Felix Scholkmann

List of Publications by Year
in descending order

106 papers	6,084 citations	147801 31 h-index	79698 73 g-index
109 all docs	109 docs citations	109 times ranked	5059 citing authors

#	Article	IF	Citations
1	Autopsy-Based Pulmonary and Vascular Pathology: Pulmonary Endotheliitis and Multi-Organ Involvement in COVID-19 Associated Deaths. Respiration, 2022, 101, 155-165.	2.6	25
2	Reply to: Role of ambient humidity underestimated in research on correlation between radioactive decay rates and space weather. Scientific Reports, 2022, 12, 2530.	3.3	1
3	Pulse oximetry, racial bias and statistical bias: further improvements of pulse oximetry are necessary. Annals of Intensive Care, 2022, 12, 19.	4.6	5
4	Characterizing reproducibility of cerebral hemodynamic responses when applying short-channel regression in functional near-infrared spectroscopy. Neurophotonics, 2022, 9, 015004.	3.3	9
5	A four-month cycle in COVID-19 cases in Switzerland. Innovation(China), 2022, 3, 100232.	9.1	0
6	Systemic physiology augmented functional near-infrared spectroscopy hyperscanning: a first evaluation investigating entrainment of spontaneous activity of brain and body physiology between subjects. Neurophotonics, 2022, 9, 026601.	3.3	12
7	The Role of Systemic Physiology in Individual Hemodynamic Responses Measured on the Head Due to Long-Term Stimulation Involving Colored Light Exposure and a Cognitive Task: An SPA-fNIRS Study. Brain Sciences, 2022, 12, 597.	2.3	6
8	No alteration of back muscle oxygenation during isometric exercise in individuals with non-specific low back pain. Scientific Reports, 2022, 12, 8306.	3.3	2
9	Changes in Water Properties in Human Tissue after Double Filtration Plasmapheresisâ€"A Case Study. Molecules, 2022, 27, 3947.	3.8	2
10	Systemic physiology augmented functional near-infrared spectroscopy: a powerful approach to study the embodied human brain. Neurophotonics, 2022, 9, .	3.3	26
11	Best practices for fNIRS publications. Neurophotonics, 2021, 8, 012101.	3.3	142
12	Long-Term Blue Light Exposure Changes Frontal and Occipital Cerebral Hemodynamics: Not All Subjects React the Same. Advances in Experimental Medicine and Biology, 2021, 1269, 217-222.	1.6	5
13	New Parents Experienced Lower Parenting Self-Efficacy during the COVID-19 Pandemic Lockdown. Children, 2021, 8, 79.	1.5	20
14	Individual Differences in Hemodynamic Responses Measured on the Head Due to a Long-Term Stimulation Involving Colored Light Exposure and a Cognitive Task: A SPA-fNIRS Study. Brain Sciences, 2021, 11, 54.	2.3	22
15	COVID-19: The Significance of Platelets, Mitochondria, Vitamin D, Serotonin and the Gut Microbiota. Current Medicinal Chemistry, 2021, 28, 7634-7657.	2.4	6
16	Color-dependent changes in humans during a verbal fluency task under colored light exposure assessed by SPA-fNIRS. Scientific Reports, 2021, 11, 9654.	3.3	16
17	Newborn Incubators Do Not Protect from High Noise Levels in the Neonatal Intensive Care Unit and Are Relevant Noise Sources by Themselves. Children, 2021, 8, 704.	1.5	6
18	Influence of study design on effects of mask wearing on fMRI BOLD contrast and systemic physiology â€" A comment on Law etÂal. (2021). NeuroImage, 2021, 244, 118549.	4.2	3

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19	The Role of Methemoglobin and Carboxyhemoglobin in COVID-19: A Review. Journal of Clinical Medicine, 2021, 10, 50.	2.4	24
20	Cerebral and systemic physiological effects of wearing face masks in young adults. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	20
21	Myelin sheath and cyanobacterial thylakoids as concentric multilamellar structures with similar bioenergetic properties. Open Biology, 2021, 11, 210177.	3.6	3
22	Comparison of Two NIRS Tissue Oximeters (Moxy and Nimo) for Non-Invasive Assessment of Muscle Oxygenation and Perfusion. Advances in Experimental Medicine and Biology, 2020, 1232, 253-259.	1.6	7
23	The RONO (Rank-Order-Normalization) Procedure for Power-Spectrum Analysis of Datasets with Non-Normal Distributions. Algorithms, 2020, 13, 157.	2.1	2
24	Microbial Colonization From the Fetus to Early Childhoodâ€"A Comprehensive Review. Frontiers in Cellular and Infection Microbiology, 2020, 10, 573735.	3.9	42
25	New Directions in Exercise Prescription: Is There a Role for Brain-Derived Parameters Obtained by Functional Near-Infrared Spectroscopy?. Brain Sciences, 2020, 10, 342.	2.3	20
26	Electron microscopy of SARS-CoV-2: a challenging task â€“ Authors' reply. Lancet, The, 2020, 395, e100.	13.7	64
27	Correlations between Background Radiation Inside a Multilayer Interleaving Structure, Geomagnetic Activity, and Cosmic Radiation: A Fourth-Order Cumulant-Based Correlation Analysis. Mathematics, 2020, 8, 344.	2.2	6
28	Frontal cerebral oxygenation asymmetry: intersubject variability and dependence on systemic physiology, season, and time of day. Neurophotonics, 2020, 7, 1.	3.3	16
29	Short-channel regression in functional near-infrared spectroscopy is more effective when considering heterogeneous scalp hemodynamics. Neurophotonics, 2020, 7, 035011.	3.3	46
30	Right-Left Asymmetry of Prefrontal Cerebral Oxygenation: Does it Depend on Systemic Physiological Activity, Absolute Tissue Oxygenation or Hemoglobin Concentration?. Advances in Experimental Medicine and Biology, 2020, 1232, 105-112.	1.6	4
31	A Multi-Layered Study on Harmonic Oscillations in Mammalian Genomics and Proteomics. International Journal of Molecular Sciences, 2019, 20, 4585.	4.1	9
32	A Distinct Role of the Autonomic Nervous System in Modulating the Function of Lymphatic Vessels under Physiological and Tumor-Draining Conditions. Cell Reports, 2019, 27, 3305-3314.e13.	6.4	38
33	Reference Ranges for Hemoglobin and Hematocrit Levels in Neonates as a Function of Gestational Age (22â€"42 Weeks) and Postnatal Age (0â€"29 Days): Mathematical Modeling. Children, 2019, 6, 38.	1.5	7
34	The Pulse-Respiration Quotient: A Powerful but Untapped Parameter for Modern Studies About Human Physiology and Pathophysiology. Frontiers in Physiology, 2019, 10, 371.	2.8	35
35	Exposure to High-Frequency Sound and Ultrasound in Public Places: Examples from Zurich, Switzerland. Acoustics, 2019, 1, 816-824.	1.4	5
36	Characterization of the optical properties of color pastes for the design of optical phantoms mimicking biological tissue. Journal of Biophotonics, 2019, 12, e201800300.	2.3	5

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37	Cerebral hemodynamic responses in preterm-born neonates to visual stimulation: classification according to subgroups and analysis of frontotemporalâ€“occipital functional connectivity. Neurophotonics, 2019, 6, 1.	3.3	13
38	Absorption spectra of early stool from preterm infants need to be considered in abdominal NIRS oximetry. Biomedical Optics Express, 2019, 10, 2784.	2.9	7
39	Order out of Randomness: Self-Organization Processes in Astrophysics. Space Science Reviews, 2018, 214, 1.	8.1	38
40	Applications of Functional Near-Infrared Spectroscopy (fNIRS) Neuroimaging in Exerciseâ€“Cognition Science: A Systematic, Methodology-Focused Review. Journal of Clinical Medicine, 2018, 7, 466.	2.4	263
41	Absolute Values of Optical Properties (Î¼a, Î¼Î„s, Î¼eff and DPF) of Human Head Tissue: Dependence on Head Region and Individual. Advances in Experimental Medicine and Biology, 2018, 1072, 325-330.	1.6	8
42	Changes in Spinal Muscle Oxygenation and Perfusion During the Biering-SÃ¸rensen Test: Preliminary Results of a Study Employing NIRS-Based Muscle Oximetry. Advances in Experimental Medicine and Biology, 2018, 1072, 103-109.	1.6	6
43	Impact of Changes in Systemic Physiology on fNIRS/NIRS Signals: Analysis Based on Oblique Subspace Projections Decomposition. Advances in Experimental Medicine and Biology, 2018, 1072, 119-125.	1.6	12
44	In Vitro Comparisons of Near-Infrared Spectroscopy Oximeters: Impact of Slow Changes in Scattering of Liquid Phantoms. Advances in Experimental Medicine and Biology, 2018, 1072, 375-379.	1.6	5
45	Systematic Analysis of Mouse Genome Reveals Distinct Evolutionary and Functional Properties Among Circadian and Ultradian Genes. Frontiers in Physiology, 2018, 9, 1178.	2.8	19
46	Synchronized Oscillations of Arterial Oxygen Saturation, Cerebral Tissue Oxygenation and Heart Rate in Preterm Neonates: Investigation of Long-Term Measurements with Multiple Einsteinâ€™s Cross Wavelet Analysis. Advances in Experimental Medicine and Biology, 2018, 1072, 157-161.	1.6	0
47	Long-Term Changes in Optical Properties (Î¼a, Î¼â€²s, Î¼eff and DPF) of Human Head Tissue During Functional Neuroimaging Experiments. Advances in Experimental Medicine and Biology, 2018, 1072, 331-337.	1.6	8
48	Liquid Blood Phantoms to Validate NIRS Oximeters: Yeast Versus Nitrogen for Deoxygenation. Advances in Experimental Medicine and Biology, 2018, 1072, 381-385.	1.6	4
49	Heart Rate Variability as a Prognostic Factor for Cancer Survival â€“ A Systematic Review. Frontiers in Physiology, 2018, 9, 623.	2.8	78
50	Electromagnetic elds and optomechanics in cancer diagnostics and treatment. Frontiers in Bioscience - Landmark, 2018, 23, 1391-1406.	3.0	7
51	Current Status and Issues Regarding Pre-processing of fNIRS Neuroimaging Data: An Investigation of Diverse Signal Filtering Methods Within a General Linear Model Framework. Frontiers in Human Neuroscience, 2018, 12, 505.	2.0	251
52	In vivo precision assessment of a near-infrared spectroscopy-based tissue oximeter (OxyPrem v1.3) in neonates considering systemic hemodynamic fluctuations. Journal of Biomedical Optics, 2018, 23, 1.	2.6	24
53	Permutation entropy based time series analysis: Equalities in the input signal can lead to false conclusions. Physics Letters, Section A: General, Atomic and Solid State Physics, 2017, 381, 1883-1892.	2.1	100
54	Oscillations of ultra-weak photon emission from cancer and non-cancer cells stressed by culture medium change and TNF-Î±. Scientific Reports, 2017, 7, 11249.	3.3	10

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55	Phosphenes, retinal discrete dark noise, negative afterimages and retinogeniculate projections: A new explanatory framework based on endogenous ocular luminescence. Progress in Retinal and Eye Research, 2017, 60, 101-119.	15.5	24
56	Functional near-infrared spectroscopy in movement science: a systematic review on cortical activity in postural and walking tasks. Neurophotonics, 2017, 4, 041403.	3.3	176
57	Possible role of biochemiluminescent photons for lysergic acid diethylamide (LSD)-induced phosphenes and visual hallucinations. Reviews in the Neurosciences, 2017, 28, 77-86.	2.9	3
58	Exoplanet Predictions Based on Harmonic Orbit Resonances. Galaxies, 2017, 5, 56.	3.0	3
59	Non-neuronal evoked and spontaneous hemodynamic changes in the anterior temporal region of the human head may lead to misinterpretations of functional near-infrared spectroscopy signals. Neurophotonics, 2017, 5, 1.	3.3	48
60	Wearable and modular functional near-infrared spectroscopy instrument with multidistance measurements at four wavelengths. Neurophotonics, 2017, 4, 1.	3.3	57
61	Signal Processing in Functional Near-Infrared Spectroscopy (fNIRS): Methodological Differences Lead to Different Statistical Results. Frontiers in Human Neuroscience, 2017, 11, 641.	2.0	125
62	Effect of short-term colored-light exposure on cerebral hemodynamics and oxygenation, and systemic physiological activity. Neurophotonics, 2017, 4, 1.	3.3	40
63	Cortical Sensorimotor Processing of Painful Pressure in Patients with Chronic Lower Back Painâ€"An Optical Neuroimaging Study using fNIRS. Frontiers in Human Neuroscience, 2016, 10, 578.	2.0	20
64	The Physical Mechanism for Retinal Discrete Dark Noise: Thermal Activation or Cellular Ultraweak Photon Emission?. PLoS ONE, 2016, 11, e0148336.	2.5	12
65	In vivo visualization and quantification of collecting lymphatic vessel contractility using near-infrared imaging. Scientific Reports, 2016, 6, 22930.	3.3	33
66	Different mechanosensory stimulations of the lower back elicit specific changes in hemodynamics and oxygenation in cortical sensorimotor areasâ€"A <scp>fNIRS</scp> study. Brain and Behavior, 2016, 6, e00575.	2.2	15
67	Modelling confounding effects from extracerebral contamination and systemic factors on functional near-infrared spectroscopy. NeuroImage, 2016, 143, 91-105.	4.2	99
68	Long range physical cell-to-cell signalling via mitochondria inside membrane nanotubes: a hypothesis. Theoretical Biology and Medical Modelling, 2016, 13, 16.	2.1	25
69	Relationship between intelligence and spectral characteristics of brain biophoton emission: Correlation does not automatically imply causation. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E5540-1.	7.1	12
70	The circadecadal rhythm of oscillation of umbilical cord blood parameters correlates with geomagnetic activity â€“ An analysis of long-term measurements (1999â€“2011). Chronobiology International, 2016, 33, 1136-1147.	2.0	8
71	False positives and false negatives in functional near-infrared spectroscopy: issues, challenges, and the way forward. Neurophotonics, 2016, 3, 031405.	3.3	378
72	Short-term pulse rate variability is better characterized by functional near-infrared spectroscopy than by photoplethysmography. Journal of Biomedical Optics, 2016, 21, 091308.	2.6	12

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73	Characterizing Fluctuations of Arterial and Cerebral Tissue Oxygenation in Preterm Neonates by Means of Data Analysis Techniques for Nonlinear Dynamical Systems. Advances in Experimental Medicine and Biology, 2016, 876, 511-519.	1.6	5
74	Phosphene perception is due to the ultra-weak photon emission produced in various parts of the visual system: glutamate in the focus. Reviews in the Neurosciences, 2016, 27, 291-299.	2.9	9
75	Endogenous spontaneous ultraweak photon emission in the formation of eye-specific retinogeniculate projections before birth. Reviews in the Neurosciences, 2016, 27, 411-419.	2.9	6
76	False positives and false negatives in functional near-infrared spectroscopy: issues, challenges, and the way forward. Neurophotonics, 2016, 3, 030401.	3.3	47
77	A New Approach for Automatic Removal of Movement Artifacts in Near-Infrared Spectroscopy Time Series by Means of Acceleration Data. Algorithms, 2015, 8, 1052-1075.	2.1	24
78	Comment on â€˜A new method for fusion, denoising and enhancement of x-ray images retrieved from Talbotâ€“Lau grating interferometryâ€™. Physics in Medicine and Biology, 2015, 60, 925-928.	3.0	1
79	Two emerging topics regarding long-range physical signaling in neurosystems: Membrane nanotubes and electromagnetic fields. Journal of Integrative Neuroscience, 2015, 14, 135-153.	1.7	15
80	Dog behavior but not frontal brain reaction changes in repeated positive interactions with a human: A non-invasive pilot study using functional near-infrared spectroscopy (fNIRS). Behavioural Brain Research, 2015, 281, 172-176.	2.2	22
81	Human Intracranial High Frequency Oscillations (HFOs) Detected by Automatic Time-Frequency Analysis. PLoS ONE, 2014, 9, e94381.	2.5	128
82	Cerebral hemodynamic and oxygenation changes induced by inner and heard speech: a study combining functional near-infrared spectroscopy and capnography. Journal of Biomedical Optics, 2014, 19, 017002.	2.6	28
83	Physiological effects of mechanical pain stimulation at the lower back measured by functional near-infrared spectroscopy and capnography. Journal of Integrative Neuroscience, 2014, 13, 121-142.	1.7	23
84	A review on continuous wave functional near-infrared spectroscopy and imaging instrumentation and methodology. NeuroImage, 2014, 85, 6-27.	4.2	1,371
85	A new method for fusion, denoising and enhancement of x-ray images retrieved from Talbotâ€“Lau grating interferometry. Physics in Medicine and Biology, 2014, 59, 1425-1440.	3.0	17
86	The Influence of Inner and Heard Speech in Arts Speech Therapy on Brain Oxygenation and Hemodynamics. Journal of Alternative and Complementary Medicine, 2014, 20, A78-A78.	2.1	0
87	Measuring tissue hemodynamics and oxygenation by continuous-wave functional near-infrared spectroscopyâ€”how robust are the different calculation methods against movement artifacts?. Physiological Measurement, 2014, 35, 717-734.	2.1	67
88	Additional evidence supporting the view of the neural signal as a propagating density pulse â€” A comment on Barz et al. (2013). Medical Hypotheses, 2014, 82, 243.	1.5	9
89	The relationship between sympathetic nervous activity and cerebral hemodynamics and oxygenation: A study using skin conductance measurement and functional near-infrared spectroscopy. Behavioural Brain Research, 2014, 270, 95-107.	2.2	34
90	Error detection and error memory in spatial navigation as reflected by electrodermal activity. Cognitive Processing, 2013, 14, 377-389.	1.4	2

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91	General equation for the differential pathlength factor of the frontal human head depending on wavelength and age. Journal of Biomedical Optics, 2013, 18, 105004.	2.6	269
92	A new methodical approach in neuroscience: assessing inter-personal brain coupling using functional near-infrared imaging (fNIRI) hyperscanning. Frontiers in Human Neuroscience, 2013, 7, 813.	2.0	111
93	The Effect of Venous and Arterial Occlusion of the Arm on Changes in Tissue Hemodynamics, Oxygenation, and Ultra-Weak Photon Emission. Advances in Experimental Medicine and Biology, 2013, 765, 257-264.	1.6	3
94	The Effect of Inner Speech on Arterial CO2 and Cerebral Hemodynamics and Oxygenation: A Functional NIRS Study. Advances in Experimental Medicine and Biology, 2013, 789, 81-87.	1.6	37
95	Non-chemical and non-contact cell-to-cell communication: a short review. American Journal of Translational Research (discontinued), 2013, 5, 586-93.	0.0	29
96	Multimodal recording of brain activity in term newborns during photic stimulation by near-infrared spectroscopy and electroencephalography. Journal of Biomedical Optics, 2012, 17, 086011.	2.6	9
97	An Efficient Algorithm for Automatic Peak Detection in Noisy Periodic and Quasi-Periodic Signals. Algorithms, 2012, 5, 588-603.	2.1	275
98	Trial-to-trial variability differentiates motor imagery during observation between low versus high responders: A functional near-infrared spectroscopy study. Behavioural Brain Research, 2012, 229, 29-40.	2.2	34
99	Extension of mental preparation positively affects motor imagery as compared to motor execution: A functional near-infrared spectroscopy study. Cortex, 2012, 48, 593-603.	2.4	27
100	Between-brain coherence during joint n-back task performance: A two-person functional near-infrared spectroscopy study. Behavioural Brain Research, 2012, 234, 212-222.	2.2	77
101	Between-brain connectivity during imitation measured by fNIRS. NeuroImage, 2012, 63, 212-222.	4.2	165
102	Assessment of Potential Short-Term Effects of Intermittent UMTS Electromagnetic Fields on Blood Circulation in an Exploratory Study, Using Near-Infrared Imaging. Advances in Experimental Medicine and Biology, 2012, 737, 83-88.	1.6	7
103	Enhancement of motor imageryâ€related cortical activation during firstâ€person observation measured by functional nearâ€infrared spectroscopy. European Journal of Neuroscience, 2012, 35, 1513-1521.	2.6	11
104	Assessment of intermittent UMTS electromagnetic field effects on blood circulation in the human auditory region using a nearâ€infrared system. Bioelectromagnetics, 2012, 33, 40-54.	1.6	15
105	Testing the potential of a virtual reality neurorehabilitation system during performance of observation, imagery and imitation of motor actions recorded by wireless functional near-infrared spectroscopy (fNIRS). Journal of NeuroEngineering and Rehabilitation, 2010, 7, 57.	4.6	77
106	How to detect and reduce movement artifacts in near-infrared imaging using moving standard deviation and spline interpolation. Physiological Measurement, 2010, 31, 649-662.	2.1	469