

# Sergio Fantini

## List of Publications by Citations

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58  
papers

1,637  
citations

19  
h-index

39  
g-index

67  
ext. papers

2,103  
ext. citations

3  
avg, IF

5.09  
L-index

#	Paper	IF	Citations
58	Comment on the modified Beer-Lambert law for scattering media. <i>Physics in Medicine and Biology</i> , <b>2004</b> , 49, N255-7	3.8	189
57	Non-invasive optical monitoring of the newborn piglet brain using continuous-wave and frequency-domain spectroscopy. <i>Physics in Medicine and Biology</i> , <b>1999</b> , 44, 1543-63	3.8	180
56	Semi-infinite-geometry boundary problem for light migration in highly scattering media: a frequency-domain study in the diffusion approximation. <i>Journal of the Optical Society of America B: Optical Physics</i> , <b>1994</b> , 11, 2128	1.7	165
55	Cerebral blood flow and autoregulation: current measurement techniques and prospects for noninvasive optical methods. <i>Neurophotonics</i> , <b>2016</b> , 3, 031411	3.9	141
54	Influence of a superficial layer in the quantitative spectroscopic study of strongly scattering media. <i>Applied Optics</i> , <b>1998</b> , 37, 7447-58	1.7	113
53	Cerebral autoregulation in the microvasculature measured with near-infrared spectroscopy. <i>Journal of Cerebral Blood Flow and Metabolism</i> , <b>2015</b> , 35, 959-66	7.3	68
52	Dynamic model for the tissue concentration and oxygen saturation of hemoglobin in relation to blood volume, flow velocity, and oxygen consumption: Implications for functional neuroimaging and coherent hemodynamics spectroscopy (CHS). <i>NeuroImage</i> , <b>2014</b> , 85 Pt 1, 202-21	7.9	63
51	Phase-amplitude investigation of spontaneous low-frequency oscillations of cerebral hemodynamics with near-infrared spectroscopy: a sleep study in human subjects. <i>NeuroImage</i> , <b>2012</b> , 63, 1571-84	7.9	62
50	Near-infrared optical mammography for breast cancer detection with intrinsic contrast. <i>Annals of Biomedical Engineering</i> , <b>2012</b> , 40, 398-407	4.7	45
49	Optical characterization of two-layered turbid media for non-invasive, absolute oximetry in cerebral and extracerebral tissue. <i>PLoS ONE</i> , <b>2013</b> , 8, e64095	3.7	40
48	DISCRIMINATION OF MENTAL WORKLOAD LEVELS IN HUMAN SUBJECTS WITH FUNCTIONAL NEAR-INFRARED SPECTROSCOPY. <i>Journal of Innovative Optical Health Sciences</i> , <b>2008</b> , 01, 227-237	1.2	40
47	New optical probe designs for absolute (self-calibrating) NIR tissue hemoglobin measurements <b>1999</b> ,		40
46	A haemodynamic model for the physiological interpretation of in vivo measurements of the concentration and oxygen saturation of haemoglobin. <i>Physics in Medicine and Biology</i> , <b>2002</b> , 47, N249-57 <sup>3.8</sup>		37
45	Quantitative Biomedical Optics: Theory, Methods, and Applications <b>2016</b> ,		37
44	Broadband optical mammography: chromophore concentration and hemoglobin saturation contrast in breast cancer. <i>PLoS ONE</i> , <b>2015</b> , 10, e0117322	3.7	33
43	Absolute measurement of cerebral optical coefficients, hemoglobin concentration and oxygen saturation in old and young adults with near-infrared spectroscopy. <i>Journal of Biomedical Optics</i> , <b>2012</b> , 17, 081406-1	3.5	32
42	Practical steps for applying a new dynamic model to near-infrared spectroscopy measurements of hemodynamic oscillations and transient changes: implications for cerebrovascular and functional brain studies. <i>Academic Radiology</i> , <b>2014</b> , 21, 185-96	4.3	30

41	Frequency-Domain Techniques for Cerebral and Functional Near-Infrared Spectroscopy. <i>Frontiers in Neuroscience</i> , <b>2020</b> , 14, 300	5.1	29
40	Reduced speed of microvascular blood flow in hemodialysis patients versus healthy controls: a coherent hemodynamics spectroscopy study. <i>Journal of Biomedical Optics</i> , <b>2014</b> , 19, 026005	3.5	22
39	Perspective: Prospects of non-invasive sensing of the human brain with diffuse optical imaging. <i>APL Photonics</i> , <b>2018</b> , 3,	5.2	19
38	A new hemodynamic model shows that temporal perturbations of cerebral blood flow and metabolic rate of oxygen cannot be measured individually using functional near-infrared spectroscopy. <i>Physiological Measurement</i> , <b>2014</b> , 35, N1-9	2.9	18
37	Perturbation theory for the diffusion equation by use of the moments of the generalized temporal point-spread function. I. Theory. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>2006</b> , 23, 2105-18	1.8	17
36	Spatial and spectral information in optical mammography. <i>Technology in Cancer Research and Treatment</i> , <b>2005</b> , 4, 471-82	2.7	15
35	Dual-slope method for enhanced depth sensitivity in diffuse optical spectroscopy. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>2019</b> , 36, 1743-1761	1.8	15
34	Phase dual-slopes in frequency-domain near-infrared spectroscopy for enhanced sensitivity to brain tissue: First applications to human subjects. <i>Journal of Biophotonics</i> , <b>2020</b> , 13, e201960018	3.1	15
33	Perturbation theory for the diffusion equation by use of the moments of the generalized temporal point-spread function. III. Frequency-domain and time-domain results. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>2010</b> , 27, 1723-42	1.8	14
32	Low-resolution mapping of the effective attenuation coefficient of the human head: a multidistance approach applied to high-density optical recordings. <i>Neurophotonics</i> , <b>2017</b> , 4, 021103	3.9	10
31	Blood-pressure-induced oscillations of deoxy- and oxyhemoglobin concentrations are in-phase in the healthy breast and out-of-phase in the healthy brain. <i>Journal of Biomedical Optics</i> , <b>2016</b> , 21, 101410	3.5	10
30	NEAR-INFRARED, BROAD-BAND SPECTRAL IMAGING OF THE HUMAN BREAST FOR QUANTITATIVE OXIMETRY: APPLICATIONS TO HEALTHY AND CANCEROUS BREASTS. <i>Journal of Innovative Optical Health Sciences</i> , <b>2010</b> , 03, 267-277	1.2	10
29	Depth dependence of coherent hemodynamics in the human head. <i>Journal of Biomedical Optics</i> , <b>2018</b> , 23, 1-9	3.5	10
28	Multi-distance frequency-domain optical measurements of coherent cerebral hemodynamics. <i>Photonics</i> , <b>2019</b> , 6,	2.2	9
27	Quantitative measurements of cerebral blood flow with near-infrared spectroscopy. <i>Biomedical Optics Express</i> , <b>2019</b> , 10, 2117-2134	3.5	9
26	Transformational change in the field of diffuse optics: From going bananas to going nuts. <i>Journal of Innovative Optical Health Sciences</i> , <b>2020</b> , 13, 1930013	1.2	9
25	Frequency-resolved analysis of coherent oscillations of local cerebral blood volume, measured with near-infrared spectroscopy, and systemic arterial pressure in healthy human subjects. <i>PLoS ONE</i> , <b>2019</b> , 14, e0211710	3.7	8
24	Cerebral blood volume and vasodilation are independently diminished by aging and hypertension: a near infrared spectroscopy study. <i>Journal of Alzheimer's Disease</i> , <b>2014</b> , 42 Suppl 3, S189-98	4.3	8

23	Coherent hemodynamics spectroscopy in a single step. <i>Biomedical Optics Express</i> , <b>2014</b> , 5, 3403-16	3.5	7
22	Optical Mammography in Patients with Breast Cancer Undergoing Neoadjuvant Chemotherapy: Individual Clinical Response Index. <i>Academic Radiology</i> , <b>2017</b> , 24, 1240-1255	4.3	6
21	Optical mammography: bilateral breast symmetry in hemoglobin saturation maps. <i>Journal of Biomedical Optics</i> , <b>2016</b> , 21, 101403	3.5	6
20	Dual-slope imaging in highly scattering media with frequency-domain near-infrared spectroscopy. <i>Optics Letters</i> , <b>2020</b> , 45, 4464-4467	3	6
19	Dual-Slope Diffuse Reflectance Instrument for Calibration-Free Broadband Spectroscopy. <i>Applied Sciences (Switzerland)</i> , <b>2021</b> , 11, 1757	2.6	6
18	Tracking Brain Development From Neonates to the Elderly by Hemoglobin Phase Measurement Using Functional Near-Infrared Spectroscopy. <i>IEEE Journal of Biomedical and Health Informatics</i> , <b>2021</b> , 25, 2497-2509	7.2	5
17	The meaning of "coherent" and its quantification in coherent hemodynamics spectroscopy. <i>Journal of Innovative Optical Health Sciences</i> , <b>2018</b> , 11,	1.2	5
16	Nonlinear extension of a hemodynamic linear model for coherent hemodynamics spectroscopy. <i>Journal of Theoretical Biology</i> , <b>2016</b> , 389, 132-45	2.3	4
15	Photon path distributions in turbid media: applications for imaging <b>1995</b> , 2389, 340		4
14	Design of a source-detector array for dual-slope diffuse optical imaging. <i>Review of Scientific Instruments</i> , <b>2020</b> , 91, 093702	1.7	4
13	Sensitivity of frequency-domain optical measurements to brain hemodynamics: simulations and human study of cerebral blood flow during hypercapnia. <i>Biomedical Optics Express</i> , <b>2021</b> , 12, 766-789	3.5	4
12	Structural heterogeneity and old-growthness: A first regional-scale assessment of Sardinian forests. <i>Annals of Forest Research</i> , <b>2021</b> , 63, 103-120	2.4	3
11	Biomedical engineering continues to make the future. <i>IEEE Pulse</i> , <b>2011</b> , 2, 70-3	0.7	2
10	Near-infrared signals associated with electrical stimulation of peripheral nerves. <i>Proceedings of SPIE</i> , <b>2009</b> , 7174,	1.7	2
9	Noninvasive Optical Measurements of Dynamic Cerebral Autoregulation by Inducing Oscillatory Cerebral Hemodynamics. <i>Frontiers in Neurology</i> , <b>2021</b> , 12, 745987	4.1	2
8	Broadband absorption spectroscopy of heterogeneous biological tissue. <i>Applied Optics</i> , <b>2021</b> , 60, 7552-7562		2
7	Study of capillary transit time distribution in coherent hemodynamics spectroscopy. <i>Journal of Innovative Optical Health Sciences</i> , <b>2015</b> , 08, 1550025	1.2	1
6	COHERENT HEMODYNAMICS SPECTROSCOPY BASED ON A PACED BREATHING PARADIGM □ REVISITED. <i>Journal of Innovative Optical Health Sciences</i> , <b>2014</b> , 07, 1450013	1.2	1

5	Incorporating the visibility analysis of fire lookouts for old-growth wood fire risk reduction in the Mediterranean island of Sardinia. <i>Geocarto International</i> ,1-9	2.7	1
4	Broadband optical mammography instrument for depth-resolved imaging and local dynamic measurements. <i>Review of Scientific Instruments</i> , <b>2016</b> , 87, 024302	1.7	1
3	Domain adaptation for robust workload level alignment between sessions and subjects using fNIRS. <i>Journal of Biomedical Optics</i> , <b>2021</b> , 26,	3.5	1
2	Folate deficiency impairs brain oxygen delivery in rat. <i>FASEB Journal</i> , <b>2010</b> , 24, lb392	0.9	
1	Aging diminishes cerebral blood volume and vasodilation in rats: non-invasive absolute measurements by Near Infrared Spectroscopy. <i>FASEB Journal</i> , <b>2013</b> , 27, 1186.2	0.9	