

Johannes Sarnthein

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1984081/publications.pdf>

Version: 2024-02-01

123
papers

7,100
citations

109321

35
h-index

62596

80
g-index

139
all docs

139
docs citations

139
times ranked

7088
citing authors

#	ARTICLE	IF	CITATIONS
1	Different frequencies for different scales of cortical integration: from local gamma to long range alpha/theta synchronization. <i>International Journal of Psychophysiology</i> , 2000, 38, 301-313.	1.0	1,469
2	Synchronization between prefrontal and posterior association cortex during human working memory. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1998, 95, 7092-7096.	7.1	721
3	Increased EEG power and slowed dominant frequency in patients with neurogenic pain. <i>Brain</i> , 2006, 129, 55-64.	7.6	366
4	Structural and Electronic Properties of Liquid and Amorphous SiO ₂ : An Ab Initio Molecular Dynamics Study. <i>Physical Review Letters</i> , 1995, 74, 4682-4685.	7.8	266
5	Synchronization Between Temporal and Parietal Cortex During Multimodal Object Processing in Man. <i>Cerebral Cortex</i> , 1999, 9, 137-150.	2.9	264
6	Persistent EEG overactivation in the cortical pain matrix of neurogenic pain patients. <i>NeuroImage</i> , 2006, 31, 721-731.	4.2	260
7	Structure and Hyperfine Parameters of E1 ² Centers in α -Quartz and in Vitreous SiO ₂ . <i>Physical Review Letters</i> , 1997, 78, 887-890.	7.8	207
8	Model of vitreous SiO ₂ generated by an ab initio molecular-dynamics quench from the melt. <i>Physical Review B</i> , 1995, 52, 12690-12695.	3.2	180
9	Test-retest reliability of resting EEG spectra validates a statistical signature of persons. <i>Clinical Neurophysiology</i> , 2007, 118, 2519-2524.	1.5	169
10	High thalamocortical theta coherence in patients with neurogenic pain. <i>NeuroImage</i> , 2008, 39, 1910-1917.	4.2	151
11	Origin of the High-Frequency Doublet in the Vibrational Spectrum of Vitreous SiO ₂ . <i>Science</i> , 1997, 275, 1925-1927.	12.6	133
12	Human Intracranial High Frequency Oscillations (HFOs) Detected by Automatic Time-Frequency Analysis. <i>PLoS ONE</i> , 2014, 9, e94381.	2.5	128
13	High Thalamocortical Theta Coherence in Patients with Parkinson's Disease. <i>Journal of Neuroscience</i> , 2007, 27, 124-131.	3.6	112
14	EEG alpha distinguishes between cuneal and precuneal activation in working memory. <i>NeuroImage</i> , 2008, 40, 1296-1310.	4.2	107
15	Persistent patterns of brain activity: An EEG coherence study of the positive effect of music on spatial-temporal reasoning. <i>Neurological Research</i> , 1997, 19, 107-116.	1.3	103
16	Resection of high frequency oscillations predicts seizure outcome in the individual patient. <i>Scientific Reports</i> , 2017, 7, 13836.	3.3	103
17	Enhanced frontal low and high frequency power and synchronization in the resting EEG of parkinsonian patients. <i>NeuroImage</i> , 2008, 41, 985-997.	4.2	101
18	Dynamic structure factor of vitreous silica from first principles: Comparison to neutron-inelastic-scattering experiments. <i>Physical Review B</i> , 1998, 57, 14133-14140.	3.2	100

#	ARTICLE	IF	CITATIONS
19	Automatic detection of high frequency oscillations during epilepsy surgery predicts seizure outcome. <i>Clinical Neurophysiology</i> , 2016, 127, 3066-3074.	1.5	83
20	Persistent hippocampal neural firing and hippocampal-cortical coupling predict verbal working memory load. <i>Science Advances</i> , 2019, 5, eaav3687.	10.3	75
21	An electronic neuromorphic system for real-time detection of high frequency oscillations (HFO) in intracranial EEG. <i>Nature Communications</i> , 2021, 12, 3095.	12.8	74
22	The morphology of high frequency oscillations (HFO) does not improve delineating the epileptogenic zone. <i>Clinical Neurophysiology</i> , 2016, 127, 2140-2148.	1.5	73
23	Combining 5-Aminolevulinic Acid Fluorescence and Intraoperative Magnetic Resonance Imaging in Glioblastoma Surgery. <i>Neurosurgery</i> , 2016, 78, 475-483.	1.1	64
24	Sleep Disruption Aggravates Focal Cerebral Ischemia in the Rat. <i>Sleep</i> , 2010, 33, 879-887.	1.1	63
25	Thalamocortical theta coherence in neurological patients at rest and during a working memory task. <i>International Journal of Psychophysiology</i> , 2005, 57, 87-96.	1.0	58
26	Ab initio molecular-dynamics study of diffusion and defects in solid Li ₃ N. <i>Physical Review B</i> , 1996, 53, 9084-9091.	3.2	54
27	Test-retest reliability of EEG spectra during a working memory task. <i>NeuroImage</i> , 2008, 43, 687-693.	4.2	53
28	Quality of Life After Brainstem Cavernoma Surgery in 71 Patients. <i>Neurosurgery</i> , 2011, 69, 689-695.	1.1	52
29	A Patient Registry to Improve Patient Safety: Recording General Neurosurgery Complications. <i>PLoS ONE</i> , 2016, 11, e0163154.	2.5	52
30	Soluble β -Klotho: a novel serum biomarker for the activity of GH-producing pituitary adenomas. <i>European Journal of Endocrinology</i> , 2013, 168, 575-583.	3.7	46
31	Clinical Utility and Limitations of Intraoperative Monitoring of Visual Evoked Potentials. <i>PLoS ONE</i> , 2015, 10, e0120525.	2.5	44
32	Brainstem cavernoma surgery with the support of pre- and postoperative diffusion tensor imaging: initial experiences and clinical course of 23 patients. <i>Neurosurgical Review</i> , 2014, 37, 481-492.	2.4	43
33	Electron-stimulated desorption of neutral lithium atoms from LiF due to excitation of surface excitons. <i>Physical Review B</i> , 1991, 43, 6729-6732.	3.2	42
34	High test-retest reliability of checkerboard reversal visual evoked potentials (VEP) over 8 months. <i>Clinical Neurophysiology</i> , 2009, 120, 1835-1840.	1.5	42
35	High-frequency oscillations in scalp EEG mirror seizure frequency in pediatric focal epilepsy. <i>Scientific Reports</i> , 2019, 9, 16560.	3.3	41
36	Prediction of seizure outcome improved by fast ripples detected in low-noise intraoperative corticogram. <i>Clinical Neurophysiology</i> , 2017, 128, 1220-1226.	1.5	39

#	ARTICLE	IF	CITATIONS
37	Motor-evoked potentials (MEP) during brainstem surgery to preserve corticospinal function. <i>Acta Neurochirurgica</i> , 2011, 153, 1753-1759.	1.7	35
38	High-density ECoG improves the detection of high frequency oscillations that predict seizure outcome. <i>Clinical Neurophysiology</i> , 2019, 130, 1882-1888.	1.5	35
39	The Architecture of Human Memory: Insights from Human Single-Neuron Recordings. <i>Journal of Neuroscience</i> , 2021, 41, 883-890.	3.6	35
40	Prognostic factors for impaired plasma sodium homeostasis after transsphenoidal surgery. <i>British Journal of Neurosurgery</i> , 2013, 27, 63-68.	0.8	33
41	Interleaving deep brain stimulation for a patient with both Parkinson's disease and essential tremor. <i>Movement Disorders</i> , 2012, 27, 1700-1701.	3.9	32
42	Reduction of Thromboembolic Events in Meningioma Surgery: A Cohort Study of 724 Consecutive Patients. <i>PLoS ONE</i> , 2013, 8, e79170.	2.5	32
43	Machine Learning Algorithm Identifies Patients at High Risk for Early Complications After Intracranial Tumor Surgery: Registry-Based Cohort Study. <i>Neurosurgery</i> , 2019, 85, E756-E764.	1.1	30
44	Current clinical management of brainstem cavernomas. <i>Swiss Medical Weekly</i> , 2010, 140, w13120.	1.6	29
45	Detectability of the somatosensory evoked high frequency oscillation (HFO) co-recorded by scalp EEG and ECoG under propofol. <i>NeuroImage: Clinical</i> , 2016, 10, 318-325.	2.7	28
46	Dataset of human medial temporal lobe neurons, scalp and intracranial EEG during a verbal working memory task. <i>Scientific Data</i> , 2020, 7, 30.	5.3	28
47	A revival of Spiegel's campotomy: long term results of the stereotactic pallidothalamic tractotomy against the parkinsonian thalamocortical dysrhythmia. <i>Thalamus & Related Systems</i> , 2005, 3, 121.	0.5	26
48	Aesthetic outcome in patients after polymethyl-methacrylate (PMMA) cranioplasty – a questionnaire-based single-centre study. <i>Neurological Research</i> , 2012, 34, 281-285.	1.3	25
49	High frequency oscillations as markers of epileptogenic tissue – End of the party?. <i>Clinical Neurophysiology</i> , 2019, 130, 624-626.	1.5	25
50	Facial nerve motor evoked potentials during skull base surgery to monitor facial nerve function using the threshold-level method. <i>Neurosurgical Focus</i> , 2013, 34, E7.	2.3	24
51	Neurosurgery in Octogenarians: A Prospective Study of Perioperative Morbidity, Mortality, and Complications in Elderly Patients. <i>World Neurosurgery</i> , 2018, 110, e287-e295.	1.3	24
52	Patients with a Normal Pressure Hydrocephalus Shunt Have Fewer Complications than Do Patients with Other Shunts. <i>World Neurosurgery</i> , 2018, 110, e249-e257.	1.3	23
53	Intraoperative subdural low-noise EEG recording of the high frequency oscillation in the somatosensory evoked potential. <i>Clinical Neurophysiology</i> , 2017, 128, 1851-1857.	1.5	21
54	Detection of ischemia in endovascular therapy of cerebral aneurysms: a perspective in the era of neurophysiological monitoring. <i>Neurosurgical Review</i> , 2011, 34, 69-75.	2.4	20

#	ARTICLE	IF	CITATIONS
55	Postoperative Neurosurgical Infection Rates After Shared-Resource Intraoperative Magnetic Resonance Imaging: A Single-Center Experience with 195 Cases. <i>World Neurosurgery</i> , 2017, 103, 275-282.	1.3	20
56	Electron-stimulated desorption of lithium from LiF and the influence of metal islands on the surface. <i>Surface Science</i> , 1991, 241, 6-10.	1.9	19
57	Olfactory improvement in acromegaly after transnasal transsphenoidal surgery. <i>Neurosurgical Focus</i> , 2010, 29, E10.	2.3	19
58	Repeated craniotomies for intracranial tumors: is the risk increased? Pooled analysis of two prospective, institutional registries of complications and outcomes. <i>Journal of Neuro-Oncology</i> , 2019, 142, 49-57.	2.9	19
59	Anticonvulsive effect of anterior thalamic deep brain stimulation in super-refractory status epilepticus crucially depends on active stimulation zone—A single case observation. <i>Seizure: the Journal of the British Epilepsy Association</i> , 2019, 71, 286-288.	2.0	18
60	Anterior—Posterior Hippocampal Dynamics Support Working Memory Processing. <i>Journal of Neuroscience</i> , 2022, 42, 443-453.	3.6	18
61	MRI-validation of SEP monitoring for ischemic events during microsurgical clipping of intracranial aneurysms. <i>Clinical Neurophysiology</i> , 2011, 122, 1878-1882.	1.5	17
62	Power spectrum slope is related to motor function after focal cerebral ischemia in the rat. <i>Sleep</i> , 2018, 41, .	1.1	16
63	The relation between neuronal firing, local field potentials and hemodynamic activity in the human amygdala in response to aversive dynamic visual stimuli. <i>NeuroImage</i> , 2020, 213, 116705.	4.2	16
64	A spiking neural network (SNN) for detecting high frequency oscillations (HFOs) in the intraoperative ECoG. <i>Scientific Reports</i> , 2021, 11, 6719.	3.3	16
65	Ultraviolet spectroscopy of CN ⁺ in alkali halides: Dynamics of the metastable triplet state. <i>Chemical Physics Letters</i> , 1988, 147, 59-64.	2.6	15
66	Energy thresholds and delayed emission for electron-stimulated desorption of neutral ground- and excited-state Li atoms from lithium fluoride. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1990, 48, 593-596.	1.4	15
67	Burr hole trepanation for chronic subdural hematomas: is surgical education safe?. <i>Acta Neurochirurgica</i> , 2018, 160, 901-911.	1.7	15
68	The influence of preoperative dependency on mortality, functional recovery and complications after microsurgical resection of intracranial tumors. <i>Journal of Neuro-Oncology</i> , 2018, 139, 441-448.	2.9	15
69	Chronic neurogenic pain: thalamocortical dysrhythmic mechanisms and their surgical treatment. <i>Thalamus & Related Systems</i> , 2005, 3, 63.	0.5	14
70	Scalp high-frequency oscillation rates are higher in younger children. <i>Brain Communications</i> , 2021, 3, fcab052.	3.3	14
71	Adverse Events in Neurosurgery: The Novel Therapy-Disability-Neurology Grade. <i>Neurosurgery</i> , 2021, 89, 236-245.	1.1	14
72	Inter-Hemispheric Oscillations in Human Sleep. <i>PLoS ONE</i> , 2012, 7, e48660.	2.5	14

#	ARTICLE	IF	CITATIONS
73	A neuromorphic spiking neural network detects epileptic high frequency oscillations in the scalp EEG. <i>Scientific Reports</i> , 2022, 12, 1798.	3.3	14
74	Nonlinear analysis of epileptic activity in rabbit neocortex. <i>Biological Cybernetics</i> , 1998, 78, 37-44.	1.3	13
75	Intraoperative Monitoring of Facial Nerve Motor-Evoked Potentials in Children. <i>World Neurosurgery</i> , 2015, 84, 786-794.	1.3	13
76	Validating a therapy-oriented complication grading system in lumbar spine surgery: a prospective population-based study. <i>Scientific Reports</i> , 2017, 7, 11752.	3.3	13
77	Prevalence of Complications in Intraoperative Magnetic Resonance Imaging Combined with Neurophysiologic Monitoring. <i>World Neurosurgery</i> , 2016, 93, 168-174.	1.3	12
78	Safeness and Utility of Concomitant Intraoperative Monitoring with Intraoperative Magnetic Resonance Imaging in Children: A Pilot Study. <i>World Neurosurgery</i> , 2018, 115, e637-e644.	1.3	12
79	Standardized assessment of outcome and complications in chronic subdural hematoma: results from a large case series. <i>Acta Neurochirurgica</i> , 2019, 161, 1297-1304.	1.7	12
80	Incidence, depth, and severity of surgical site infections after neurosurgical interventions. <i>Acta Neurochirurgica</i> , 2019, 161, 17-24.	1.7	12
81	Persistent neuronal firing in the medial temporal lobe supports performance and workload of visual working memory in humans. <i>NeuroImage</i> , 2022, 254, 119123.	4.2	12
82	Thalamic theta field potentials and EEG: high thalamocortical coherence in patients with neurogenic pain, epilepsy and movement disorders. <i>Thalamus & Related Systems</i> , 2003, 2, 231-238.	0.5	11
83	Inter- and Inpatient Variability of Facial Nerve Response Areas in the Floor of the Fourth Ventricle. <i>Operative Neurosurgery</i> , 2011, 68, ons23-ons31.	0.8	11
84	Adaptive grip force is modulated by subthalamic beta activity in Parkinson's disease patients. <i>NeuroImage: Clinical</i> , 2015, 9, 450-457.	2.7	11
85	The current management of spinal cord cavernoma. <i>Journal of Neurosurgical Sciences</i> , 2018, 62, 383-396.	0.6	11
86	Blinded study: prospectively defined high-frequency oscillations predict seizure outcome in individual patients. <i>Brain Communications</i> , 2021, 3, fcab209.	3.3	11
87	Development and external validation of a clinical prediction model for functional impairment after intracranial tumor surgery. <i>Journal of Neurosurgery</i> , 2021, 134, 1743-1750.	1.6	11
88	A Neuromorphic Device for Detecting High-Frequency Oscillations in Human iEEG. , , .		10
89	Compatibility of intraoperative 3T MR imaging and intraoperative neurophysiological monitoring. <i>Clinical Neurophysiology</i> , 2015, 126, 218-220.	1.5	9
90	Safety of resident training in the microsurgical resection of intracranial tumors: Data from a prospective registry of complications and outcome. <i>Scientific Reports</i> , 2019, 9, 954.	3.3	9

#	ARTICLE	IF	CITATIONS
91	Predicting Functional Impairment in patients with chronic subdural hematoma treated with burr hole Trepanationâ€”The FIT-score. <i>Clinical Neurology and Neurosurgery</i> , 2019, 182, 142-147.	1.4	8
92	Scalp HFO rates decrease after successful epilepsy surgery and are not impacted by the skull defect resulting from craniotomy. <i>Scientific Reports</i> , 2022, 12, 1301.	3.3	8
93	Scalp HFO rates are higher for larger lesions. <i>Epilepsia Open</i> , 2022, 7, 496-503.	2.4	8
94	Stimulation sites in the subthalamic nucleus projected onto a mean 3-D atlas of the thalamus and basal ganglia. <i>Acta Neurochirurgica</i> , 2013, 155, 1655-1660.	1.7	7
95	Neurosurgery outcomes and complications in a monocentric 7-year patient registry. <i>Brain and Spine</i> , 2022, , 100860.	0.1	7
96	Protocol for multicentre comparison of interictal high-frequency oscillations as a predictor of seizure freedom. <i>Brain Communications</i> , 2022, 4, .	3.3	7
97	Cerebrospinal Fluid Leaks after Planned Intradural Spine Surgery: a Single-Center Analysis of 91 Cases. <i>Journal of Neurological Surgery, Part A: Central European Neurosurgery</i> , 2013, 74, 216-221.	0.8	6
98	Early detection of cervical spondylotic myelopathy using diffusion tensor imaging: Experiences in 1.5-tesla magnetic resonance imaging. <i>Neuroradiology Journal</i> , 2015, 28, 508-514.	1.2	6
99	Epileptic High-Frequency Oscillations in Intracranial EEG Are Not Confounded by Cognitive Tasks. <i>Frontiers in Human Neuroscience</i> , 2021, 15, 613125.	2.0	6
100	Intraoperative Neurophysiologic Assessment in Deep Brain Stimulation Surgery and its Impact on Lead Placement. <i>Journal of Neurological Surgery, Part A: Central European Neurosurgery</i> , 2021, 82, 018-026.	0.8	5
101	Dataset of spiking and LFP activity invasively recorded in the human amygdala during aversive dynamic stimuli. <i>Scientific Data</i> , 2021, 8, 9.	5.3	5
102	Preoperative risk factors associated with new focal neurological deficit and other major adverse events in first-time intracranial meningioma neurosurgery. <i>Acta Neurochirurgica</i> , 2021, 163, 2871-2879.	1.7	5
103	Variation of scalp EEG high frequency oscillation rate with sleep stage and time spent in sleep in patients with pediatric epilepsy. <i>Clinical Neurophysiology</i> , 2022, 135, 117-125.	1.5	5
104	EEG frequency and the size of cognitive neuronal assemblies. <i>Behavioral and Brain Sciences</i> , 2000, 23, 413-414.	0.7	4
105	Spectral iEEG markers precede SSEP events during surgery for subarachnoid hemorrhage. <i>Clinical Neurophysiology</i> , 2010, 121, 2172-2176.	1.5	4
106	Resection of cavernous malformations of the brainstem. , 2011, , 143-160.		4
107	Enhanced serum creatine kinase after neurosurgery in lateral position and intraoperative neurophysiological monitoring. <i>Clinical Neurology and Neurosurgery</i> , 2013, 115, 266-269.	1.4	4
108	Elevated serum creatine kinase after neurosurgeries in lateral position with intraoperative neurophysiological monitoring is associated with OP duration, BMI and age. <i>Clinical Neurophysiology</i> , 2015, 126, 2026-2032.	1.5	4

#	ARTICLE	IF	CITATIONS
109	Improving intraoperative evoked potentials at short latency by a novel neuro-stimulation technology with delayed return discharge. <i>Clinical Neurophysiology</i> , 2021, 132, 1195-1199.	1.5	4
110	Peroral Trigeminal Rhizotomy Using a Novel 3-Dimensional Printed Patient-Specific Guidance Tool. <i>Operative Neurosurgery</i> , 2021, 21, 491-496.	0.8	4
111	Automatic Detection of High-Frequency Oscillations With Neuromorphic Spiking Neural Networks. <i>Frontiers in Neuroscience</i> , 2022, 16, .	2.8	4
112	Multimodal Monitoring Strategy Is Decisive in Elective Middle Cerebral Artery Aneurysm Clipping: A Case Report. <i>World Neurosurgery</i> , 2019, 122, 43-47.	1.3	3
113	Astrid von Stein (1961â€“2002). <i>International Journal of Psychophysiology</i> , 2005, 57, 79-79.	1.0	2
114	Smoking status and perioperative adverse events in patients undergoing cranial tumor surgery. <i>Journal of Neuro-Oncology</i> , 2019, 144, 97-105.	2.9	2
115	Editorial: High-Frequency Oscillations in the Hippocampus as Biomarkers of Pathology and Healthy Brain Function. <i>Frontiers in Human Neuroscience</i> , 2021, 15, 763881.	2.0	2
116	Validation of the Clavien-Dindo grading system of complications for microsurgical treatment of unruptured intracranial aneurysms. <i>Neurosurgical Focus</i> , 2021, 51, E10.	2.3	2
117	Transcranial electrical stimulation elicits short and long latency responses in the tongue muscles. <i>Clinical Neurophysiology</i> , 2022, 138, 148-152.	1.5	2
118	Gamma-oscillations from bench to bed. <i>Clinical Neurophysiology</i> , 2012, 123, 1897-1898.	1.5	1
119	The Size of Neuronal Assemblies, Their Frequency of Synchronization, and Their Cognitive Function. , 2009, , 117-136.		1
120	Mapping and Monitoring of the Corticospinal Tract by Direct Brainstem Stimulation. <i>Neurosurgery</i> , 2022, 91, 496-504.	1.1	1
121	Doing it the other way round â€“ Mapping motor function by intrinsic activity. <i>Clinical Neurophysiology</i> , 2018, 129, 2024-2025.	1.5	0
122	Is it worth recording SEP during emergency extracranial internal carotid artery surgical recanalization?. <i>Clinical Neurophysiology</i> , 2022, , .	1.5	0
123	Sex-related differences in postoperative complications following elective craniotomy for intracranial lesions: An observational study. <i>Medicine (United States)</i> , 2022, 101, e29267.	1.0	0