Gunnar Naulaers

List of Publications by Year
in descending order

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130 papers	4,285 citations	126708 33 h-index	128067 60 g-index
132 all docs	132 docs citations	132 times ranked	3779 citing authors

#	Article	IF	Citations
1	Pediatric Outcome after Maternal Cancer Diagnosed during Pregnancy. New England Journal of Medicine, 2015, 373, 1824-1834.	13.9	283
2	Neurodevelopmental outcome in very preterm and veryâ€lowâ€birthweight infants born over the past decade: a metaâ€analytic review. Developmental Medicine and Child Neurology, 2018, 60, 342-355.	1.1	247
3	Monitoring Neonatal Regional Cerebral Oxygen Saturation in Clinical Practice: Value and Pitfalls. Neonatology, 2008, 94, 237-244.	0.9	238
4	Effect of Treatment of Subclinical Neonatal Seizures Detected With aEEG: Randomized, Controlled Trial. Pediatrics, 2010, 125, e358-e366.	1.0	207
5	Use of Tissue Oxygenation Index and Fractional Tissue Oxygen Extraction as Non-Invasive Parameters for Cerebral Oxygenation. Neonatology, 2007, 92, 120-126.	0.9	203
6	Guidelines for the Management of Extremely Premature Deliveries: A Systematic Review. Pediatrics, 2015, 136, 343-350.	1.0	158
7	Reference values of regional cerebral oxygen saturation during the first 3 days of life in preterm neonates. Pediatric Research, 2016, 79, 55-64.	1.1	158
8	Neonatal Seizure Detection Using Deep Convolutional Neural Networks. International Journal of Neural Systems, 2019, 29, 1850011.	3.2	157
9	The SafeBoosC Phase II Randomised Clinical Trial: A Treatment Guideline for Targeted Near-Infrared-Derived Cerebral Tissue Oxygenation versus Standard Treatment in Extremely Preterm Infants. Neonatology, 2013, 104, 171-178.	0.9	99
10	Review of sleep-EEG in preterm and term neonates. Early Human Development, 2017, 113, 87-103.	0.8	99
11	Maturational pharmacokinetics of single intravenous bolus of propofol. Paediatric Anaesthesia, 2007, 17, 1028-1034.	0.6	98
12	L-Thyroxine Treatment of Preterm Newborns: Clinical and Endocrine Effects. Pediatric Research, 1997, 42, 87-92.	1.1	86
13	The paracetamol concentrationâ€effect relation in neonates. Paediatric Anaesthesia, 2013, 23, 45-50.	0.6	76
14	Cerebral and Systemic Hemodynamic Effects of Intravenous Bolus Administration of Propofol in Neonates. Neonatology, 2010, 98, 57-63.	0.9	67
15	Introduction of Hypothermia for Neonates with Perinatal Asphyxia in the Netherlands and Flanders. Neonatology, 2013, 104, 15-21.	0.9	65
16	Systematic evaluation of pain in neonates: effect on the number of intravenous analgesics prescribed. European Journal of Clinical Pharmacology, 2003, 59, 87-90.	0.8	63
17	Propofol Dose-Finding to Reach Optimal Effect for (Semi-)Elective Intubation in Neonates. Journal of Pediatrics, 2016, 179, 54-60.e9.	0.9	63
18	Measurement of Neurovascular Coupling in Neonates. Frontiers in Physiology, 2019, 10, 65.	1.3	61

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19	Fetal surgery is a clinical reality. Seminars in Fetal and Neonatal Medicine, 2010, 15, 58-67.	1.1	57
20	An Automated Quiet Sleep Detection Approach in Preterm Infants as a Gateway to Assess Brain Maturation. International Journal of Neural Systems, 2017, 27, 1750023.	3.2	55
21	Line length as a robust method to detect high-activity events: Automated burst detection in premature EEG recordings. Clinical Neurophysiology, 2014, 125, 1985-1994.	0.7	53
22	Complexity Analysis of Neonatal EEG Using Multiscale Entropy: Applications in Brain Maturation and Sleep Stage Classification. Entropy, 2017, 19, 516.	1.1	52
23	Cerebral Tissue Oxygenation and Regional Oxygen Saturation Can Be Used to Study Cerebral Autoregulation in Prematurely Born Infants. Pediatric Research, 2011, 69, 548-553.	1.1	51
24	Automated EEG sleep staging in the term-age baby using a generative modelling approach. Journal of Neural Engineering, 2018, 15, 036004.	1.8	51
25	Cerebral near-infrared spectroscopy monitoring versus treatment as usual for extremely preterm infants: a protocol for the SafeBoosC randomised clinical phase III trial. Trials, 2019, 20, 811.	0.7	48
26	Autism spectrum disorder and pupillometry: A systematic review and meta-analysis. Neuroscience and Biobehavioral Reviews, 2021, 120, 479-508.	2.9	48
27	Quiet sleep detection in preterm infants using deep convolutional neural networks. Journal of Neural Engineering, 2018, 15, 066006.	1.8	47
28	A phase II randomized clinical trial on cerebral near-infrared spectroscopy plus a treatment guideline versus treatment as usual for extremely preterm infants during the first three days of life (SafeBoosC): study protocol for a randomized controlled trial. Trials, 2013, 14, 120.	0.7	46
29	A Review of near Infrared Spectroscopy for Term and Preterm Newborns. Journal of Near Infrared Spectroscopy, 2012, 20, 43-55.	0.8	45
30	The effect of changes in tPCO2 on the fractional tissue oxygen extraction â€“ as measured by near-infrared spectroscopy â€“ in neonates during the first days of life. European Journal of Paediatric Neurology, 2009, 13, 128-134.	0.7	44
31	Caffeine Prevents Hyperoxia-Induced Functional and Structural Lung Damage in Preterm Rabbits. Neonatology, 2016, 109, 274-281.	0.9	44
32	A convolutional neural network outperforming state-of-the-art sleep staging algorithms for both preterm and term infants. Journal of Neural Engineering, 2020, 17, 016028.	1.8	41
33	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.	0.7	40
34	Measurement of Tissue Oxygenation Index During the First Three Days in Premature Born Infants. Advances in Experimental Medicine and Biology, 2003, 510, 379-383.	0.8	37
35	Measuring Near-Infrared Spectroscopy Derived Cerebral Autoregulation in Neonates: From Research Tool Toward Bedside Multimodal Monitoring. Frontiers in Pediatrics, 2018, 6, 117.	0.9	36
36	Outcome of Infants with Therapeutic Hypothermia after Perinatal Asphyxia and Early-Onset Sepsis. Neonatology, 2019, 115, 127-133.	0.9	34

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37	Prospective validation of neonatal vancomycin dosing regimens is urgently needed. Current Therapeutic Research, 2014, 76, 51-57.	0.5	33
38	Early development of synchrony in cortical activations in the human. Neuroscience, 2016, 322, 298-307.	1.1	32
39	Child development at 6 years after maternal cancer diagnosis and treatment during pregnancy. European Journal of Cancer, 2020, 138, 57-67.	1.3	31
40	Objective differentiation of neonatal EEG background grades using detrended fluctuation analysis. Frontiers in Human Neuroscience, 2015, 9, 189.	1.0	29
41	Improved multi-stage neonatal seizure detection using a heuristic classifier and a data-driven post-processor. Clinical Neurophysiology, 2016, 127, 3014-3024.	0.7	29
42	Physiciansâ€™ Attitudes on Resuscitation of Extremely Premature Infants: A Systematic Review. Pediatrics, 2019, 143, .	1.0	29
43	Clinical use of cerebral oximetry in extremely preterm infants is feasible. Danish Medical Journal, 2013, 60, A4533.	0.5	28
44	Interhemispheric synchrony in the neonatal EEG revisited: activation synchrony index as a promising classifier. Frontiers in Human Neuroscience, 2014, 8, 1030.	1.0	27
45	Detection of cerebral autoregulation by near-infrared spectroscopy in neonates: performance analysis of measurement methods. Journal of Biomedical Optics, 2012, 17, 117003.	1.4	24
46	Impaired Cerebral Autoregulation Using Near-Infrared Spectroscopy and Its Relation to Clinical Outcomes in Premature Infants. Advances in Experimental Medicine and Biology, 2011, 701, 233-239.	0.8	24
47	Automated Respiration Detection from Neonatal Video Data. , 2015, , .		23
48	Surgical Therapy and Histological Abnormalities in Functional Isolated Small Bowel Obstruction and Idiopathic Gastrointestinal Perforation in the Very Low Birth Weight Infant. World Journal of Surgery, 2003, 27, 350-355.	0.8	21
49	Measurement of the liver tissue oxygenation by near-infrared spectroscopy. Intensive Care Medicine, 2005, 31, 138-141.	3.9	20
50	Automated EEG background analysis to identify neonates with hypoxic-ischemic encephalopathy treated with hypothermia at risk for adverse outcome: A pilot study. Pediatrics and Neonatology, 2019, 60, 50-58.	0.3	20
51	Applying a data-driven approach to quantify EEG maturational deviations in preterms with normal and abnormal neurodevelopmental outcomes. Scientific Reports, 2020, 10, 7288.	1.6	20
52	Cerebral autoregulation and activity after propofol for endotracheal intubation in preterm neonates. Pediatric Research, 2018, 84, 719-725.	1.1	19
53	Neurodevelopmental outcomes of very preterm and very-low-birthweight infants in a population-based clinical cohort with a definite perinatal treatment policy. European Journal of Paediatric Neurology, 2020, 28, 133-141.	0.7	19
54	Neuroblastoma in a mother and congenital central hypoventilation in her daughter: Variable expression of the same genetic disorder?. , 2000, 90, 430-431.		18

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55	Cerebrovascular autoregulation in preterm fetal growth restricted neonates. Archives of Disease in Childhood: Fetal and Neonatal Edition, 2019, 104, F467-F472.	1.4	18
56	Extremely Preterm Infant Admissions Within the SafeBoosC-III Consortium During the COVID-19 Lockdown. Frontiers in Pediatrics, 2021, 9, 647880.	0.9	18
57	New Measurements For Assessment Of Impaired Cerebral Autoregulation Using Near-Infrared Spectroscopy. Advances in Experimental Medicine and Biology, 2009, 645, 273-278.	0.8	18
58	Holistic approach for automated background EEG assessment in asphyxiated full-term infants. Journal of Neural Engineering, 2014, 11, 066007.	1.8	17
59	Neonatal factors predictive for respiratory and gastro-intestinal morbidity after esophageal atresia repair. Pediatrics and Neonatology, 2019, 60, 261-269.	0.3	17
60	The placenta in fetal thyroid hormone delivery: from normal physiology to adaptive mechanisms in complicated pregnancies. Journal of Maternal-Fetal and Neonatal Medicine, 2020, 33, 3857-3866.	0.7	17
61	Psychological support in end-of-life decision-making in neonatal intensive care units: Full population survey among neonatologists and neonatal nurses. Palliative Medicine, 2020, 34, 430-434.	1.3	16
62	Cerebral oxygen saturation and autoregulation during hypotension in extremely preterm infants. Pediatric Research, 2021, 90, 373-380.	1.1	16
63	The suppression curve as a quantitative approach for measuring brain maturation in preterm infants. Clinical Neurophysiology, 2016, 127, 2760-2765.	0.7	15
64	Long-term outcome of pre- and perinatal management of congenital head and neck tumors and malformations. International Journal of Pediatric Otorhinolaryngology, 2019, 121, 164-172.	0.4	15
65	Heart rate variability during REM and non-REM sleep in preterm neonates with and without abnormal cardiorespiratory events. Early Human Development, 2009, 85, 665-671.	0.8	14
66	A New Framework for the Assessment of Cerebral Hemodynamics Regulation in Neonates Using NIRS. Advances in Experimental Medicine and Biology, 2016, 876, 501-509.	0.8	14
67	Improving Reliability of Monitoring Background EEG Dynamics in Asphyxiated Infants. IEEE Transactions on Biomedical Engineering, 2016, 63, 973-983.	2.5	14
68	Evolution of circulating thyroid hormone levels in preterm infants during the first week of life: perinatal influences and impact on neurodevelopment. Journal of Pediatric Endocrinology and Metabolism, 2019, 32, 597-606.	0.4	14
69	Review shows that thyroid hormone substitution could benefit transient hypothyroxinaemia of prematurity but treatment strategies need to be clarified. Acta Paediatrica, International Journal of Paediatrics, 2019, 108, 792-805.	0.7	14
70	Weighted Performance Metrics for Automatic Neonatal Seizure Detection Using Multiscored EEG Data. IEEE Journal of Biomedical and Health Informatics, 2018, 22, 1114-1123.	3.9	13
71	Neonatologists and neonatal nurses have positive attitudes towards perinatal endâ€ofâ€life decisions, a nationwide survey. Acta Paediatrica, International Journal of Paediatrics, 2020, 109, 494-504.	0.7	13
72	A Deep Shared Multi-Scale Inception Network Enables Accurate Neonatal Quiet Sleep Detection With Limited EEG Channels. IEEE Journal of Biomedical and Health Informatics, 2022, 26, 1023-1033.	3.9	13

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73	Heart Rate Variability in Newborns with Hypoxic Brain Injury. Advances in Experimental Medicine and Biology, 2013, 789, 43-48.	0.8	12
74	Using Graph Theory to Assess the Interaction between Cerebral Function, Brain Hemodynamics, and Systemic Variables in Premature Infants. Complexity, 2018, 2018, 1-15.	0.9	11
75	Barriers to and Facilitators of End-of-Life Decision Making by Neonatologists and Neonatal Nurses in Neonates: A Qualitative Study. Journal of Pain and Symptom Management, 2020, 59, 599-608.e2.	0.6	11
76	Ethics of resuscitation for extremely premature infants: a systematic review of argument-based literature. Journal of Medical Ethics, 2020, , medethics-2020-106102.	1.0	11
77	Neonatologistsâ€™ decision-making for resuscitation and non-resuscitation of extremely preterm infants: ethical principles, challenges, and strategiesâ€”a qualitative study. BMC Medical Ethics, 2021, 22, 129.	1.0	11
78	Are All Amplitude-Integrated Electroencephalogram Systems Equal?. Neonatology, 2017, 112, 394-401.	0.9	10
79	Interrater agreement in visual scoring of neonatal seizures based on majority voting on a web-based system: The Neoguard EEG database. Clinical Neurophysiology, 2017, 128, 1737-1745.	0.7	10
80	Risk factors for spontaneous localized intestinal perforation in the preterm infant. Journal of Maternal-Fetal and Neonatal Medicine, 2018, 31, 2617-2623.	0.7	10
81	Motor outcome after perinatal stroke and early prediction of unilateral spastic cerebral palsy. European Journal of Paediatric Neurology, 2020, 29, 54-61.	0.7	10
82	The effect of early procedural pain in preterm infants on the maturation of electroencephalogram and heart rate variability. Pain, 2021, 162, 1556-1566.	2.0	10
83	Automated EEG inter-burst interval detection in neonates with mild to moderate postasphyxial encephalopathy. , 2012, 2012, 17-20.		9
84	Influence of the Maternal Use of Labetalol on the Neurogenic Mechanism for Cerebral Autoregulation Assessed by Means of NIRS. Advances in Experimental Medicine and Biology, 2014, 812, 173-179.	0.8	9
85	Neonatal haemodynamic effects following foetal exposure to labetalol in hypertensive disorders of pregnancy. Journal of Maternal-Fetal and Neonatal Medicine, 2017, 30, 1533-1538.	0.7	9
86	Towards integrative neuromonitoring of the surgical newborn. European Journal of Anaesthesiology, 2020, 37, 701-712.	0.7	9
87	Changes in Oxygenation Levels Precede Changes in Amplitude of the EEG in Premature Infants. Advances in Experimental Medicine and Biology, 2016, 923, 143-149.	0.8	8
88	Sonographic Development of the Pericallosal Vascularization in the First and Early Second Trimester of Pregnancy. American Journal of Neuroradiology, 2018, 39, 589-596.	1.2	8
89	Decomposition of a Multiscale Entropy Tensor for Sleep Stage Identification in Preterm Infants. Entropy, 2019, 21, 936.	1.1	8
90	Quantitation of the Concordance Between Cerebral Intravascular Oxygenation and Mean Arterial Blood Pressure for the Detection of Impaired Autoregulation. Advances in Experimental Medicine and Biology, 2003, 510, 403-408.	0.8	8

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91	A Bradycardia-Based Stress Calculator for the Neonatal Intensive Care Unit: A Multisystem Approach. Frontiers in Physiology, 2020, 11, 741.	1.3	7
92	Maturation of the Autonomic Nervous System in Premature Infants: Estimating Development Based on Heart-Rate Variability Analysis. Frontiers in Physiology, 2020, 11, 581250.	1.3	7
93	Effect of Maternal use of Labetalol on the Cerebral Autoregulation in Premature Infants. Advances in Experimental Medicine and Biology, 2013, 789, 105-111.	0.8	7
94	Nonlinear Transfer Entropy to Assess the Neurovascular Coupling in Premature Neonates. Advances in Experimental Medicine and Biology, 2020, 1232, 11-17.	0.8	7
95	THE PRENATAL MANAGEMENT OF NEURAL TUBE DEFECTS: TIME FOR A RE-APPRAISAL. Fetal and Maternal Medicine Review, 2012, 23, 158-186.	0.3	6
96	Differences in the cerebral hemodynamics regulation mechanisms of premature infants with intra-ventricular hemorrhage assessed by means of phase rectified signal averaging. , 2014, 2014, 4208-11.		6
97	Detailed statistical analysis plan for the SafeBoosC III trial: a multinational randomised clinical trial assessing treatment guided by cerebral oxygenation monitoring versus treatment as usual in extremely preterm infants. Trials, 2019, 20, 746.	0.7	6
98	Glomerular Filtration Rate in Asphyxiated Neonates Under Therapeutic Whole-Body Hypothermia, Quantified by Mannitol Clearance. Clinical Pharmacokinetics, 2021, 60, 897-906.	1.6	6
99	Central data monitoring in the multicentre randomised SafeBoosC-III trial â€“ a pragmatic approach. BMC Medical Research Methodology, 2021, 21, 160.	1.4	6
100	Neonatologistsâ€™ Resuscitation Decisions at Birth for Extremely Premature Infants. A Belgian Qualitative Study. Frontiers in Pediatrics, 2022, 10, 852073.	0.9	6
101	A post-mortem population survey on foetal-infantile end-of-life decisions: a research protocol. BMC Pediatrics, 2018, 18, 260.	0.7	5
102	Long-term outcomes of very low birth weight infants with spontaneous intestinal perforation: A retrospective case-matched cohort study. Journal of Pediatric Surgery, 2019, 54, 2084-2091.	0.8	5
103	Maternal and placental responses before preterm birth: adaptations to increase fetal thyroid hormone availability?. Journal of Maternal-Fetal and Neonatal Medicine, 2019, 32, 2746-2757.	0.7	5
104	Maturation of Esophageal Motility and Esophagogastric Junction in Preterm Infants. Neonatology, 2020, 117, 495-503.	0.9	5
105	Assessment of the Myogenic and Metabolic Mechanism Influence in Cerebral Autoregulation Using Near-Infrared Spectroscopy. Advances in Experimental Medicine and Biology, 2012, 737, 37-44.	0.8	5
106	Relation Between EEG Activity and Brain Oxygenation in Preterm Neonates. Advances in Experimental Medicine and Biology, 2017, 977, 133-139.	0.8	5
107	Data describing child development at 6 years after maternal cancer diagnosis and treatment during pregnancy. Data in Brief, 2020, 32, 106209.	0.5	4
108	From Birth to Death? A Personalist Approach to End-of-Life Care of Severely Ill Newborns. Christian Bioethics, 2013, 19, 7-24.	0.1	3

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109	Data-driven metric representing the maturation of preterm EEG. , 2015, 2015, 1492-5.		3
110	Transient hypothyroidism associated with viral Human Parechovirus encephalitis in a newborn. European Journal of Paediatric Neurology, 2015, 19, 706-710.	0.7	3
111	Pharmacokinetic/Pharmacodynamic Modelling of Allopurinol, its Active Metabolite Oxypurinol, and Biomarkers Hypoxanthine, Xanthine and Uric Acid in Hypoxic-Ischemic Encephalopathy Neonates. Clinical Pharmacokinetics, 2022, 61, 321-333.	1.6	3
112	Functional brain maturation and sleep organisation in neonates with congenital heart disease. European Journal of Paediatric Neurology, 2022, 36, 115-122.	0.7	3
113	Cerebral Oxygenation and Activity During Surgical Repair of Neonates With Congenital Diaphragmatic Hernia: A Center Comparison Analysis. Frontiers in Pediatrics, 2021, 9, 798952.	0.9	3
114	<title>Episodes of apnea and bradycardia in the preterm newborn: impact on cerebral oxygenation measured by near-infrared spectrophotometry</title>. , 1998, 3566, 112.		2
115	65: In utero oxygen reactivity in fetuses with congenital diaphragmatic hernia and correlations with postnatal respiratory function. American Journal of Obstetrics and Gynecology, 2007, 197, S30.	0.7	2
116	Continuous Deep Sedation until Death in Neonates and Infants in Flanders: A Post-Mortem Survey. Neonatology, 2021, 118, 553-561.	0.9	2
117	Improving results with percutaneous fetal endoscopic tracheal occlusion (FETO) for severe left congenital diaphragmatic hernia. American Journal of Obstetrics and Gynecology, 2004, 191, S167.	0.7	1
118	Pediatric Outcome After Maternal Cancer Diagnosed During Pregnancy. Obstetrical and Gynecological Survey, 2016, 71, 144-146.	0.2	1
119	Differences in Contraction-Induced Hemodynamics and Surface EMG in Duchenne Muscular Dystrophy. Advances in Experimental Medicine and Biology, 2016, 876, 71-77.	0.8	1
120	Erythropoietin and neonatal treatment: still more questions than answers. Pediatric Research, 2018, 84, 793-794.	1.1	1
121	A Bayesian parametric model for quantifying brain maturation from sleep-EEG in the vulnerable newborn baby. , 2018, 2018, 1-4.		1
122	Neurocardiovascular coupling in congenital diaphragmatic hernia patients undergoing different types of surgical treatment. European Journal of Anaesthesiology, 2021, Publish Ahead of Print, .	0.7	1
123	Automated detection and removal of flat line segments and large amplitude fluctuations in neonatal electroencephalography. PeerJ, 0, 10, e13734.	0.9	1
124	Pulmonary effects of antenatal intratracheal VEGF administration in preterm fetal rabbits. American Journal of Obstetrics and Gynecology, 2006, 195, S168.	0.7	0
125	1363 Empirical Mode Decomposition to Assess Coupling Between Infants Cry Signals and Pain Expression Quantified by a Pain Score. Pediatric Research, 2010, 68, 675-675.	1.1	0
126	Clinical Applications of Near-Infrared Spectroscopy in Neonates. , 2012, , 173-185.		0

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127	The suppression curve as a new representation of the premature EEG maturation. BMC Neuroscience, 2015, 16, .	0.8	0
128	DOSE-FINDING STUDY AND PHARMACODYNAMIC ASSESSMENT OF PROPOFOL FOR (SEMI-)ELECTIVE INTUBATION IN NEONATES. Archives of Disease in Childhood, 2016, 101, e1.9-e1.	1.0	0
129	Clinical Applications of Near-Infrared Spectroscopy in Neonates. , 2019, , 311-326.		0
130	Cerebral venous volume changes and pressure autoregulation in critically ill infants: an editorial comment. Journal of Perinatology, 2020, 40, 693-694.	0.9	0