Jean Provost

List of Publications by Year in descending order

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Version: 2024-02-01

52 papers	2,108 citations	257357 24 h-index	243529 44 g-index
56 all docs	56 docs citations	56 times ranked	1513 citing authors

#	Article	IF	Citations
1	3D ultrafast ultrasound imagingin vivo. Physics in Medicine and Biology, 2014, 59, L1-L13.	1.6	290
2	The Application of Compressed Sensing for Photo-Acoustic Tomography. IEEE Transactions on Medical Imaging, 2009, 28, 585-594.	5.4	245
3	4D ultrafast ultrasound flow imaging:in vivoquantification of arterial volumetric flow rate in a single heartbeat. Physics in Medicine and Biology, 2016, 61, L48-L61.	1.6	101
4	3-D ultrafast doppler imaging applied to the noninvasive mapping of blood vessels in Vivo. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2015, 62, 1467-1472.	1.7	95
5	A composite high-frame-rate system for clinical cardiovascular imaging. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2008, 55, 2221-2233.	1.7	93
6	Ultrafast 3D Ultrasound Localization Microscopy Using a 32 $imes$ 32 Matrix Array. IEEE Transactions on Medical Imaging, 2019, 38, 2005-2015.	5.4	89
7	4-D ultrafast shear-wave imaging. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2015, 62, 1059-1065.	1.7	83
8	Electromechanical wave imaging for arrhythmias. Physics in Medicine and Biology, 2011, 56, L1-L11.	1.6	79
9	Electromechanical Wave Imaging of Normal and Ischemic HeartsIn Vivo. IEEE Transactions on Medical Imaging, 2010, 29, 625-635.	5.4	73
10	Imaging the electromechanical activity of the heart in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 8565-8570.	3.3	71
11	Ultrafast Harmonic Coherent Compound (UHCC) Imaging for High Frame Rate Echocardiography and Shear-Wave Elastography. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2016, 63, 420-431.	1.7	61
12	4Din vivoultrafast ultrasound imaging using a row-column addressed matrix and coherently-compounded orthogonal plane waves. Physics in Medicine and Biology, 2017, 62, 4571-4588.	1.6	61
13	A clinical feasibility study of atrial and ventricular electromechanical wave imaging. Heart Rhythm, 2013, 10, 856-862.	0.3	59
14	Imaging the dynamics of cardiac fiber orientation in vivo using 3D Ultrasound Backscatter Tensor Imaging. Scientific Reports, 2017, 7, 830.	1.6	57
15	In vivostudy of myocardial elastography under graded ischemia conditions. Physics in Medicine and Biology, 2011, 56, 1155-1172.	1.6	56
16	Mapping of cardiac electrical activation with electromechanical wave imaging: An in silicoâ€“in vivo reciprocity study. Heart Rhythm, 2011, 8, 752-759.	0.3	53
17	Simultaneous positron emission tomography and ultrafast ultrasound for hybrid molecular, anatomical and functional imaging. Nature Biomedical Engineering, 2018, 2, 85-94.	11.6	44
18	A Deep Learning Framework for Spatiotemporal Ultrasound Localization Microscopy. IEEE Transactions on Medical Imaging, 2021, 40, 1428-1437.	5.4	44

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19	Physiologic Cardiovascular Strain and Intrinsic Wave Imaging. Annual Review of Biomedical Engineering, 2011, 13, 477-505.	5.7	38
20	Electromechanical wave imaging for noninvasive mapping of the 3D electrical activation sequence in canines and humans in vivo. Journal of Biomechanics, 2012, 45, 856-864.	0.9	33
21	Sparse Matrix Beamforming and Image Reconstruction for 2-D HIFU Monitoring Using Harmonic Motion Imaging for Focused Ultrasound (HMIFU) With In Vitro Validation. IEEE Transactions on Medical Imaging, 2014, 33, 2107-2117.	5.4	33
22	Stochastic precision analysis of 2D cardiac strain estimationin vivo. Physics in Medicine and Biology, 2014, 59, 6841-6858.	1.6	30
23	Single-heartbeat electromechanical wave imaging with optimal strain estimation using temporally unequispaced acquisition sequences. Physics in Medicine and Biology, 2012, 57, 1095-1112.	1.6	28
24	An integrated and highly sensitive ultrafast acoustoelectric imaging system for biomedical applications. Physics in Medicine and Biology, 2017, 62, 5808-5822.	1.6	25
25	Quantitative evaluation of atrial radio frequency ablation using intracardiac shearâ€wave elastography. Medical Physics, 2014, 41, 112901.	1.6	24
26	Spatiotemporal matrix image formation for programmable ultrasound scanners. Physics in Medicine and Biology, 2018, 63, 03NT03.	1.6	23
27	Electromechanical Wave Imaging of Biologically and Electrically Paced Canine Hearts inÂVivo. Ultrasound in Medicine and Biology, 2014, 40, 177-187.	0.7	20
28	Assessing the atrial electromechanical coupling during atrial focal tachycardia, flutter, and fibrillation using electromechanical wave imaging in humans. Computers in Biology and Medicine, 2015, 65, 161-167.	3.9	20
29	3D elastic tensor imaging in weakly transversely isotropic soft tissues. Physics in Medicine and Biology, 2018, 63, 155005.	1.6	20
30	4D simultaneous tissue and blood flow Doppler imaging: revisiting cardiac Doppler index with single heart beat 4D ultrafast echocardiography. Physics in Medicine and Biology, 2019, 64, 085013.	1.6	20
31	A Comparison of the Performance of Different Multiline Transmit Setups for Fast Volumetric Cardiac Ultrasound. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2016, 63, 2082-2091.	1.7	19
32	Bimodal modulation and continuous stimulation in optical imaging to map direction selectivity. NeuroImage, 2010, 49, 1416-1431.	2.1	18
33	Mapping Biological Current Densities With Ultrafast Acoustoelectric Imaging: Application to the Beating Rat Heart. IEEE Transactions on Medical Imaging, 2019, 38, 1852-1857.	5.4	14
34	In Vivo Pulsatility Measurement of Cerebral Microcirculation in Rodents Using Dynamic Ultrasound Localization Microscopy. IEEE Transactions on Medical Imaging, 2022, 41, 782-792.	5.4	14
35	Dynamic Myocardial Ultrasound Localization Angiography. IEEE Transactions on Medical Imaging, 2021, 40, 3379-3388.	5.4	13
36	Concurrent imaging of vascularization and metabolism in a mouse model of paraganglioma under anti-angiogenic treatment. Theranostics, 2020, 10, 3518-3532.	4.6	12

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37	Evaluation of receptive field size from higher harmonics in visuotopic mapping using continuous stimulation optical imaging. Journal of Neuroscience Methods, 2010, 189, 138-150.	1.3	10
38	Performance evaluation of the PET component of a hybrid PET/CT-ultrafast ultrasound imaging instrument. Physics in Medicine and Biology, 2018, 63, 19NT01.	1.6	7
39	Sparse channel sampling for ultrasound localization microscopy (SPARSE-ULM). Physics in Medicine and Biology, 2021, 66, 095008.	1.6	7
40	In-vivo 4D Ultrafast vector flow imaging: Quantitative assessment of arterial blood flow. , 2016, , .		5
41	Elevated Strain and Structural Disarray Occur at the Right Ventricular Apex. Cardiovascular Engineering and Technology, 2012, 3, 52-61.	0.7	4
42	Ultrafast acoustoelectric imaging. , 2014, , .		4
43	Flow Rate and Low Hematocrit Measurements for $In Vitro$ Blood Processing With Doppler Ultrasound. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2020, 67, 1293-1302.	1.7	4
44	Ultrafast Ultrasound Imaging for Super-Resolution Preclinical Cardiac PET. Molecular Imaging and Biology, 2020, 22, 1342-1352.	1.3	4
45	Validation of an intracardiac ultrasonic therapyâ€“imaging dual mode transducer. Irbm, 2015, 36, 351-354.	3.7	3
46	Equivalent time active cavitation imaging. Physics in Medicine and Biology, 2021, 66, 195010.	1.6	2
47	Compressive sampling in photo-acoustic imaging. Proceedings of SPIE, 2007, , .	0.8	0
48	In vivo validation of 2D myocardial elastography at variable levels of ischemia. , 2008, , .		0
49	Non-invasive localization and quantification of graded ischemia using Electromechanical Wave Imaging in vivo. , 2009, , .		0
50	In vivo validation of Myocardial Elastography under graded ischemia conditions. , 2010, , .		0
51	Non-invasive Electromechanical Wave Imaging of atrial, supraventricular and ventricular cardiac conduction disorders in canines and humans. , 2011, , .		0
52	A Positron Emission Tomography registered Ultrafast Sonography prototype for preclinical in-vivo studies. , 2016, , .		0