

Vivek J Srinivasan

List of Publications by Year in descending order

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Version: 2024-02-01

93
papers

6,697
citations

126708

33
h-index

76769

74
g-index

94
all docs

94
docs citations

94
times ranked

5338
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Ultra-high-resolution, high-speed, Fourier domain optical coherence tomography and methods for dispersion compensation. <i>Optics Express</i> , 2004, 12, 2404. | 1.7 | 1,095 |
| 2 | Ultra-high speed Spectral / Fourier domain OCT ophthalmic imaging at 70,000 to 312,500 axial scans per second. <i>Optics Express</i> , 2008, 16, 15149. | 1.7 | 429 |
| 3 | Two-photon high-resolution measurement of partial pressure of oxygen in cerebral vasculature and tissue. <i>Nature Methods</i> , 2010, 7, 755-759. | 9.0 | 415 |
| 4 | High-Definition and 3-dimensional Imaging of Macular Pathologies with High-speed Ultra-high-Resolution Optical Coherence Tomography. <i>Ophthalmology</i> , 2006, 113, 2054-2065.e3. | 2.5 | 310 |
| 5 | Extracellular carbonic anhydrase mediates hemorrhagic retinal and cerebral vascular permeability through prekallikrein activation. <i>Nature Medicine</i> , 2007, 13, 181-188. | 15.2 | 304 |
| 6 | Ultra-high-Speed Optical Coherence Tomography for Three-Dimensional and En Face Imaging of the Retina and Optic Nerve Head. , 2008, 49, 5103. | | 283 |
| 7 | Characterization of Outer Retinal Morphology with High-Speed, Ultra-high-Resolution Optical Coherence Tomography. , 2008, 49, 1571. | | 261 |
| 8 | Quantitative cerebral blood flow with Optical Coherence Tomography. <i>Optics Express</i> , 2010, 18, 2477. | 1.7 | 239 |
| 9 | Noninvasive Volumetric Imaging and Morphometry of the Rodent Retina with High-Speed, Ultra-high-Resolution Optical Coherence Tomography. , 2006, 47, 5522. | | 177 |
| 10 | â€œOvershootâ€ of O_2 Is Required to Maintain Baseline Tissue Oxygenation at Locations Distal to Blood Vessels. <i>Journal of Neuroscience</i> , 2011, 31, 13676-13681. | 1.7 | 175 |
| 11 | Rapid volumetric angiography of cortical microvasculature with optical coherence tomography. <i>Optics Letters</i> , 2010, 35, 43. | 1.7 | 165 |
| 12 | Large arteriolar component of oxygen delivery implies a safe margin of oxygen supply to cerebral tissue. <i>Nature Communications</i> , 2014, 5, 5734. | 5.8 | 165 |
| 13 | Optical coherence microscopy for deep tissue imaging of the cerebral cortex with intrinsic contrast. <i>Optics Express</i> , 2012, 20, 2220. | 1.7 | 155 |
| 14 | OCT methods for capillary velocimetry. <i>Biomedical Optics Express</i> , 2012, 3, 612. | 1.5 | 143 |
| 15 | Frontiers in Optical Imaging of Cerebral Blood Flow and Metabolism. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2012, 32, 1259-1276. | 2.4 | 137 |
| 16 | Noninvasive, in vivo imaging of subcortical mouse brain regions with 17â€m optical coherence tomography. <i>Optics Letters</i> , 2015, 40, 4911. | 1.7 | 110 |
| 17 | Quantitative microvascular hemoglobin mapping using visible light spectroscopic Optical Coherence Tomography. <i>Biomedical Optics Express</i> , 2015, 6, 1429. | 1.5 | 95 |
| 18 | Optical Coherence Tomography Scan Circle Location and Mean Retinal Nerve Fiber Layer Measurement Variability. , 2008, 49, 2315. | | 94 |

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|----|---|-----|-----------|
| 19 | Multiparametric, Longitudinal Optical Coherence Tomography Imaging Reveals Acute Injury and Chronic Recovery in Experimental Ischemic Stroke. PLoS ONE, 2013, 8, e71478. | 1.1 | 73 |
| 20 | Real time en face Fourier-domain optical coherence tomography with direct hardware frequency demodulation. Optics Letters, 2008, 33, 2556. | 1.7 | 72 |
| 21 | Optical coherence tomography for the quantitative study of cerebrovascular physiology. Journal of Cerebral Blood Flow and Metabolism, 2011, 31, 1339-1345. | 2.4 | 70 |
| 22 | Peripapillary Nerve Fiber Layer Thickness Profile Determined with High Speed, Ultrahigh Resolution Optical Coherence Tomography High-Density Scanning. , 2007, 48, 3154. | | 68 |
| 23 | Cerebral metabolic rate of oxygen (CMRO ₂) assessed by combined Doppler and spectroscopic OCT. Biomedical Optics Express, 2015, 6, 3941. | 1.5 | 65 |
| 24 | Cortical Spreading Depression Impairs Oxygen Delivery and Metabolism in Mice. Journal of Cerebral Blood Flow and Metabolism, 2012, 32, 376-386. | 2.4 | 63 |
| 25 | Structural and functional human retinal imaging with a fiber-based visible light OCT ophthalmoscope. Biomedical Optics Express, 2017, 8, 323. | 1.5 | 60 |
| 26 | Optical monitoring of oxygen tension in cortical microvessels with confocal microscopy. Optics Express, 2009, 17, 22341. | 1.7 | 58 |
| 27 | Microvascular Oxygen Tension and Flow Measurements in Rodent Cerebral Cortex during Baseline Conditions and Functional Activation. Journal of Cerebral Blood Flow and Metabolism, 2011, 31, 1051-1063. | 2.4 | 54 |
| 28 | Volumetric imaging and quantification of cytoarchitecture and myeloarchitecture with intrinsic scattering contrast. Biomedical Optics Express, 2013, 4, 1978. | 1.5 | 54 |
| 29 | Ultrahigh resolution retinal imaging by visible light OCT with longitudinal achromatization. Biomedical Optics Express, 2018, 9, 1477. | 1.5 | 51 |
| 30 | Discovery and clinical translation of novel glaucoma biomarkers. Progress in Retinal and Eye Research, 2021, 80, 100875. | 7.3 | 51 |
| 31 | Depth-resolved microscopy of cortical hemodynamics with optical coherence tomography. Optics Letters, 2009, 34, 3086. | 1.7 | 49 |
| 32 | Highly parallel, interferometric diffusing wave spectroscopy for monitoring cerebral blood flow dynamics. Optica, 2018, 5, 518. | 4.8 | 49 |
| 33 | Due to intravascular multiple sequential scattering, Diffuse Correlation Spectroscopy of tissue primarily measures relative red blood cell motion within vessels. Biomedical Optics Express, 2011, 2, 2047. | 1.5 | 46 |
| 34 | Improving visible light OCT of the human retina with rapid spectral shaping and axial tracking. Biomedical Optics Express, 2019, 10, 2918. | 1.5 | 45 |
| 35 | Three-dimensional ultrahigh resolution optical coherence tomography imaging of age-related macular degeneration. Optics Express, 2009, 17, 4046. | 1.7 | 43 |
| 36 | Optical coherence tractography using intrinsic contrast. Optics Letters, 2012, 37, 3882. | 1.7 | 43 |

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|----|---|-----|-----------|
| 37 | Mapping the 3D Connectivity of the Rat Inner Retinal Vascular Network Using OCT Angiography. , 2015, 56, 5785. | | 36 |
| 38 | Functional interferometric diffusing wave spectroscopy of the human brain. Science Advances, 2021, 7, . | 4.7 | 36 |
| 39 | Metabolic, inflammatory, and microvascular determinants of white matter disease and cognitive decline. American Journal of Neurodegenerative Disease, 2016, 5, 171-177. | 0.1 | 36 |
| 40 | Microstructural characterization of myocardial infarction with optical coherence tractography and two-photon microscopy. Physiological Reports, 2016, 4, e12894. | 0.7 | 35 |
| 41 | Laminar microvascular transit time distribution in the mouse somatosensory cortex revealed by Dynamic Contrast Optical Coherence Tomography. NeuroImage, 2016, 125, 350-362. | 2.1 | 35 |
| 42 | Can OCT Angiography Be Made a Quantitative Blood Measurement Tool?. Applied Sciences (Switzerland), 2017, 7, 687. | 1.3 | 35 |
| 43 | Optical Coherence Tomography angiography reveals laminar microvascular hemodynamics in the rat somatosensory cortex during activation. NeuroImage, 2014, 102, 393-406. | 2.1 | 34 |
| 44 | Interferometric Near-Infrared Spectroscopy (iNIRS) for determination of optical and dynamical properties of turbid media. Optics Express, 2016, 24, 329. | 1.7 | 33 |
| 45 | Time-of-flight resolved light field fluctuations reveal deep human tissue physiology. Nature Communications, 2020, 11, 391. | 5.8 | 32 |
| 46 | Multimodal optical imaging system for in vivo investigation of cerebral oxygen delivery and energy metabolism. Biomedical Optics Express, 2015, 6, 4994. | 1.5 | 31 |
| 47 | Micro-Heterogeneity of Flow in a Mouse Model of Chronic Cerebral Hypoperfusion Revealed by Longitudinal Doppler Optical Coherence Tomography and Angiography. Journal of Cerebral Blood Flow and Metabolism, 2015, 35, 1552-1560. | 2.4 | 28 |
| 48 | Compartment-resolved imaging of cortical functional hyperemia with OCT angiography. Biomedical Optics Express, 2013, 4, 1255. | 1.5 | 27 |
| 49 | Diagnostic Performance of a Novel Three-Dimensional Neuroretinal Rim Parameter for Glaucoma Using High-Density Volume Scans. American Journal of Ophthalmology, 2016, 169, 168-178. | 1.7 | 27 |
| 50 | Visible Light Optical Coherence Tomography (OCT) Quantifies Subcellular Contributions to Outer Retinal Band 4. Translational Vision Science and Technology, 2021, 10, 30. | 1.1 | 25 |
| 51 | Interferometric near-infrared spectroscopy directly quantifies optical field dynamics in turbid media. Optica, 2016, 3, 1471. | 4.8 | 24 |
| 52 | Dynamic contrast optical coherence tomography images transit time and quantifies microvascular plasma volume and flow in the retina and choriocapillaris. Biomedical Optics Express, 2016, 7, 4289. | 1.5 | 23 |
| 53 | Investigation of artifacts in retinal and choroidal OCT angiography with a contrast agent. Biomedical Optics Express, 2018, 9, 1020. | 1.5 | 23 |
| 54 | Two-photon microscopy of cortical NADH fluorescence intensity changes: correcting contamination from the hemodynamic response. Journal of Biomedical Optics, 2011, 16, 106003. | 1.4 | 21 |

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|----|--|-----|-----------|
| 55 | Comparison of Kasai Autocorrelation and Maximum Likelihood Estimators for Doppler Optical Coherence Tomography. IEEE Transactions on Medical Imaging, 2013, 32, 1033-1042. | 5.4 | 20 |
| 56 | Imaging and graphing of cortical vasculature using dynamically focused optical coherence microscopy angiography. Journal of Biomedical Optics, 2016, 21, 020502. | 1.4 | 20 |
| 57 | 1700nm optical coherence microscopy enables minimally invasive, label-free, in vivo optical biopsy deep in the mouse brain. Light: Science and Applications, 2021, 10, 145. | 7.7 | 20 |
| 58 | Compensating spatially dependent dispersion in visible light OCT. Optics Letters, 2019, 44, 775. | 1.7 | 20 |
| 59 | Total average blood flow and angiography in the rat retina. Journal of Biomedical Optics, 2013, 18, 076025. | 1.4 | 18 |
| 60 | Genetic and environmental factors in vascular dementia: an update of blood brain barrier dysfunction. Clinical and Experimental Pharmacology and Physiology, 2016, 43, 515-521. | 0.9 | 18 |
| 61 | Reflectance-mode interferometric near-infrared spectroscopy quantifies brain absorption, scattering, and blood flow index in vivo. Optics Letters, 2017, 42, 591. | 1.7 | 18 |
| 62 | High-speed, Ultrahigh Resolution Optical Coherence Tomography of the Retina in Hunter Syndrome. Ophthalmic Surgery Lasers and Imaging Retina, 2007, 38, 423-428. | 0.4 | 18 |
| 63 | Persistence of Cloquet's Canal in Normal Healthy Eyes. American Journal of Ophthalmology, 2006, 142, 862-864. | 1.7 | 17 |
| 64 | Neurophotonic Tools for Microscopic Measurements and Manipulation: Status Report. Neurophotonics, 2022, 9, 013001. | 1.7 | 17 |
| 65 | Optode Design Space Exploration for Clinically-robust Non-invasive Fetal Oximetry. Transactions on Embedded Computing Systems, 2019, 18, 1-22. | 2.1 | 16 |
| 66 | HIGH-SPEED ULTRAHIGH-RESOLUTION OPTICAL COHERENCE TOMOGRAPHY FINDINGS IN CHRONIC SOLAR RETINOPATHY. Retinal Cases and Brief Reports, 2008, 2, 103-105. | 0.3 | 15 |
| 67 | Design and <i>In Vivo</i> Evaluation of a Non-Invasive Transabdominal Fetal Pulse Oximeter. IEEE Transactions on Biomedical Engineering, 2021, 68, 256-266. | 2.5 | 15 |
| 68 | In vivo Morphometry of Inner Plexiform Layer (IPL) Stratification in the Human Retina With Visible Light Optical Coherence Tomography. Frontiers in Cellular Neuroscience, 2021, 15, 655096. | 1.8 | 14 |
| 69 | Association of genetic polymorphisms of claudin-1 with small vessel vascular dementia. Clinical and Experimental Pharmacology and Physiology, 2017, 44, 623-630. | 0.9 | 13 |
| 70 | Interferometric near-infrared spectroscopy (iNIRS): performance tradeoffs and optimization. Optics Express, 2017, 25, 28567. | 1.7 | 13 |
| 71 | Multi-exposure interferometric diffusing wave spectroscopy. Optics Letters, 2021, 46, 4498. | 1.7 | 13 |
| 72 | Incoherent excess noise spectrally encodes broadband light sources. Light: Science and Applications, 2020, 9, 172. | 7.7 | 12 |

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|----|--|-----|-----------|
| 73 | Visibility of microvessels in Optical Coherence Tomography angiography depends on angular orientation. Journal of Biophotonics, 2020, 13, e202000090. | 1.1 | 12 |
| 74 | Proactive spectrometer matching for excess noise suppression in balanced visible light optical coherence tomography (OCT). Optics Express, 2021, 29, 42037. | 1.7 | 11 |
| 75 | Visible light OCT improves imaging through a highly scattering retinal pigment epithelial wall. Optics Letters, 2020, 45, 5945. | 1.7 | 10 |
| 76 | Beyond diffuse correlations: deciphering random flow in time-of-flight resolved light dynamics. Optics Express, 2020, 28, 11191. | 1.7 | 10 |
| 77 | Maximum Likelihood Doppler Frequency Estimation Under Decorrelation Noise for Quantifying Flow in Optical Coherence Tomography. IEEE Transactions on Medical Imaging, 2014, 33, 1313-1323. | 5.4 | 9 |
| 78 | Dynamic Contrast Optical Coherence Tomography reveals laminar microvascular hemodynamics in the mouse neocortex in vivo. NeuroImage, 2019, 202, 116067. | 2.1 | 8 |
| 79 | Noninvasive, in vivo rodent brain optical coherence tomography at 21â€‰microns. Optics Letters, 2019, 44, 4147. | 1.7 | 8 |
| 80 | Scanning interferometric near-infrared spectroscopy (iNIRS) for three-dimensional imaging of adult human forehead blood flow dynamics. Optics Letters, 2022, 47, 110-113. | 1.7 | 7 |
| 81 | Correlation gating quantifies the optical properties of dynamic media in transmission. Optics Letters, 2018, 43, 5881. | 1.7 | 4 |
| 82 | Noninvasive imaging of the photoreceptor mosaic response to light stimulation. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12902-12903. | 3.3 | 3 |
| 83 | Water wavenumber calibration for visible light optical coherence tomography. Journal of Biomedical Optics, 2020, 25, . | 1.4 | 3 |
| 84 | Optimal doppler frequency estimators for ultrasound and optical coherence tomography. , 2012, , . | | 2 |
| 85 | Optical Coherence Imaging of Hemodynamics, Metabolism, and Cell Viability during Brain Injury. , 2014, , . | | 2 |
| 86 | Biophotonics feature: introduction. Biomedical Optics Express, 2018, 9, 1229. | 1.5 | 2 |
| 87 | INTACT RETINAL TISSUE AND RETINAL PIGMENT EPITHELIUM IDENTIFIED WITHIN A COLOBOMA BY HIGH-SPEED, ULTRAHIGH-RESOLUTION OPTICAL COHERENCE TOMOGRAPHY. Retinal Cases and Brief Reports, 2011, 5, 46-48. | 0.3 | 1 |
| 88 | Imaging oxygenation of retinal capillaries with depth resolution. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 14626-14628. | 3.3 | 1 |
| 89 | Fourier Domain Mode Locking (FDML) in the non-zero dispersion regime: A laser for ultrahigh-speed retinal OCT imaging at 236kHz line rate. , 2007, , . | | 0 |
| 90 | Large Arteriolar Component of Oxygen Delivery Implies Safe Margin of Oxygen Supply to Cerebral Tissue. FASEB Journal, 2015, 29, 794.1. | 0.2 | 0 |

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|----|--|----|-----------|
| 91 | Three-Dimensional Optical Coherence Microscopy Angiography and Mapping of Angio-Architecture in the Central Nervous System. , 2016, , 141-157. | | 0 |
| 92 | Visible light optical coherence microscopy imaging of the mouse cortex with femtoliter volume resolution. , 2018, , . | | 0 |
| 93 | Parallel interferometric Diffusing Wave Spectroscopy (iDWS) with Time-of-Flight Discrimination. , 2022, , . | | 0 |