

Ralph Sinkus

List of Publications by Year in descending order

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59
papers

4,530
citations

218677

26
h-index

133252

59
g-index

60
all docs

60
docs citations

60
times ranked

3579
citing authors

#	ARTICLE	IF	CITATIONS
1	Magnetic Resonance Elastography for the Noninvasive Staging of Liver Fibrosis. <i>Gastroenterology</i> , 2008, 135, 32-40.	1.3	650
2	Viscoelastic shear properties of in vivo breast lesions measured by MR elastography. <i>Magnetic Resonance Imaging</i> , 2005, 23, 159-165.	1.8	441
3	Liver fibrosis: non-invasive assessment with MR elastography. <i>NMR in Biomedicine</i> , 2006, 19, 173-179.	2.8	389
4	<i>In vivo</i> brain viscoelastic properties measured by magnetic resonance elastography. <i>NMR in Biomedicine</i> , 2008, 21, 755-764.	2.8	364
5	Liver Fibrosis: Noninvasive Assessment with MR Elastography versus Aspartate Aminotransferase-to-Platelet Ratio Index. <i>Radiology</i> , 2007, 245, 458-466.	7.3	353
6	MR elastography of breast lesions: Understanding the solid/liquid duality can improve the specificity of contrast-enhanced MR mammography. <i>Magnetic Resonance in Medicine</i> , 2007, 58, 1135-1144.	3.0	295
7	Demyelination reduces brain parenchymal stiffness quantified in vivo by magnetic resonance elastography. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 6650-6655.	7.1	193
8	MR elastography of liver tumours: value of viscoelastic properties for tumour characterisation. <i>European Radiology</i> , 2012, 22, 2169-2177.	4.5	136
9	Early Detection of Steatohepatitis in Fatty Rat Liver by Using MR Elastography. <i>Radiology</i> , 2009, 253, 90-97.	7.3	134
10	Assessment of portal hypertension and high-risk oesophageal varices with liver and spleen three-dimensional multifrequency MR elastography in liver cirrhosis. <i>European Radiology</i> , 2014, 24, 1394-402.	4.5	103
11	MR elastography: Principles, guidelines, and terminology. <i>Magnetic Resonance in Medicine</i> , 2021, 85, 2377-2390.	3.0	100
12	A unifying fractional wave equation for compressional and shear waves. <i>Journal of the Acoustical Society of America</i> , 2010, 127, 542-548.	1.1	99
13	Exploring the Biomechanical Properties of Brain Malignancies and Their Pathologic Determinants <i>In Vivo</i> with Magnetic Resonance Elastography. <i>Cancer Research</i> , 2015, 75, 1216-1224.	0.9	90
14	MR elastography of liver fibrosis: preliminary results comparing spin-echo and echo-planar imaging. <i>European Radiology</i> , 2008, 18, 2535-2541.	4.5	78
15	Rapid acquisition of multifrequency, multislice and multidirectional MR elastography data with a fractionally encoded gradient echo sequence. <i>NMR in Biomedicine</i> , 2013, 26, 1326-1335.	2.8	77
16	Combining MR elastography and diffusion tensor imaging for the assessment of anisotropic mechanical properties: A phantom study. <i>Journal of Magnetic Resonance Imaging</i> , 2013, 37, 217-226.	3.4	77
17	Magnetic Resonance Elastography of the Breast. <i>Investigative Radiology</i> , 2005, 40, 412-420.	6.2	69
18	Stiffness reconstruction methods for MR elastography. <i>NMR in Biomedicine</i> , 2018, 31, e3935.	2.8	59

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19	Colon Tumor Growth and Antivasular Treatment in Mice: Complementary Assessment with MR Elastography and Diffusion-weighted MR Imaging. <i>Radiology</i> , 2012, 264, 436-444.	7.3	55
20	In Vivo Anisotropic Mechanical Properties of Dystrophic Skeletal Muscles Measured by Anisotropic MR Elastographic Imaging: The mdx Mouse Model of Muscular Dystrophy. <i>Radiology</i> , 2014, 273, 726-735.	7.3	46
21	Transperineal prostate MR elastography: Initial in vivo results. <i>Magnetic Resonance in Medicine</i> , 2013, 69, 411-420.	3.0	45
22	Robust MR elastography stiffness quantification using a localized divergence free finite element reconstruction. <i>Medical Image Analysis</i> , 2018, 44, 126-142.	11.6	45
23	Liver Stiffness Values Are Lower in Pediatric Subjects than in Adults and Increase with Age: A Multifrequency MR Elastography Study. <i>Radiology</i> , 2017, 283, 222-230.	7.3	36
24	Investigating the Contribution of Collagen to the Tumor Biomechanical Phenotype with Noninvasive Magnetic Resonance Elastography. <i>Cancer Research</i> , 2019, 79, 5874-5883.	0.9	35
25	Prostate MR elastography with transperineal electromagnetic actuation and a fast fractionally encoded steady-state gradient echo sequence. <i>NMR in Biomedicine</i> , 2014, 27, 784-794.	2.8	33
26	Bridging Three Orders of Magnitude: Multiple Scattered Waves Sense Fractal Microscopic Structures via Dispersion. <i>Physical Review Letters</i> , 2015, 115, 094301.	7.8	32
27	Imaging localized neuronal activity at fast time scales through biomechanics. <i>Science Advances</i> , 2019, 5, eaav3816.	10.3	32
28	A novel magnetic resonance elastography transducer concept based on a rotational eccentric mass: preliminary experiences with the gravitational transducer. <i>Physics in Medicine and Biology</i> , 2019, 64, 045007.	3.0	27
29	Changes in Rat Brain Tissue Microstructure and Stiffness during the Development of Experimental Obstructive Hydrocephalus. <i>PLoS ONE</i> , 2016, 11, e0148652.	2.5	27
30	Characterization of glioblastoma in an orthotopic mouse model with magnetic resonance elastography. <i>NMR in Biomedicine</i> , 2018, 31, e3840.	2.8	25
31	Rheological determinants for simultaneous staging of hepatic fibrosis and inflammation in patients with chronic liver disease. <i>NMR in Biomedicine</i> , 2018, 31, e3956.	2.8	25
32	A viscoelastic model for human myocardium. <i>Acta Biomaterialia</i> , 2021, 135, 441-457.	8.3	23
33	Magnetic Resonance Elastography Reconstruction for Anisotropic Tissues. <i>Medical Image Analysis</i> , 2021, 74, 102212.	11.6	22
34	Ristretto MRE: A generalized multi-shot GRE-MRE sequence. <i>NMR in Biomedicine</i> , 2019, 32, e4049.	2.8	21
35	Nonlinear viscoelastic constitutive model for bovine liver tissue. <i>Biomechanics and Modeling in Mechanobiology</i> , 2020, 19, 1641-1662.	2.8	21
36	Viscoelastic Parameters for Quantifying Liver Fibrosis: Three-Dimensional Multifrequency MR Elastography Study on Thin Liver Rat Slices. <i>PLoS ONE</i> , 2014, 9, e94679.	2.5	20

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37	Microvasculature alters the dispersion properties of shear waves - a multi-frequency MR elastography study. <i>NMR in Biomedicine</i> , 2015, 28, 1763-1771.	2.8	20
38	Robustness of MR Elastography in the Healthy Brain: Repeatability, Reliability, and Effect of Different Reconstruction Methods. <i>Journal of Magnetic Resonance Imaging</i> , 2021, 53, 1510-1521.	3.4	20
39	Towards noninvasive estimation of tumour pressure by utilising MR elastography and nonlinear biomechanical models: a simulation and phantom study. <i>Scientific Reports</i> , 2020, 10, 5588.	3.3	19
40	Analysis and improvement of motion encoding in magnetic resonance elastography. <i>NMR in Biomedicine</i> , 2018, 31, e3908.	2.8	18
41	Magnetic resonance elastography in nonlinear viscoelastic materials under load. <i>Biomechanics and Modeling in Mechanobiology</i> , 2019, 18, 111-135.	2.8	17
42	A MRI-Compatible Combined Mechanical Loading and MR Elastography Setup to Study Deformation-Induced Skeletal Muscle Damage in Rats. <i>PLoS ONE</i> , 2017, 12, e0169864.	2.5	16
43	Decreased tissue stiffness in glioblastoma by MR elastography is associated with increased cerebral blood flow. <i>European Journal of Radiology</i> , 2022, 147, 110136.	2.6	16
44	Biomarkers of liver fibrosis: prospective comparison of multimodal magnetic resonance, serum algorithms and transient elastography. <i>Scandinavian Journal of Gastroenterology</i> , 2020, 55, 848-859.	1.5	15
45	Elasticity Imaging via MRI: Basics, Overcoming the Waveguide Limit, and Clinical Liver Results. <i>Current Medical Imaging</i> , 2012, 8, 56-63.	0.8	14
46	Magnetic resonance elastography of skeletal muscle deep tissue injury. <i>NMR in Biomedicine</i> , 2019, 32, e4087.	2.8	14
47	Cannabinoid receptor activation in the juvenile rat brain results in rapid biomechanical alterations: Neurovascular mechanism as a putative confounding factor. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2016, 36, 954-964.	4.3	12
48	The apparent mechanical effect of isolated amyloid β and α -synuclein aggregates revealed by multi-frequency MRE. <i>NMR in Biomedicine</i> , 2020, 33, e4174.	2.8	12
49	A framework for optimization-based design of motion encoding in magnetic resonance elastography. <i>Magnetic Resonance in Medicine</i> , 2015, 73, 1514-1525.	3.0	11
50	Magnetic Resonance Elastography reveals effects of anti-angiogenic glioblastoma treatment on tumor stiffness and captures progression in an orthotopic mouse model. <i>Cancer Imaging</i> , 2020, 20, 35.	2.8	11
51	Shear wave cardiovascular MR elastography using intrinsic cardiac motion for transducer-free non-invasive evaluation of myocardial shear wave velocity. <i>Scientific Reports</i> , 2021, 11, 1403.	3.3	9
52	Response Monitoring with [18F]FLT PET and Diffusion-Weighted MRI After Cytotoxic 5-FU Treatment in an Experimental Rat Model for Colorectal Liver Metastases. <i>Molecular Imaging and Biology</i> , 2017, 19, 540-549.	2.6	6
53	Targeted Blood Brain Barrier Opening With Focused Ultrasound Induces Focal Macrophage/Microglial Activation in Experimental Autoimmune Encephalomyelitis. <i>Frontiers in Neuroscience</i> , 2021, 15, 665722.	2.8	6
54	Elasticity of the Heart, Problems and Potentials. <i>Current Cardiovascular Imaging Reports</i> , 2014, 7, 1.	0.6	4

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55	Unipolar MR elastography: Theory, numerical analysis and implementation. NMR in Biomedicine, 2020, 33, e4138.	2.8	4
56	Elastography Validity Criteria Definition Using Numerical Simulations and MR Acquisitions on a Low-Cost Structured Phantom. Frontiers in Physics, 2021, 9, .	2.1	4
57	Magnetic resonance elastography to study the effect of amyloid plaque accumulation in a mouse model. Journal of Neuroimaging, 2022, , .	2.0	2
58	Special issue on MR elastography. NMR in Biomedicine, 2018, 31, e4003.	2.8	1
59	Impact of axisymmetric deformation on MR elastography of a nonlinear tissue-mimicking material and implications in peri-tumour stiffness quantification. PLoS ONE, 2021, 16, e0253804.	2.5	1