# Lawrence R Frank

List of Publications by Year
in descending order



| | | | |
|---|---|---|---|
| 63 papers | 7,623 citations | 196777 29 h-index | 145109 60 g-index |
| 64 all docs | 64 docs citations | 64 times ranked | 7849 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Diffusion MRI tractography of the locus coeruleusâ€transentorhinal cortex connections using GOâ€ESP. Magnetic Resonance in Medicine, 2022, 87, 1816-1831. | 1.9 | 5 |
| 2 | Varying diffusion time to discriminate between simulated skeletal muscle injury models using stimulated echo diffusion tensor imaging. Magnetic Resonance in Medicine, 2021, 85, 2524-2536. | 1.9 | 9 |
| 3 | Medical imaging of tissue engineering and regenerative medicine constructs. Biomaterials Science, 2021, 9, 301-314. | 2.6 | 9 |
| 4 | Unveiling the third dimension in morphometry with automated quantitative volumetric computations. Scientific Reports, 2021, 11, 14438. | 1.6 | 4 |
| 5 | JEDI: J oint E stimation D iffusion I maging of macroscopic and microscopic tissue properties. Magnetic Resonance in Medicine, 2020, 84, 966-990. | 1.9 | 3 |
| 6 | Brain Waves: Emergence of Localized, Persistent, Weakly Evanescent Cortical Loops. Journal of Cognitive Neuroscience, 2020, 32, 2178-2202. | 1.1 | 7 |
| 7 | Multiparametric MRI characterization of level dependent differences in lumbar muscle size, quality, and microstructure. JOR Spine, 2020, 3, e1079. | 1.5 | 4 |
| 8 | Regional variations in ex-vivo diffusion tensor anisotropy are associated with cardiomyocyte remodeling in rats after left ventricular pressure overload. Journal of Cardiovascular Magnetic Resonance, 2020, 22, 21. | 1.6 | 8 |
| 9 | Universal theory of brain waves: From linear loops to nonlinear synchronized spiking and collective brain rhythms. Physical Review Research, 2020, 2, . | 1.3 | 12 |
| 10 | Symplectomorphic registration with phase space regularization by entropy spectrum pathways. Magnetic Resonance in Medicine, 2019, 81, 1335-1352. | 1.9 | 5 |
| 11 | Joint Estimation of Effective Brain Wave Activation Modes Using EEG/MEG Sensor Arrays and Multimodal MRI Volumes. Neural Computation, 2018, 30, 1725-1749. | 1.3 | 5 |
| 12 | Relationships between tissue microstructure and the diffusion tensor in simulated skeletal muscle. Magnetic Resonance in Medicine, 2018, 80, 317-329. | 1.9 | 59 |
| 13 | Decreasing Compensatory Ability of Concentric Ventricular Hypertrophy in Aortic-Banded Rat Hearts. Frontiers in Physiology, 2018, 9, 37. | 1.3 | 4 |
| 14 | Dynamic Multiscale Modes of Severe Storm Structure Detected in Mobile Doppler Radar Data by Entropy Field Decomposition. Journals of the Atmospheric Sciences, 2018, 75, 709-730. | 0.6 | 6 |
| 15 | <sup />A 3D Tissue-Printing Approach for Validation of Diffusion Tensor Imaging in Skeletal Muscle. Tissue Engineering - Part A, 2017, 23, 980-988. | 1.6 | 30 |
| 16 | A Unified Theory of Neuro-MRI Data Shows Scale-Free Nature of Connectivity Modes. Neural Computation, 2017, 29, 1441-1467. | 1.3 | 12 |
| 17 | Dynamic Multiscale Modes of Resting State Brain Activity Detected by Entropy Field Decomposition. Neural Computation, 2016, 28, 1769-1811. | 1.3 | 11 |
| 18 | Detecting spatio-temporal modes in multivariate data by entropy field decomposition. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 395001. | 0.7 | 7 |

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|---|---|---|---|
| 19 | The Lamellar Structure of the Brain Fiber Pathways. Neural Computation, 2016, 28, 2533-2556. | 1.3 | 14 |
| 20 | Quantitative Classification of Cerebellar Foliation in Cartilaginous Fishes (Class: Chondrichthyes) Using Three-Dimensional Shape Analysis and Its Implications for Evolutionary Biology. Brain, Behavior and Evolution, 2016, 87, 252-264. | 0.9 | 8 |
| 21 | The coelacanth rostral organ is a unique low-resolution electro-detector that facilitates the feeding strike. Scientific Reports, 2015, 5, 8962. | 1.6 | 11 |
| 22 | Simultaneous Multi-Scale Diffusion Estimation and Tractography Guided by Entropy Spectrum Pathways. IEEE Transactions on Medical Imaging, 2015, 34, 1177-1193. | 5.4 | 17 |
| 23 | Information pathways in a disordered lattice. Physical Review E, 2014, 89, 032142. | 0.8 | 18 |
| 24 | Spiracular air breathing in polypterid fishes and its implications for aerial respiration in stem tetrapods. Nature Communications, 2014, 5, 3022. | 5.8 | 38 |
| 25 | Automated segmentation and shape characterization of volumetric data. NeuroImage, 2014, 92, 156-168. | 2.1 | 16 |
| 26 | Patient-specific models of cardiac biomechanics. Journal of Computational Physics, 2013, 244, 4-21. | 1.9 | 160 |
| 27 | A computational model for diffusion weighted imaging of myelinated white matter. NeuroImage, 2013, 75, 204-212. | 2.1 | 23 |
| 28 | Frontal White Matter Integrity Predictors of Adult Alcohol Treatment Outcome. Biological Psychiatry, 2012, 71, 262-268. | 0.7 | 60 |
| 29 | An atlas-based geometry pipeline for cardiac Hermite model construction and diffusion tensor reorientation. Medical Image Analysis, 2012, 16, 1130-1141. | 7.0 | 39 |
| 30 | The Digital Fish Library: Using MRI to Digitize, Database, and Document the Morphological Diversity of Fish. PLoS ONE, 2012, 7, e34499. | 1.1 | 48 |
| 31 | Loadâ€Carrying Lumbar Spine Kinematics in Activeâ€Duty Marines. FASEB Journal, 2012, 26, 723.7. | 0.2 | 0 |
| 32 | Incorporating Human Ventricular Fiber Architecture in Patientâ€Specific Computational Models. FASEB Journal, 2012, 26, 864.19. | 0.2 | 0 |
| 33 | The Disappearing Third Dimension. Science, 2011, 331, 712-714. | 6.0 | 41 |
| 34 | High efficiency, low distortion 3D diffusion tensor imaging with variable density spiral fast spin echoes (3D DW VDS RARE). NeuroImage, 2010, 49, 1510-1523. | 2.1 | 45 |
| 35 | Altered white matter microstructure in adolescent substance users. Psychiatry Research - Neuroimaging, 2009, 173, 228-237. | 0.9 | 158 |
| 36 | Highâ€field diffusion MR histology: Imageâ€based correction of eddyâ€current ghosts in diffusionâ€weighted rapid acquisition with relaxation enhancement (DWâ€RARE). Magnetic Resonance in Medicine, 2009, 61, 728-733. | 1.9 | 7 |

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| 37 | A simulation environment for diffusion weighted MR experiments in complex media. Magnetic Resonance in Medicine, 2009, 62, 771-778. | 1.9 | 43 |
| 38 | Brain Size and Brain Organization of the Whale Shark, <i>Rhincodon typus</i>, Using Magnetic Resonance Imaging. Brain, Behavior and Evolution, 2009, 74, 121-142. | 0.9 | 47 |
| 39 | Perfusion Tensor Imaging. Magnetic Resonance in Medicine, 2008, 60, 1284-1291. | 1.9 | 17 |
| 40 | Utilizing magnetic resonance imaging (MRI) to assess the effects of angling-induced barotrauma on rockfish (Sebastes). Canadian Journal of Fisheries and Aquatic Sciences, 2008, 65, 1245-1249. | 0.7 | 33 |
| 41 | Microstructural integrity of the corpus callosum linked with neuropsychological performance in adolescents. Brain and Cognition, 2008, 67, 225-233. | 0.8 | 92 |
| 42 | Quantification of red myotomal muscle volume and geometry in the shortfin mako shark (Isurus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 5<br>Journal of Morphology, 2007, 268, 284-292. | 0.6 | 13 |
| 43 | Velocity-selective arterial spin labeling. Magnetic Resonance in Medicine, 2006, 55, 1334-1341. | 1.9 | 224 |
| 44 | Efficiency, power, and entropy in event-related FMRI with multiple trial types. NeuroImage, 2004, 21, 387-400. | 2.1 | 104 |
| 45 | Increased diffusion sensitivity with hyperechos. Magnetic Resonance in Medicine, 2003, 49, 1098-1105. | 1.9 | 8 |
| 46 | Characterization of anisotropy in high angular resolution diffusion-weighted MRI. Magnetic Resonance in Medicine, 2002, 47, 1083-1099. | 1.9 | 497 |
| 47 | Local perfusion and metabolic demand during exercise: a noninvasive MRI method of assessment. Journal of Applied Physiology, 2001, 91, 1845-1853. | 1.2 | 80 |
| 48 | Estimation of respiration-induced noise fluctuations from undersampled multislice fMRI data. Magnetic Resonance in Medicine, 2001, 45, 635-644. | 1.9 | 84 |
| 49 | Anisotropy in high angular resolution diffusion-weighted MRI. Magnetic Resonance in Medicine, 2001, 45, 935-939. | 1.9 | 377 |
| 50 | Articular Cartilage in the Knee: Mapping of the Physiologic Parameters at MR Imaging with a Local Gradient Coilâ€”Preliminary Results. Radiology, 1999, 210, 241-246. | 3.6 | 74 |
| 51 | Dynamic imaging of perfusion in human skeletal muscle during exercise with arterial spin labeling. Magnetic Resonance in Medicine, 1999, 42, 258-267. | 1.9 | 110 |
| 52 | Mapping the Physiological Parameters of Articular Cartilage with Magnetic Resonance Imaging. Topics in Magnetic Resonance Imaging, 1999, 10, 153-179. | 0.7 | 13 |
| 53 | Probabilistic analysis of functional magnetic resonance imaging data. Magnetic Resonance in Medicine, 1998, 39, 132-148. | 1.9 | 44 |
| 54 | Quantitative imaging of perfusion using a single subtraction (QUIPSS and QUIPSS II). Magnetic Resonance in Medicine, 1998, 39, 702-708. | 1.9 | 653 |

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|---|---|---|---|
| 55 | Dynamics of blood flow and oxygenation changes during brain activation: The balloon model. Magnetic Resonance in Medicine, 1998, 39, 855-864. | 1.9 | 1,526 |
| 56 | A theoretical and experimental comparison of continuous and pulsed arterial spin labeling techniques for quantitative perfusion imaging. Magnetic Resonance in Medicine, 1998, 40, 348-355. | 1.9 | 228 |
| 57 | A general kinetic model for quantitative perfusion imaging with arterial spin labeling. Magnetic Resonance in Medicine, 1998, 40, 383-396. | 1.9 | 1,067 |
| 58 | A Model for the Coupling between Cerebral Blood Flow and Oxygen Metabolism during Neural Stimulation. Journal of Cerebral Blood Flow and Metabolism, 1997, 17, 64-72. | 2.4 | 708 |
| 59 | Slice profile effects in adiabatic inversion: Application to multislice perfusion imaging. Magnetic Resonance in Medicine, 1997, 38, 558-564. | 1.9 | 75 |
| 60 | Implementation of quantitative perfusion imaging techniques for functional brain mapping using pulsed arterial spin labeling. , 1997, 10, 237-249. | | 531 |
| 61 | Distortions from curved flow in magnetic resonance imaging. Magnetic Resonance in Medicine, 1993, 29, 84-93. | 1.9 | 16 |
| 62 | Pulsatile flow artifacts in 3D magnetic resonance imaging. Magnetic Resonance in Medicine, 1993, 30, 296-304. | 1.9 | 17 |
| 63 | Elimination of oblique flow artifacts in magnetic resonance imaging. Magnetic Resonance in Medicine, 1992, 25, 299-307. | 1.9 | 39 |