Joseph R Madsen

List of Publications by Year in descending order

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140 11,786
papers citations

47 103
h-index g-index

148 148 all docs docs citations

148 times ranked 12002 citing authors

#	Article	IF	Citations
1	Theta and Gamma Oscillations during Encoding Predict Subsequent Recall. Journal of Neuroscience, 2003, 23, 10809-10814.	3.6	698
2	Gating of Human Theta Oscillations by a Working Memory Task. Journal of Neuroscience, 2001, 21, 3175-3183.	3.6	683
3	Human theta oscillations exhibit task dependence during virtual maze navigation. Nature, 1999, 399, 781-784.	27.8	667
4	Gamma Oscillations Correlate with Working Memory Load in Humans. Cerebral Cortex, 2003, 13, 1369-1374.	2.9	658
5	Theta returns. Current Opinion in Neurobiology, 2001, 11, 739-744.	4.2	484
6	Single-neuron dynamics in human focal epilepsy. Nature Neuroscience, 2011, 14, 635-641.	14.8	449
7	Human \hat{l}_s Oscillations Related to Sensorimotor Integration and Spatial Learning. Journal of Neuroscience, 2003, 23, 4726-4736.	3.6	381
8	Rapid fragmentation of neuronal networks at the onset of propofol-induced unconsciousness. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E3377-86.	7.1	366
9	Timing, Timing, Timing: Fast Decoding of Object Information from Intracranial Field Potentials in Human Visual Cortex. Neuron, 2009, 62, 281-290.	8.1	353
10	Hippocampal and Neocortical Gamma Oscillations Predict Memory Formation in Humans. Cerebral Cortex, 2006, 17, 1190-1196.	2.9	349
11	The pulsating brain: A review of experimental and clinical studies of intracranial pulsatility. Fluids and Barriers of the CNS, 2011, 8, 5.	5.0	338
12	The Human K-Complex Represents an Isolated Cortical Down-State. Science, 2009, 324, 1084-1087.	12.6	328
13	Sleep-Dependent Î, Oscillations in the Human Hippocampus and Neocortex. Journal of Neuroscience, 2003, 23, 10897-10903.	3.6	269
14	Long-term outcome in children with moyamoya syndrome after cranial revascularization by pial synangiosis. Journal of Neurosurgery: Pediatrics, 2004, 100, 142-149.	1.3	267
15	Somatic Mutations Activating the mTOR Pathway in Dorsal Telencephalic Progenitors Cause a Continuum of Cortical Dysplasias. Cell Reports, 2017, 21, 3754-3766.	6.4	247
16	Intrathecal Baclofen for Management of Spastic Cerebral Palsy: Multicenter Trial. Journal of Child Neurology, 2000, 15, 71-77.	1.4	240
17	Individualized localization and cortical surface-based registration of intracranial electrodes. Neurolmage, 2012, 59, 3563-3570.	4.2	213
18	Distinct Patterns of Brain Oscillations Underlie Two Basic Parameters of Human Maze Learning. Journal of Neurophysiology, 2001, 86, 368-380.	1.8	211

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19	Developmental Regulation of Mitochondrial Apoptosis by c-Myc Governs Age- and Tissue-Specific Sensitivity to Cancer Therapeutics. Cancer Cell, 2017, 31, 142-156.	16.8	190
20	Human seizures self-terminate across spatial scales via a critical transition. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 21116-21121.	7.1	182
21	Vagus Nerve Stimulation Therapy in Pediatric Patients With Refractory Epilepsy: Retrospective Study. Journal of Child Neurology, 2001, 16, 843-848.	1.4	179
22	Heterogeneous neuronal firing patterns during interictal epileptiform discharges in the human cortex. Brain, 2010, 133, 1668-1681.	7.6	168
23	Spatiotemporal dynamics of neocortical excitation and inhibition during human sleep. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 1731-1736.	7.1	166
24	The role of simulation in neurosurgery. Child's Nervous System, 2016, 32, 43-54.	1.1	136
25	Gamma EEG dynamics in neocortex and hippocampus during human wakefulness and sleep. NeuroImage, 2004, 22, 1271-1280.	4.2	123
26	Gamma Oscillations Distinguish True From False Memories. Psychological Science, 2007, 18, 927-932.	3.3	123
27	Human neocortical oscillations exhibit theta phase differences between encoding and retrieval. Neurolmage, 2006, 31, 1352-1358.	4.2	117
28	Task-free presurgical mapping using functional magnetic resonance imaging intrinsic activity. Journal of Neurosurgery, 2009, 111, 746-754.	1.6	117
29	Tacrolimus (FK506) Increases Neuronal Expression of GAP-43 and Improves Functional Recovery after Spinal Cord Injury in Rats. Experimental Neurology, 1998, 154, 673-683.	4.1	109
30	Neuronal Ensemble Synchrony during Human Focal Seizures. Journal of Neuroscience, 2014, 34, 9927-9944.	3.6	103
31	Autonomic changes following generalized tonic clonic seizures: An analysis of adult and pediatric patients with epilepsy. Epilepsy Research, 2015, 115, 113-118.	1.6	96
32	VEGF Signaling in Neurological Disorders. International Journal of Molecular Sciences, 2018, 19, 275.	4.1	96
33	Somatic <i>SLC35A2</i> variants in the brain are associated with intractable neocortical epilepsy. Annals of Neurology, 2018, 83, 1133-1146.	5.3	95
34	Localization of focal epileptic discharges using functional connectivity magnetic resonance imaging. Journal of Neurosurgery, 2011, 114, 1693-1697.	1.6	80
35	The effect of propofol on intraoperative electrocorticography and cortical stimulation during awake craniotomies in children. Paediatric Anaesthesia, 2000, 10, 29-34.	1.1	77
36	Spatiotemporal Dynamics Underlying Object Completion in Human Ventral Visual Cortex. Neuron, 2014, 83, 736-748.	8.1	75

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37	Connections of the hippocampal formation in humans: I. The mossy fiber pathway. Journal of Comparative Neurology, 1997, 385, 325-351.	1.6	64
38	Pathophysiology, prevention, and potential treatment of neural tube defects. Mental Retardation and Developmental Disabilities Research Reviews, 2000, 6, 6-14.	3.6	62
39	Propagation of epileptic spikes reconstructed from spatiotemporal magnetoencephalographic and electroencephalographic source analysis. Neurolmage, 2010, 50, 217-222.	4.2	62
40	Assessing the localization accuracy and clinical utility of electric and magnetic source imaging in children with epilepsy. Clinical Neurophysiology, 2019, 130, 491-504.	1.5	62
41	Superficial Slow Rhythms Integrate Cortical Processing in Humans. Scientific Reports, 2018, 8, 2055.	3.3	56
42	Solitary Fibrous Tumor Presenting As a Symptomatic Intraspinal Mass: Case Report. Neurosurgery, 1997, 40, 844-847.	1.1	55
43	Current and Emerging Potential of Magnetoencephalography in the Detection and Localization of High-Frequency Oscillations in Epilepsy. Frontiers in Neurology, 2017, 8, 14.	2.4	53
44	Hip status in cerebral palsy after one year of continuous intrathecal baclofen infusion. Pediatric Neurology, 2004, 30, 163-168.	2.1	52
45	Comparison of Rapid Cranial MRI to CT for Ventricular Shunt Malfunction. Pediatrics, 2014, 134, e47-e54.	2.1	52
46	Right-lateralized Brain Oscillations in Human Spatial Navigation. Journal of Cognitive Neuroscience, 2010, 22, 824-836.	2.3	51
47	Surgical resection of ripple onset predicts outcome in pediatric epilepsy. Annals of Neurology, 2018, 84, 331-346.	5.3	51
48	Vagus nerve stimulation in pediatric epilepsy: a review. Pediatric Neurology, 2001, 25, 368-376.	2.1	50
49	Direct current stimulation induces mGluR5â€dependent neocortical plasticity. Annals of Neurology, 2016, 80, 233-246.	5.3	50
50	GMFM 1 year after continuous intrathecal baclofen infusion. Developmental Neurorehabilitation, 2005, 8, 207-213.	1.1	48
51	Priorities for hydrocephalus research: report from a National Institutes of Health–sponsored workshop. Journal of Neurosurgery: Pediatrics, 2007, 107, 345-357.	1.3	48
52	Interictal High Frequency Oscillations Detected with Simultaneous Magnetoencephalography and Electroencephalography as Biomarker of Pediatric Epilepsy. Journal of Visualized Experiments, 2016, , .	0.3	46
53	Connections of the hippocampal formation in humans: II. The endfolial fiber pathway. Journal of Comparative Neurology, 1997, 385, 352-371.	1.6	45
54	Travelling spindles create necessary conditions for spike-timing-dependent plasticity in humans. Nature Communications, 2021, 12, 1027.	12.8	45

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55	Intracranial pressure waves: characterization of a pulsation absorber with notch filter properties using systems analysis. Journal of Neurosurgery: Pediatrics, 2008, 2, 83-94.	1.3	44
56	Laminar profile of spontaneous and evoked theta: Rhythmic modulation of cortical processing during word integration. Neuropsychologia, 2015, 76, 108-124.	1.6	43
57	Microscale spatiotemporal dynamics during neocortical propagation of human focal seizures. Neurolmage, 2015, 122, 114-130.	4.2	41
58	Heterogeneous Origins of Human Sleep Spindles in Different Cortical Layers. Journal of Neuroscience, 2018, 38, 3013-3025.	3.6	40
59	Dynamic statistical parametric mapping for analyzing ictal magnetoencephalographic spikes in patients with intractable frontal lobe epilepsy. Epilepsy Research, 2009, 85, 279-286.	1.6	39
60	Simulation of the human intracranial arterial tree. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 2371-2386.	3.4	39
61	H reflex studies in cerebral palsy patients undergoing partial dorsal rhizotomy. Muscle and Nerve, 1994, 17, 539-549.	2.2	37
62	Robust Selectivity to Two-Object Images in Human Visual Cortex. Current Biology, 2010, 20, 872-879.	3.9	37
63	Cerebrospinal fluid pulsatility and hydrocephalus: the fourth circulation. Clinical Neurosurgery, 2006, 53, 48-52.	0.2	36
64	What we don't (but should) know about hydrocephalus. Journal of Neurosurgery: Pediatrics, 2006, 104, 157-159.	1.3	35
65	Surgery for Intractable Epilepsy Due to Unilateral Brain Disease: A Retrospective Study Comparing Hemispherectomy Techniques. Pediatric Neurology, 2014, 51, 336-343.	2.1	35
66	Granger Causality Analysis of Interictal iEEG Predicts Seizure Focus and Ultimate Resection. Neurosurgery, 2018, 82, 99-109.	1.1	35
67	Scalp ripples as prognostic biomarkers of epileptogenicity in pediatric surgery. Annals of Clinical and Translational Neurology, 2020, 7, 329-342.	3.7	35
68	Evaluation of the ShuntCheck Noninvasive Thermal Technique for Shunt Flow Detection in Hydrocephalic Patients. Neurosurgery, 2011, 68, 198-205.	1.1	34
69	Cascade of neural processing orchestrates cognitive control in human frontal cortex. ELife, 2016, 5, .	6.0	33
70	Alterations of pulsation absorber characteristics in experimental hydrocephalus. Journal of Neurosurgery: Pediatrics, 2010, 6, 159-170.	1.3	32
71	Electrode localization for planning surgical resection of the epileptogenic zone in pediatric epilepsy. International Journal of Computer Assisted Radiology and Surgery, 2014, 9, 91-105.	2.8	32
72	VEGF, which is elevated in the CSF of patients with hydrocephalus, causes ventriculomegaly and ependymal changes in rats. Experimental Neurology, 2013, 247, 703-709.	4.1	31

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73	Passive fMRI mapping of language function for pediatric epilepsy surgical planning: Validation using Wada, ECS, and FMAER. Epilepsy Research, 2014, 108, 1874-1888.	1.6	30
74	Microscale Physiological Events on the Human Cortical Surface. Cerebral Cortex, 2021, 31, 3678-3700.	2.9	29
75	Noninvasive Mapping of Ripple Onset Predicts Outcome in Epilepsy Surgery. Annals of Neurology, 2021, 89, 911-925.	5.3	29
76	lctal and interictal source imaging on intracranial EEG predicts epilepsy surgery outcome in children with focal cortical dysplasia. Clinical Neurophysiology, 2020, 131, 734-743.	1.5	26
77	Outcome following multiple repeated spinal cord untethering operations. Journal of Neurosurgery: Pediatrics, 2007, 106, 434-438.	1.3	25
78	Magnetoencephalographic Analysis inÂPatients With VagusÂNerve Stimulator. Pediatric Neurology, 2009, 41, 383-387.	2.1	25
79	A dynamic nonlinear relationship between the static and pulsatile components of intracranial pressure in patients with subarachnoid hemorrhage. Journal of Neurosurgery, 2010, 112, 616-625.	1.6	24
80	Modeling of blood flow in arterial trees. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2010, 2, 612-623.	6.6	24
81	Outcomes of vagal nerve stimulation in a pediatric population: A single center experience. Seizure: the Journal of the British Epilepsy Association, 2014, 23, 105-111.	2.0	24
82	Combining task-evoked and spontaneous activity to improve pre-operative brain mapping with fMRI. NeuroImage, 2016, 124, 714-723.	4.2	24
83	Pilot Study of Neurodevelopmental Impact of Early Epilepsy Surgery in Tuberous Sclerosis Complex. Pediatric Neurology, 2020, 109, 39-46.	2.1	23
84	Presurgical accuracy of dipole clustering in MRI-negative pediatric patients with epilepsy: Validation against intracranial EEG and resection. Clinical Neurophysiology, 2022, 141, 126-138.	1.5	23
85	Impaired pulsation absorber mechanism in idiopathic normal pressure hydrocephalus. Journal of Neurosurgery, 2012, 117, 1189-1196.	1.6	22
86	Clinical value of magnetoencephalographic spike propagation represented by spatiotemporal source analysis: Correlation with surgical outcome. Epilepsy Research, 2014, 108, 280-288.	1.6	22
87	Early Detection of Human Epileptic Seizures Based on Intracortical Microelectrode Array Signals. IEEE Transactions on Biomedical Engineering, 2020, 67, 817-831.	4.2	20
88	The frequency modulated auditory evoked response (FMAER), a technical advance for study of childhood language disorders: cortical source localization and selected case studies. BMC Neurology, 2013, 13, 12.	1.8	19
89	Neural Dynamics Underlying Target Detection in the Human Brain. Journal of Neuroscience, 2014, 34, 3042-3055.	3.6	19
90	What is changing when: Decoding visual information in movies from human intracranial recordings. Neurolmage, 2018, 180, 147-159.	4.2	16

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91	Drugâ€Responsive Inhomogeneous Cortical Modulation by Direct Current Stimulation. Annals of Neurology, 2020, 88, 489-502.	5.3	16
92	Source imaging of seizure onset predicts surgical outcome in pediatric epilepsy. Clinical Neurophysiology, 2021, 132, 1622-1635.	1.5	15
93	Nitrous Oxide Depresses the H-Reflex in Children with Cerebral Palsy. Anesthesia and Analgesia, 1995, 80, 239-241.	2.2	13
94	Task dependence of human theta: The case for multiple cognitive functions. Neurocomputing, 2000, 32-33, 659-665.	5.9	12
95	Gentle dorsal root retraction and dissection can cause areflexia: Implications for intraoperative monitoring during ?selective? partial dorsal rhizotomy. Muscle and Nerve, 2001, 24, 1352-1358.	2.2	12
96	Urological outcome following multiple repeat spinal cord untethering operations. Journal of Neurosurgery: Pediatrics, 2009, 4, 275-279.	1.3	12
97	Magnetic resonance imaging–guided laser-induced thermal therapy for functional hemispherotomy in a child with refractory epilepsy and multiple medical comorbidities. Journal of Neurosurgery: Pediatrics, 2021, 27, 30-35.	1.3	12
98	Molecular Biology of Axonal Outgrowth. Pediatric Neurosurgery, 1997, 27, 113-120.	0.7	11
99	Temporal stability of visually selective responses in intracranial field potentials recorded from human occipital and temporal lobes. Journal of Neurophysiology, 2012, 108, 3073-3086.	1.8	11
100	Delay differential analysis for dynamical sleep spindle detection. Journal of Neuroscience Methods, 2019, 316, 12-21.	2.5	11
101	Electroencephalography in epilepsy surgery planning. Child's Nervous System, 2006, 22, 760-765.	1.1	10
102	Neuroimaging of Children With Surgically Treated Hydrocephalus: A Practical Approach. American Journal of Roentgenology, 2017, 208, 413-419.	2.2	10
103	Noninvasive Localization of High-Frequency Oscillations in Children with Epilepsy: Validation against Intracranial Gold-Standard., 2019, 2019, 1555-1558.		10
104	Functional Transplantation of the Rat Pituitary Gland. Neurosurgery, 1998, 43, 1157-1163.	1.1	9
105	Demonstration that a new flow sensor can operate in the clinical range for cerebrospinal fluid flow. Sensors and Actuators A: Physical, 2015, 234, 223-231.	4.1	9
106	Magnetoencephalographic Spike Analysis in Patients With Focal Cortical Dysplasia: What Defines a "Dipole Cluster�. Pediatric Neurology, 2018, 83, 25-31.	2.1	9
107	Changes in the Functional Brain Network of Children Undergoing Repeated Epilepsy Surgery: An EEG Source Connectivity Study. Diagnostics, 2021, 11, 1234.	2.6	9
108	Intracortical neural activity distal to seizure-onset-areas predicts human focal seizures. PLoS ONE, 2019, 14, e0211847.	2.5	8

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109	Antenatal neurosurgical counseling: approach to the unborn patient. Pediatric Clinics of North America, 2004, 51, 491-505.	1.8	7
110	VEGF: A potential target for hydrocephalus. Cell and Tissue Research, 2014, 358, 667-683.	2.9	7
111	Decrease in gamma-band activity tracks sequence learning. Frontiers in Systems Neuroscience, 2014, 8, 222.	2.5	7
112	Noninvasive Thermal Evaluation of Ventriculoperitoneal Shunt Patency and Cerebrospinal Fluid Flow Using a Flow Enhancing Device. Neurosurgery, 2019, 85, 240-249.	1.1	7
113	Mesoscopic physiological interactions in the human brain reveal small-world properties. Cell Reports, 2021, 36, 109585.	6.4	7
114	Shunt technology: contemporary concepts and prospects. Clinical Neurosurgery, 2003, 50, 256-67.	0.2	7
115	Using intracranial recordings to study theta. Trends in Cognitive Sciences, 1999, 3, 406-407.	7.8	6
116	Pharyngeal Dysesthesia in Refractory Complex Partial Epilepsy: New Seizure or Adverse Effect of Vagal Nerve Stimulation?. Epilepsia, 2003, 44, 855-858.	5.1	6
117	Magnetoencephalographic Mapping of Epileptic Spike Population Using Distributed Source Analysis. Journal of Clinical Neurophysiology, 2018, 35, 339-345.	1.7	6
118	Novel User-Friendly Application for MRI Segmentation of Brain Resection following Epilepsy Surgery. Diagnostics, 2022, 12, 1017.	2.6	5
119	Sensitivity to timing and order in human visual cortex. Journal of Neurophysiology, 2015, 113, 1656-1669.	1.8	4
120	Corpus Callosotomy for Refractory Epilepsy in Aicardi Syndrome: Case Report and Focused Review of the Literature. World Neurosurgery, 2020, 142, 450-455.	1.3	4
121	Diagnostic Accuracy of Non-Invasive Thermal Evaluation of Ventriculoperitoneal Shunt Flow in Shunt Malfunction: A Prospective, Multi-Site, Operator-Blinded Study. Neurosurgery, 2020, 87, 939-948.	1.1	4
122	Mapping Functional Connectivity of Epileptogenic Networks through Virtual Implantation., 2021, 2021, 408-411.		4
123	Response to Comment on "The Human K-Complex Represents an Isolated Cortical Down-State― Science, 2010, 330, 35-35.	12.6	3
124	Rasmussen encephalitis tissue transfer program. Epilepsia, 2016, 57, 1005-1007.	5.1	3
125	Neural Interactions Underlying Visuomotor Associations in the Human Brain. Cerebral Cortex, 2019, 29, 4551-4567.	2.9	3
126	Anesthetic management and outcomes for MRIâ€guided laser interstitial thermal therapy (LITT) for seizure focus in pediatrics: A singleâ€centre experience with 10 consecutive patients. Paediatric Anaesthesia, 2021, 31, 234-236.	1.1	3

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127	A Standardized Electrode Nomenclature for Stereoelectroencephalography Applications. Journal of Clinical Neurophysiology, 2021, 38, 509-515.	1.7	3
128	Virtual implantation using conventional scalp EEG delineates seizure onset and predicts surgical outcome in children with epilepsy. Clinical Neurophysiology, 2022, 139, 49-57.	1.5	3
129	Cerebrospinal Fluid Anion Transport: Studies of Pertechnetate in Unanesthetized Sheep. Neurosurgery, 1985, 17, 778-783.	1.1	2
130	Extensions of Granger Causality Calculations on Brain Networks for Efficient and Accurate Seizure Focus Identification via iEEGs. Brain Sciences, 2021, 11, 1167.	2.3	2
131	A Noninvasive Retrograde Flushing System for Shunted Hydrocephalus: Initial Case Series of 25 Patients. Cureus, 2020, 12, e8940.	0.5	2
132	Mapping Propagation of Interictal Spikes, Ripples, and Fast Ripples in Intracranial EEG of Children with Refractory Epilepsy., 2021, 2021, 194-197.		2
133	Posterior quadrant disconnection for refractory epilepsy: how I do it. Acta Neurochirurgica, 2022, , .	1.7	2
134	Limited utility of structural MRI to identify the epileptogenic zone in young children with tuberous sclerosis. Journal of Neuroimaging, 0 , , .	2.0	2
135	Connections of the hippocampal formation in humans: II. The endfolial fiber pathway. Journal of Comparative Neurology, 1997, 385, 352-371.	1.6	1
136	Electric Source Imaging on Intracranial EEG Localizes Spatiotemporal Propagation of Interictal Spikes in Children with Epilepsy., 2021, 2021, 2668-2671.		1
137	Complete Corpus Callosotomy for Refractory Epilepsy in Children: a video article. World Neurosurgery, 2022, , .	1.3	1
138	Gamma EEG dynamics in neocortex and hippocampus during human wakefulness and sleep. NeuroImage, 2004, 22, 1271-1271.	4.2	0
139	Treatment of Intractable Epilepsy by Electrical Stimulation of the Vagus Nerve. , 2012, , 1301-1308.		0
140	Single-stage resection of bottom-of-a-sulcus dysplasia involving eloquent cortex using navigated transcranial magnetic stimulation and intraoperative modalities. Child's Nervous System, 2022, , 1.	1.1	O