Sampsa Vanhatalo

List of Publications by Year
in descending order

124	5,295	87888	102487
papers	citations	38 h-index	66 g-index

131	131	131	4544
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Spatial spectra of scalp EEG and EMG from awake humans. Clinical Neurophysiology, 2003, 114, 1053-1068.	1.5	322
2	Development of neonatal EEG activity: From phenomenology to physiology. Seminars in Fetal and Neonatal Medicine, 2006, 11, 471-478.	2.3	265
3	Experimental febrile seizures are precipitated by a hyperthermia-induced respiratory alkalosis. Nature Medicine, 2006, 12, 817-823.	30.7	257
4	Bumetanide for the treatment of seizures in newborn babies with hypoxic ischaemic encephalopathy (NEMO): an open-label, dose finding, and feasibility phase 1/2 trial. Lancet Neurology, The, 2015, 14, 469-477.	10.2	208
5	Slow endogenous activity transients and developmental expression of K+-Clâ^'cotransporter 2 in the immature human cortex. European Journal of Neuroscience, 2005, 22, 2799-2804.	2.6	202
6	The ILAE classification of seizures and the epilepsies: Modification for seizures in the neonate. Position paper by the ILAE Task Force on Neonatal Seizures. Epilepsia, 2021, 62, 615-628.	5.1	158
7	Full-band EEG (FbEEG): an emerging standard in electroencephalography. Clinical Neurophysiology, 2005, 116, 1-8.	1.5	146
8	Millivolt-Scale DC Shifts in the Human Scalp EEG: Evidence for a Nonneuronal Generator. Journal of Neurophysiology, 2003, 89, 2208-2214.	1.8	124
9	Early Brain Activity Relates to Subsequent Brain Growth in Premature Infants. Cerebral Cortex, 2015, 25, 3014-3024.	2.9	108
10	DC-EEG discloses prominent, very slow activity patterns during sleep in preterm infants. Clinical Neurophysiology, 2002, 113, 1822-1825.	1.5	100
11	Visual Field Constriction in 91 Finnish Children Treated withâ€ƒVigabatrin. Epilepsia, 2002, 43, 748-756.	5.1	100
12	Fine spatiotemporal structure of phase in human intracranial EEG. Clinical Neurophysiology, 2006, 117, 1228-1243.	1.5	99
13	Monitoring neonatal seizures. Seminars in Fetal and Neonatal Medicine, 2013, 18, 202-208.	2.3	94
14	Five percent CO2 is a potent, fast-acting inhalation anticonvulsant. Epilepsia, 2011, 52, 104-114.	5.1	92
15	Cortical burst dynamics predict clinical outcome early in extremely preterm infants. Brain, 2015, 138, 2206-2218.	7.6	90
16	Functional Bimodality in the Brain Networks of Preterm and Term Human Newborns. Cerebral Cortex, 2014, 24, 2657-2668.	2.9	76
17	Measuring Time-Varying Information Flow in Scalp EEG Signals: Orthogonalized Partial Directed Coherence. IEEE Transactions on Biomedical Engineering, 2014, 61, 680-693.	4.2	70
18	Automated classification of neonatal sleep states using EEG. Clinical Neurophysiology, 2017, 128, 1100-1108.	1.5	69

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19	Automatic Posture and Movement Tracking of Infants with Wearable Movement Sensors. Scientific Reports, 2020, 10, 169.	3.3	69
20	Neonatal SEP â€“ Back to bedside with basic science. Seminars in Fetal and Neonatal Medicine, 2006, 11, 464-470.	2.3	66
21	Detection of â€˜EEG burstsâ€™ in the early preterm EEG: Visual vs. automated detection. Clinical Neurophysiology, 2010, 121, 1015-1022.	1.5	65
22	Large-scale brain modes reorganize between infant sleep states and carry prognostic information for preterms. Nature Communications, 2019, 10, 2619.	12.8	65
23	Spatial patterning of the neonatal EEG suggests a need for a high number of electrodes. NeuroImage, 2013, 68, 229-235.	4.2	64
24	Neurturin is a neurotrophic factor for penile parasympathetic neurons in adult rat. , 2000, 43, 198-205.		63
25	Does Hyperventilation Elicit Epileptic Seizures?. Epilepsia, 2004, 45, 618-620.	5.1	63
26	Nitric oxide synthase in the hypothalamo-pituitary pathways. Journal of Chemical Neuroanatomy, 1995, 8, 165-173.	2.1	60
27	Respiratory alkalosis in children with febrile seizures. Epilepsia, 2011, 52, 1949-1955.	5.1	59
28	Time-Varying EEG Correlations Improve Automated Neonatal Seizure Detection. International Journal of Neural Systems, 2019, 29, 1850030.	5.2	56
29	Scale-Free Bursting in Human Cortex following Hypoxia at Birth. Journal of Neuroscience, 2014, 34, 6557-6572.	3.6	53
30	Neonatal EEG at scalp is focal and implies high skull conductivity in realistic neonatal head models. NeuroImage, 2014, 96, 73-80.	4.2	53
31	Functional Brain Connectivity Develops Rapidly Around Term Age and Changes Between Vigilance States in the Human Newborn. Cerebral Cortex, 2016, 26, 4540-4550.	2.9	49
32	Interobserver agreement for neonatal seizure detection using multichannel <scp>EEG</scp>. Annals of Clinical and Translational Neurology, 2015, 2, 1002-1011.	3.7	48
33	Brain alkalosis causes birth asphyxia seizures, suggesting therapeutic strategy. Annals of Neurology, 2011, 69, 493-500.	5.3	47
34	Ictal localization by source analysis of infraslow activity in DC-coupled scalp EEG recordings. NeuroImage, 2007, 35, 583-597.	4.2	45
35	Optimization of an NLEO-based algorithm for automated detection of spontaneous activity transients in early preterm EEG. Physiological Measurement, 2010, 31, N85-N93.	2.1	45
36	Nonneuronal Origin of CO2-Related DC EEG Shifts: An In Vivo Study in the Cat. Journal of Neurophysiology, 2004, 92, 1011-1022.	1.8	44

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37	Fetal pain?. Brain and Development, 2000, 22, 145-150.	1.1	42
38	Neonatal seizures: Is there a relationship between ictal electroclinical features and etiology? A critical appraisal based on a systematic literature review. Epilepsia Open, 2019, 4, 10-29.	2.4	42
39	Phase synchrony in the early preterm EEG: Development of methods for estimating synchrony in both oscillations and events. NeuroImage, 2012, 60, 1562-1573.	4.2	41
40	Sleep wake cycling in early preterm infants: Comparison of polysomnographic recordings with a novel EEG-based index. Clinical Neurophysiology, 2013, 124, 1807-1814.	1.5	41
41	Preterm Birth Changes Networks of Newborn Cortical Activity. Cerebral Cortex, 2019, 29, 814-826.	2.9	41
42	Effect of allopurinol in addition to hypothermia treatment in neonates for hypoxic-ischemic brain injury on neurocognitive outcome (ALBINO): study protocol of a blinded randomized placebo-controlled parallel group multicenter trial for superiority (phase III). BMC Pediatrics, 2019, 19, 210.	1.7	40
43	High-fidelity recording of brain activity in the extremely preterm babies: Feasibility study in the incubator. Clinical Neurophysiology, 2008, 119, 439-445.	1.5	39
44	Glial cell line-derived neurotrophic factor is expressed in penis of adult rat and retrogradely transported in penile parasympathetic and sensory nerves. Cell and Tissue Research, 2000, 302, 321-329.	2.9	38
45	Drug effects on endogenous brain activity in preterm babies. Brain and Development, 2014, 36, 116-123.	1.1	38
46	Dynamics of human neocortex that optimizes its stability and flexibility. International Journal of Intelligent Systems, 2006, 21, 881-901.	5.7	37
47	Cortical somatosensory processing measured by magnetoencephalography predicts neurodevelopment in extremely low-gestational-age infants. Pediatric Research, 2013, 73, 763-771.	2.3	36
48	Evaluation of somatosensory cortical processing in extremely preterm infants at term with MEG and EEG. Clinical Neurophysiology, 2015, 126, 275-283.	1.5	35
49	Visual Fixation in Human Newborns Correlates with Extensive White Matter Networks and Predicts Long-Term Neurocognitive Development. Journal of Neuroscience, 2015, 35, 4824-4829.	3.6	35
50	Full-Band EEG (FbEEG): A New Standard for Clinical Electroencephalography. Clinical EEG and Neuroscience, 2005, 36, 311-317.	1.7	34
51	Bumetanide for neonatal seizures: Based on evidence or enthusiasm?. Epilepsia, 2009, 50, 1292-1293.	5.1	34
52	An Easy and Practical Method for Routine, Bedside Testing of Somatosensory Systems in Extremely Low Birth Weight Infants. Pediatric Research, 2009, 66, 710-713.	2.3	33
53	Early Detection of Preterm Intraventricular Hemorrhage From Clinical Electroencephalography. Critical Care Medicine, 2015, 43, 2219-2227.	0.9	33
54	Automated cotâ€side tracking of functional brain age in preterm infants. Annals of Clinical and Translational Neurology, 2020, 7, 891-902.	3.7	33

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55	Colocalization of dopamine and serotonin in the rat pituitary gland and in the nuclei innervating it. Brain Research, 1995, 669, 275-284.	2.2	32
56	Automated pose estimation captures key aspects of General Movements at eight to 17Âweeks from conventional videos. Acta Paediatrica, International Journal of Paediatrics, 2019, 108, 1817-1824.	1.5	32
57	NADPH-diaphorase activity and its colocalization with transmitters and neuropeptides in the postganglionic neurons of the rat superior cervical ganglion. Brain Research, 1994, 652, 107-112.	2.2	31
58	Novel features of early burst suppression predict outcome after birth asphyxia. Annals of Clinical and Translational Neurology, 2014, 1, 209-214.	3.7	31
59	Newborn Brain Function Is Affected by Fetal Exposure to Maternal Serotonin Reuptake Inhibitors. Cerebral Cortex, 2017, 27, bhw153.	2.9	30
60	Objective differentiation of neonatal EEG background grades using detrended fluctuation analysis. Frontiers in Human Neuroscience, 2015, 9, 189.	2.0	29
61	Development of a novel robust measure for interhemispheric synchrony in the neonatal EEG: Activation Synchrony Index (ASI). NeuroImage, 2013, 69, 256-266.	4.2	28
62	Interhemispheric synchrony in the neonatal EEG revisited: activation synchrony index as a promising classifier. Frontiers in Human Neuroscience, 2014, 8, 1030.	2.0	27
63	Analysis of infant cortical synchrony is constrained by the number of recording electrodes and the recording montage. Clinical Neurophysiology, 2016, 127, 310-323.	1.5	27
64	Vagal Nerve Stimulation Induces Intermittent Hypocapnia. Epilepsia, 2003, 44, 1588-1591.	5.1	26
65	Neurobiological and physiological mechanisms of fever-related epileptiform syndromes. Brain and Development, 2009, 31, 378-382.	1.1	26
66	Markedly Elevated Nitrate/Nitrite Levels in the Cerebrospinal Fluid of Children with Progressive Encephalopathy with Edema, Hypsarrhythmia, and Optic Atrophy (PEHO Syndrome). Epilepsia, 2000, 41, 705-708.	5.1	25
67	Electroencephalographic Response to Procedural Pain in Healthy Term Newborn Infants. Pediatric Research, 2008, 64, 429-434.	2.3	25
68	Nitric oxide synthase in the autonomic and sensory ganglia innervating the submandibular salivary gland. , 1996, 35, 32-43.		24
69	Critical role for resource constraints in neural models. Frontiers in Systems Neuroscience, 2014, 8, 154.	2.5	24
70	Axonal transport of nitric oxide synthase in autonomic nerves. Journal of the Autonomic Nervous System, 1996, 56, 207-214.	1.9	23
71	Structural damage in early preterm brain changes the electric resting state networks. NeuroImage, 2015, 120, 266-273.	4.2	23
72	Detecting bursts in the EEG of very and extremely premature infants using a multi-feature approach. Medical Engineering and Physics, 2017, 45, 42-50.	1.7	23

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73	Evoked potentials recorded during routine EEG predict outcome after perinatal asphyxia. Clinical Neurophysiology, 2017, 128, 1337-1343.	1.5	23
74	The effect of reducing EEG electrode number on the visual interpretation of the human expert for neonatal seizure detection. Clinical Neurophysiology, 2018, 129, 265-270.	1.5	23
75	Nitric oxide metabolites, nitrates and nitrites in the cerebrospinal fluid in children with west syndrome. Epilepsy Research, 2001, 46, 3-13.	1.6	22
76	Effects of prenatal antiepileptic drug exposure on newborn brain activity. Epilepsia, 2016, 57, 252-262.	5.1	22
77	Co-localization of NADPH diaphorase reactivity and vasoactive intestinal polypeptide in human colon. Journal of the Autonomic Nervous System, 1995, 54, 177-183.	1.9	21
78	Early development of sleep and brain functional connectivity in term-born and preterm infants. Pediatric Research, 2022, 91, 771-786.	2.3	21
79	Nitric oxide synthase immunoreactivity in the rat hippocampus after status epilepticus induced by perforant pathway stimulation. Brain Research, 2000, 871, 303-310.	2.2	20
80	Corticokinematic coherence as a new marker for somatosensory afference in newborns. Clinical Neurophysiology, 2017, 128, 647-655.	1.5	19
81	Cortical responses to tactile stimuli in preterm infants. European Journal of Neuroscience, 2020, 51, 1059-1073.	2.6	18
82	Evidence for spared attention to faces in 7-month-old infants after prenatal exposure to antiepileptic drugs. Epilepsy and Behavior, 2016, 64, 62-68.	1.7	17
83	Neonatal somatosensory evoked potentials persist during hypothermia. Acta Paediatrica, International Journal of Paediatrics, 2017, 106, 912-917.	1.5	16
84	Dynamic Eye Tracking Based Metrics for Infant Gaze Patterns in the Face-Distractor Competition Paradigm. PLoS ONE, 2014, 9, e97299.	2.5	16
85	Serotonin is not synthesized, but specifically transported, in the neurons of the hypothalamic dorsomedial nucleus. European Journal of Neuroscience, 1998, 10, 1930-1935.	2.6	15
86	Preterm EEG: A Multimodal Neurophysiological Protocol. Journal of Visualized Experiments, 2012, , .	0.3	15
87	Bedside neurophysiological tests can identify neonates with stroke leading to cerebral palsy. Clinical Neurophysiology, 2019, 130, 759-766.	1.5	15
88	Characterization of the Functional Dynamics in the Neonatal Brain during REM and NREM Sleep States by means of Microstate Analysis. Brain Topography, 2021, 34, 555-567.	1.8	14
89	Automated detection of artefacts in neonatal EEG with residual neural networks. Computer Methods and Programs in Biomedicine, 2021, 208, 106194.	4.7	13
90	Early brain activity: Translations between bedside and laboratory. Progress in Neurobiology, 2022, 213, 102268.	5.7	13

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91	Intelligent wearable allows out-of-the-lab tracking of developing motor abilities in infants. Communications Medicine, 2022, 2, .	4.2	13
92	Neonatal neuroimaging and neurophysiology predict infantile onset epilepsy after perinatal hypoxic ischemic encephalopathy. Seizure: the Journal of the British Epilepsy Association, 2020, 80, 249-256.	2.0	12
93	Building an Open Source Classifier for the Neonatal EEG Background: A Systematic Feature-Based Approach From Expert Scoring to Clinical Visualization. Frontiers in Human Neuroscience, 2021, 15, 675154.	2.0	12
94	Validating an SVM-based neonatal seizure detection algorithm for generalizability, non-inferiority and clinical efficacy. Computers in Biology and Medicine, 2022, 145, 105399.	7.0	12
95	Safety of EEGâ€“fMRI recordings in newborn infants at 3T: A study using a baby-size phantom. Clinical Neurophysiology, 2014, 125, 941-946.	1.5	11
96	Reliability and accuracy of EEG interpretation for estimating age in preterm infants. Annals of Clinical and Translational Neurology, 2020, 7, 1564-1573.	3.7	11
97	Detrended fluctuation analysis in the presurgical evaluation of parietal lobe epilepsy patients. Clinical Neurophysiology, 2021, 132, 1515-1525.	1.5	11
98	Designing a trial for neonatal seizure treatment. Seminars in Fetal and Neonatal Medicine, 2018, 23, 213-217.	2.3	10
99	Evaluation of SEPs in asphyxiated newborns using a 4-electrode aEEG brain monitoring set-up. Clinical Neurophysiology Practice, 2018, 3, 122-126.	1.4	10
100	Treatment Trials for Neonatal Seizures: The Effect of Design on Sample Size. PLoS ONE, 2016, 11, e0165693.	2.5	10
101	Emergence of spontaneous and evoked electroencephalographic activity in the human brain. , 2010, , 229-244.		9
102	Profile of minor neurological findings after perinatal asphyxia. Acta Paediatrica, International Journal of Paediatrics, 2022, 111, 291-299.	1.5	9
103	Phase-Based Cortical Synchrony Is Affected by Prematurity. Cerebral Cortex, 2022, 32, 2265-2276.	2.9	7
104	Impact of In Utero Exposure to Antiepileptic Drugs on Neonatal Brain Function. Cerebral Cortex, 2022, 32, 2385-2397.	2.9	7
105	Posttraumatic tremor and Arnold Chiari malformation: No sign of compression, but cure after surgical decompression. Movement Disorders, 2000, 15, 581-583.	3.9	6
106	Towards multimodal brain monitoring in asphyxiated newborns with amplitude-integrated EEG and simultaneous somatosensory evoked potentials. Early Human Development, 2021, 153, 105287.	1.8	6
107	An openly available wearable, a diaper cover, monitors infant's respiration and position during rest and sleep. Acta Paediatrica, International Journal of Paediatrics, 2021, 110, 2766-2771.	1.5	6
108	Visual field defects after vigabatrin treatment during infancy: retrospective populationâ€based study. Developmental Medicine and Child Neurology, 2022, 64, 641-648.	2.1	6

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109	Why monitor the neonatal brainâ€"that is the important question. Pediatric Research, 2023, 93, 19-21.	2.3	6
110	Use of eye tracking improves the detection of evoked responses to complex visual stimuli during EEG in infants. Clinical Neurophysiology Practice, 2017, 2, 81-90.	1.4	4
111	Use of complex visual stimuli allows controlled recruitment of cortical networks in infants. Clinical Neurophysiology, 2020, 131, 2032-2040.	1.5	4
112	An Open Source Classifier for Bed Mattress Signal in Infant Sleep Monitoring. Frontiers in Neuroscience, 2020, 14, 602852.	2.8	3
113	Cortical Cross-Frequency Coupling Is Affected by in utero Exposure to Antidepressant Medication. Frontiers in Neuroscience, 2022, 16, 803708.	2.8	3
114	Playing music to preemies: boosting of soothing the brain?. Acta Paediatrica, International Journal of Paediatrics, 2018, 107, 549-550.	1.5	2
115	Measuring Cot-Side the Effects of Parenteral Nutrition on Preterm Cortical Function. Frontiers in Human Neuroscience, 2020, 14, 69.	2.0	2
116	Recording activity in proximal muscle networks with surface EMG in assessing infant motor development. Clinical Neurophysiology, 2021, 132, 2840-2850.	1.5	2
117	Asymmetry in sleep spindles and motor outcome in infants with unilateral brain injury. Developmental Medicine and Child Neurology, 2022, , .	2.1	2
118	Care should be taken in interpretation of visual field tests in children. Annals of Neurology, 2001, 49, 277-277.	5.3	1
119	Generalized Mean Phase Coherence for asynchrony abnormality detection in multichannel newborn EEG. , 2012, , .		1
120	Prenatal exposure to antiepileptic drugs and early processing of emotionally relevant sounds. Epilepsy and Behavior, 2019, 100, 106503.	1.7	1
121	Intrahypothalamic Serotonergic Neurons. Nutritional Neuroscience, 1999, 2, 403-412.	3.1	0
122	Comparison of the Distributions of Neuropeptide Y-, Tyrosine Hydroxylase-, and Tryptophan Hydroxylase-Expressing Neurons in the Hypothalamic Arcuate Nucleus. Nutritional Neuroscience, 2000, 3, 11-17.	3.1	0
123	Cumulative deviance scores can be used as an alternative to the Hammersmith Neonatal Neurological Examination in scientific research. Acta Paediatrica, International Journal of Paediatrics, 2015, 104, e414-e416.	1.5	0
124	Testing brains with burst suppressions. Clinical Neurophysiology, 2016, 127, 2919-2920.	1.5	0