation and Systematic Review of the Literature. World Neurosurgery, 2015, 84, 470-474.	0.7	7
103	EEG spindles integrity in critical care adults. Analysis of a randomized trial. Acta Neurologica Scandinavica, 2021, 144, 655-662.	1.0	7
104	Noise-driven neocortical interaction: a simple generation mechanism for complex neuron spiking. Acta Biotheoretica, 2000, 48, 149-171.	0.7	6
105	Improved Localization of Implanted Subdural Electrode Contacts on Magnetic Resonance Imaging With an Elastic Image Fusion Algorithm in an Invasive Electroencephalography Recording. Operative Neurosurgery, 2014, 10, 506-513.	0.4	6
106	Continuous Versus Routine Standardized Electroencephalogram for Outcome Prediction in Critically Ill Adults: Analysis From a Randomized Trial. Critical Care Medicine, 2022, 50, 329-334.	0.4	6
107	A Primer on Hyperdimensional Computing for iEEG Seizure Detection. Frontiers in Neurology, 2021, 12, 701791.	1.1	5
108	Stationary EEG pattern relates to large-scale resting state networks – An EEG-fMRI study connecting brain networks across time-scales. NeuroImage, 2022, 246, 118763.	2.1	5

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109	Diagnosis of epilepsy after first seizure. Introducing the SWISS FIRST study. Clinical and Translational Neuroscience, 2020, 4, 2514183X2093944.	0.4	4
110	EEG recording latency in critically ill patients: Impact on outcome. An analysis of a randomized controlled trial (CERTA). Clinical Neurophysiology, 2022, 139, 23-27.	0.7	4
111	Assessing periodicity of periodic leg movements during sleep. Frontiers in Neuroscience, 2010, 4, .	1.4	3
112	Low-Latency Detection of Epileptic Seizures from iEEG with Temporal Convolutional Networks on a Low-Power Parallel MCU. , 2021, , .		3
113	A novel synchronization measure for epileptic seizure detection based on Fourier series expansions. IFMBE Proceedings, 2009, , 171-175.	0.2	3
114	An Instrumented Apartment to Monitor Human Behavior: A Pilot Case Study in the NeuroTec Loft. Sensors, 2022, 22, 1657.	2.1	3
115	Bivariate and Multivariate Time Series Analysis Techniques and their Potential Impact for Seizure Prediction. , 0, , 189-208.		2
116	Local thalamic atrophy associates with large-scale functional connectivity alterations of fronto-parietal cortices in genetic generalized epilepsies. Clinical and Translational Neuroscience, 2019, 3, 2514183X1985032.	0.4	2
117	Informed consent in critically ill adults participating to a randomized trial. Brain and Behavior, 2021, 11, e01965.	1.0	2
118	Continuous versus routine EEG in critically ill adults: reimbursement analysis of a randomised trial. Swiss Medical Weekly, 2021, 151, w20477.	0.8	2
119	Electroencephalography of mechanically ventilated patients at high risk of delirium. Acta Neurologica Scandinavica, 2021, 144, 296-302.	1.0	2
120	Reply to â€œNonconvulsive status epilepticus in Creutzfeldt-Jakob diseaseâ€. Clinical Neurophysiology, 2006, 117, 1881.	0.7	1
121	Random Sampling with Interspike-Intervals of the Exponential Integrate and Fire Neuron: A Computational Interpretation of UP-States. PLoS ONE, 2015, 10, e0132906.	1.1	1
122	Assessment of a Study of Continuous vs Repeat-Spot Electroencephalography in Patients With Critical Illnessâ€"Reply. JAMA Neurology, 2021, 78, 369.	4.5	1
123	More Than Spikes: On the Added Value of Non-linear Intracranial EEG Analysis for Surgery Planning in Temporal Lobe Epilepsy. Frontiers in Neurology, 2021, 12, 741450.	1.1	1
124	In-vivo validation of a compact inductively-powered neural recording interface. , 2014, , .		0
125	DYNAMICS OF LINEAR AND NONLINEAR INTERRELATION NETWORKS IN PERI-ICTAL INTRACRANIAL EEG: SEIZURE ONSET AND TERMINATION. , 2013, , .		0
126	Prolonged Postictal Asystole in a Child with Focal Epilepsy and Cerebellar Atrophy. Neuropediatrics, 2016, 47, .	0.3	0