

Jean-Francois Aubry

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114
papers

4,086
citations

36
h-index

61
g-index

140
ext. papers

5,141
ext. citations

4.1
avg, IF

5.34
L-index

#	Paper	IF	Citations
114	Experimental demonstration of noninvasive transskull adaptive focusing based on prior computed tomography scans. <i>Journal of the Acoustical Society of America</i> , 2003 , 113, 84-93	2.2	333
113	Low-intensity focused ultrasound modulates monkey visuomotor behavior. <i>Current Biology</i> , 2013 , 23, 2430-3	6.3	232
112	Attenuation, scattering, and absorption of ultrasound in the skull bone. <i>Medical Physics</i> , 2012 , 39, 299-307	7.4	165
111	High power transcranial beam steering for ultrasonic brain therapy. <i>Physics in Medicine and Biology</i> , 2003 , 48, 2577-89	3.8	153
110	Optimal focusing by spatio-temporal inverse filter. I. Basic principles. <i>Journal of the Acoustical Society of America</i> , 2001 , 110, 37-47	2.2	146
109	Measurements of intrafraction motion and interfraction and intrafraction rotation of prostate by three-dimensional analysis of daily portal imaging with radiopaque markers. <i>International Journal of Radiation Oncology Biology Physics</i> , 2004 , 60, 30-9	4	135
108	Non-invasive transcranial ultrasound therapy based on a 3D CT scan: protocol validation and in vitro results. <i>Physics in Medicine and Biology</i> , 2009 , 54, 2597-613	3.8	134
107	Influence of the pressure field distribution in transcranial ultrasonic neurostimulation. <i>Medical Physics</i> , 2013 , 40, 082902	4.4	123
106	Manipulation of Subcortical and Deep Cortical Activity in the Primate Brain Using Transcranial Focused Ultrasound Stimulation. <i>Neuron</i> , 2019 , 101, 1109-1116.e5	13.9	115
105	In vivo transcranial brain surgery with an ultrasonic time reversal mirror. <i>Journal of Neurosurgery</i> , 2007 , 106, 1061-6	3.2	98
104	Simulation of intracranial acoustic fields in clinical trials of sonothrombolysis. <i>Ultrasound in Medicine and Biology</i> , 2009 , 35, 1148-58	3.5	97
103	Offline impact of transcranial focused ultrasound on cortical activation in primates. <i>ELife</i> , 2019 , 8,	8.9	97
102	Transcostal high-intensity-focused ultrasound: ex vivo adaptive focusing feasibility study. <i>Physics in Medicine and Biology</i> , 2008 , 53, 2937-51	3.8	85
101	Combined passive detection and ultrafast active imaging of cavitation events induced by short pulses of high-intensity ultrasound. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2011 , 58, 517-32	3.2	83
100	MR-guided adaptive focusing of therapeutic ultrasound beams in the human head. <i>Medical Physics</i> , 2012 , 39, 1141-9	4.4	80
99	Optimal focusing by spatio-temporal inverse filter. II. Experiments. Application to focusing through absorbing and reverberating media. <i>Journal of the Acoustical Society of America</i> , 2001 , 110, 48-58	2.2	78
98	Compensating for bone interfaces and respiratory motion in high-intensity focused ultrasound. <i>International Journal of Hyperthermia</i> , 2007 , 23, 141-51	3.7	77

97	Transcranial ultrasonic stimulation modulates single-neuron discharge in macaques performing an antisaccade task. <i>Brain Stimulation</i> , 2017 , 10, 1024-1031	5.1	76
96	Ultrafast imaging of ultrasound contrast agents. <i>Ultrasound in Medicine and Biology</i> , 2009 , 35, 1908-16	3.5	70
95	A magnetic resonance imaging, histological, and dose modeling comparison of focused ultrasound, radiofrequency, and Gamma Knife radiosurgery lesions in swine thalamus. <i>Journal of Neurosurgery</i> , 2013 , 119, 307-17	3.2	68
94	The macaque anterior cingulate cortex translates counterfactual choice value into actual behavioral change. <i>Nature Neuroscience</i> , 2019 , 22, 797-808	25.5	66
93	The road to clinical use of high-intensity focused ultrasound for liver cancer: technical and clinical consensus. <i>Journal of Therapeutic Ultrasound</i> , 2013 , 1, 13		63
92	MR-guided transcranial brain HIFU in small animal models. <i>Physics in Medicine and Biology</i> , 2010 , 55, 365-88	3.8	62
91	In vivo bubble nucleation probability in sheep brain tissue. <i>Physics in Medicine and Biology</i> , 2011 , 56, 7001-85	3.85	62
90	Targeting accuracy of transcranial magnetic resonance-guided high-intensity focused ultrasound brain therapy: a fresh cadaver model. <i>Journal of Neurosurgery</i> , 2013 , 118, 1046-52	3.2	55
89	Effects of nonlinear ultrasound propagation on high intensity brain therapy. <i>Medical Physics</i> , 2011 , 38, 1207-16	4.4	52
88	Transcranial ultrasonic therapy based on time reversal of acoustically induced cavitation bubble signature. <i>IEEE Transactions on Biomedical Engineering</i> , 2010 , 57, 134-44	5	50
87	Optimal transcostal high-intensity focused ultrasound with combined real-time 3D movement tracking and correction. <i>Physics in Medicine and Biology</i> , 2011 , 56, 7061-80	3.8	48
86	Monitoring of cornea elastic properties changes during UV-A/riboflavin-induced corneal collagen cross-linking using supersonic shear wave imaging: a pilot study 2012 , 53, 5948-54		48
85	Ultrasonic focusing through the ribs using the DORT method. <i>Medical Physics</i> , 2009 , 36, 3495-503	4.4	44
84	Potential impact of thermal effects during ultrasonic neurostimulation: retrospective numerical estimation of temperature elevation in seven rodent setups. <i>Physics in Medicine and Biology</i> , 2018 , 63, 025003	3.8	43
83	3D-printed adaptive acoustic lens as a disruptive technology for transcranial ultrasound therapy using single-element transducers. <i>Physics in Medicine and Biology</i> , 2018 , 63, 025026	3.8	43
82	Ex vivo optimisation of a heterogeneous speed of sound model of the human skull for non-invasive transcranial focused ultrasound at 1 MHz. <i>International Journal of Hyperthermia</i> , 2017 , 33, 635-645	3.7	41
81	In vivo evidence of porcine cornea anisotropy using supersonic shear wave imaging 2014 , 55, 7545-52		41
80	Adaptive focusing for transcranial ultrasound imaging using dual arrays. <i>Journal of the Acoustical Society of America</i> , 2006 , 120, 2737-45	2.2	39

79	Ultrashort echo-time MRI versus CT for skull aberration correction in MR-guided transcranial focused ultrasound: In vitro comparison on human calvaria. <i>Medical Physics</i> , 2015 , 42, 2223-33	4.4	38
78	A 200-1380-kHz Quadrifrequency Focused Ultrasound Transducer for Neurostimulation in Rodents and Primates: Transcranial In Vitro Calibration and Numerical Study of the Influence of Skull Cavity. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2017 , 64, 717-724	3.2	33
77	Magnetic resonance-guided motorized transcranial ultrasound system for blood-brain barrier permeabilization along arbitrary trajectories in rodents. <i>Journal of Therapeutic Ultrasound</i> , 2015 , 3, 22		29
76	Time reversal of photoacoustic waves. <i>Applied Physics Letters</i> , 2006 , 89, 184108	3.4	29
75	Performing daily prostate targeting with a standard V-EPID and an automated radio-opaque marker detection algorithm. <i>Radiotherapy and Oncology</i> , 2004 , 73, 61-4	5.3	29
74	Image-guided focused ultrasound: state of the technology and the challenges that lie ahead. <i>Imaging in Medicine</i> , 2013 , 5, 357-370	1	28
73	Trans-cranial focused ultrasound without hair shaving: feasibility study in an ex vivo cadaver model. <i>Journal of Therapeutic Ultrasound</i> , 2013 , 1, 24		26
72	Numerical prediction of frequency dependent 3D maps of mechanical index thresholds in ultrasonic brain therapy. <i>Medical Physics</i> , 2012 , 39, 455-67	4.4	26
71	A Basal Forebrain-Cingulate Circuit in Macaques Decides It Is Time to Act. <i>Neuron</i> , 2020 , 105, 370-384.e813.9		26
70	Intracranial inertial cavitation threshold and thermal ablation lesion creation using MRI-guided 220-kHz focused ultrasound surgery: preclinical investigation. <i>Journal of Neurosurgery</i> , 2015 , 122, 152-61	3.2	25
69	MR-Guided Transcranial Focused Ultrasound. <i>Advances in Experimental Medicine and Biology</i> , 2016 , 880, 97-111	3.6	24
68	Non-invasive ultrasonic surgery of the brain in non-human primates. <i>Journal of the Acoustical Society of America</i> , 2013 , 134, 1632-9	2.2	24
67	MRI monitoring of temperature and displacement for transcranial focus ultrasound applications. <i>NeuroImage</i> , 2020 , 204, 116236	7.9	23
66	Direct phase projection and transcranial focusing of ultrasound for brain therapy. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2012 , 59, 1149-59	3.2	21
65	How minute sooglossid frogs hear without a middle ear. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 15360-4	11.5	20
64	Suppression of tissue harmonics for pulse-inversion contrast imaging using time reversal. <i>Physics in Medicine and Biology</i> , 2008 , 53, 5469-80	3.8	20
63	Multiobjective optimization with a modified simulated annealing algorithm for external beam radiotherapy treatment planning. <i>Medical Physics</i> , 2006 , 33, 4718-29	4.4	19
62	T1-weighted MRI as a substitute to CT for refocusing planning in MR-guided focused ultrasound. <i>Physics in Medicine and Biology</i> , 2014 , 59, 3599-614	3.8	18

61	Photoacoustic guidance of high intensity focused ultrasound with selective optical contrasts and time-reversal. <i>Applied Physics Letters</i> , 2009 , 94, 054102	3.4	18
60	Real-time monitoring of tissue displacement and temperature changes during MR-guided high intensity focused ultrasound. <i>Magnetic Resonance in Medicine</i> , 2017 , 78, 1911-1921	4.4	17
59	Head phantoms for transcranial focused ultrasound. <i>Medical Physics</i> , 2015 , 42, 1518-27	4.4	17
58	Focused ultrasound development and clinical adoption: 2013 update on the growth of the field. <i>Journal of Therapeutic Ultrasound</i> , 2014 , 2, 2		17
57	Keyhole acceleration for magnetic resonance acoustic radiation force imaging (MR ARFI). <i>Magnetic Resonance Imaging</i> , 2013 , 31, 1695-703	3.3	17
56	Statistics of acoustically induced bubble-nucleation events in in vitro blood: a feasibility study. <i>Ultrasound in Medicine and Biology</i> , 2013 , 39, 1812-25	3.5	17
55	Adaptive projection method applied to three-dimensional ultrasonic focusing and steering through the ribs. <i>Journal of the Acoustical Society of America</i> , 2011 , 130, 716-23	2.2	17
54	Photoacoustic-guided ultrasound therapy with a dual-mode ultrasound array. <i>Journal of Biomedical Optics</i> , 2012 , 17, 061205	3.5	16
53	Steering Capabilities of an Acoustic Lens for Transcranial Therapy: Numerical and Experimental Studies. <i>IEEE Transactions on Biomedical Engineering</i> , 2020 , 67, 27-37	5	16
52	In-vivo non-invasive motion tracking and correction in high intensity focused ultrasound therapy. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2006 , 2006, 688-91		15
51	Combining brain perturbation and neuroimaging in non-human primates. <i>NeuroImage</i> , 2021 , 235, 118017.9		15
50	Transcranial high intensity focused ultrasound therapy guided by 7 TESLA MRI in a rat brain tumour model: a feasibility study. <i>International Journal of Hyperthermia</i> , 2013 , 29, 598-608	3.7	14
49	Spatio-temporal coding in complex media for optimum beamforming: the iterative time-reversal approach. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2005 , 52, 220-30	3.2	13
48	Non-invasive ultrasonic modulation of visual evoked response by GABA delivery through the blood brain barrier. <i>Journal of Controlled Release</i> , 2020 , 318, 223-231	11.7	12
47	Non-Invasive, Focal Disconnection of Brain Circuitry Using Magnetic Resonance-Guided Low-Intensity Focused Ultrasound to Deliver a Neurotoxin. <i>Ultrasound in Medicine and Biology</i> , 2016 , 42, 2261-9	3.5	11
46	Dual-arrays brain imaging prototype: experimental in vitro results 2005 ,		10
45	Neuronavigated Repetitive Transcranial Ultrasound Stimulation Induces Long-Lasting and Reversible Effects on Oculomotor Performance in Non-human Primates. <i>Frontiers in Physiology</i> , 2020 , 11, 1042	4.6	10
44	High-intensity therapeutic ultrasound: metrological requirements versus clinical usage. <i>Metrologia</i> , 2012 , 49, S259-S266	2.1	9

43	The Stokes relations linking time reversal and the inverse filter. <i>Journal of the Acoustical Society of America</i> , 2006 , 119, 1335-1346	2.2	9
42	Noninvasive vascular occlusion with HIFU for venous insufficiency treatment: preclinical feasibility experience in rabbits. <i>Physics in Medicine and Biology</i> , 2019 , 64, 025003	3.8	9
41	Equivalence of cell survival data for radiation dose and thermal dose in ablative treatments: analysis applied to essential tremor thalamotomy by focused ultrasound and gamma knife. <i>International Journal of Hyperthermia</i> , 2017 , 33, 401-410	3.7	8
40	Random calibration for accelerating MR-ARFI guided ultrasonic focusing in transcranial therapy. <i>Physics in Medicine and Biology</i> , 2015 , 60, 1069-85	3.8	8
39	Computationally Efficient Transcranial Ultrasonic Focusing: Taking Advantage of the High Correlation Length of the Human Skull. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2020 , 67, 1993-2002	3.2	8
38	Inside/outside the brain binary cavitation localization based on the lowpass filter effect of the skull on the harmonic content: a proof of concept study. <i>Physics in Medicine and Biology</i> , 2018 , 63, 135012	3.8	8
37	Mechanisms of attenuation and heating dissipation of ultrasound in the skull bone: Comparison between simulation models and experiments 2010 ,		8
36	Time-reversal focusing of therapeutic ultrasound on targeted microbubbles. <i>Applied Physics Letters</i> , 2009 , 94, 173901	3.4	8
35	Non-invasive transcranial ultrasound therapy guided by CT-scans. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2006 , 2006, 683-7		8
34	Thermal dose and radiation dose comparison based on cell survival. <i>Journal of Therapeutic Ultrasound</i> , 2015 , 3,		7
33	Defining the optimal age for focal lesioning in a rat model of transcranial HIFU. <i>Ultrasound in Medicine and Biology</i> , 2015 , 41, 449-55	3.5	6
32	Ultrasons focalisés de forte intensité pour la thérapie transcrânienne du cerveau. <i>Irbm</i> , 2010 , 31, 87-91	4.8	6
31	High power phased array prototype for clinical high intensity focused ultrasound : applications to transcortical and transcranial therapy. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2007 , 2007, 234-7		6
30	Adaptive Focusing For Ultrasonic Transcranial Brain Therapy: First In Vivo Investigation On 22 Sheep. <i>AIP Conference Proceedings</i> , 2005 ,	0	6
29	Optimal adaptive focusing through heterogeneous media with the minimally invasive inverse filter. <i>Journal of the Acoustical Society of America</i> , 2007 , 122, 2715-24	2.2	5
28	Efficacy and safety assessment of an ultrasound-based thermal treatment of varicose veins in a sheep model. <i>International Journal of Hyperthermia</i> , 2020 , 37, 231-244	3.7	4
27	A simple novel approach for detecting blood-brain barrier permeability using GPCR internalization. <i>Neuropathology and Applied Neurobiology</i> , 2021 , 47, 297-315	5.2	4
26	Extracorporeal Treatment with High Intensity Focused Ultrasound of an Incompetent Perforating Vein in a Patient with Active Venous Ulcers. <i>EJVES Vascular Forum</i> , 2021 , 50, 1-5	0.4	4

25	SU-FF-T-337: Multiobjective Inverse Planning Optimization: Adjustment of Dose Homogeneity and Urethra Protection in HDR-Brachytherapy of the Prostate. <i>Medical Physics</i> , 2006 , 33, 2124-2124	4.4	3
24	An incoherent HIFU transducer for treatment of the medial branch nerve: Numerical study and in vivo validation. <i>International Journal of Hyperthermia</i> , 2020 , 37, 1219-1228	3.7	2
23	High-intensity Focused Ultrasound. <i>Ultrasound Clinics</i> , 2013 , 8, 213-226		2
22	Transcranial ultrasound neuromodulation of the contralateral visual field in awake monkey 2013 ,		2
21	Radiation force localization of HIFU therapeutic beams coupled with magnetic resonance-elastography treatment monitoring in vivo application to the rat brain 2008 ,		2
20	Imaging Changes during Therapy: Does it Matter?. <i>Imaging Decisions (Berlin, Germany)</i> , 2008 , 12, 3-13		2
19	Non-Invasive Transcranial Brain Therapy Guided by CT Scans: an In Vivo Monkey Study. <i>AIP Conference Proceedings</i> , 2007 ,	0	2
18	Reflection and time-reversal of ultrasonic waves in the vicinity of the Rayleigh angle at a fluid-solid interface. <i>Journal of the Acoustical Society of America</i> , 2005 , 118, 3145-3153	2.2	2
17	Manipulation of subcortical and deep cortical activity in the primate brain using transcranial focused ultrasound stimulation		2
16	Vein wall shrinkage induced by thermal coagulation with high-intensity-focused ultrasound: numerical modeling and experiments in sheep. <i>International Journal of Hyperthermia</i> , 2020 , 37, 1238-1247	3.7	2
15	Comparison Between Ray-Tracing and Full-Wave Simulation for Transcranial Ultrasound Focusing on a Clinical System Using the Transfer Matrix Formalism. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2021 , 68, 2554-2565	3.2	2
14	Numerical prediction of frequency dependent 3D maps of mechanical index thresholds in ultrasonic brain therapy 2010 ,		1
13	Effects of nonlinearity on propagation through the skull 2009 ,		1
12	Cavitation bubble generation and control for HIFU transcranial adaptive focusing 2009 ,		1
11	Tissue harmonics cancellation using time-reversal 2008 ,		1
10	In vivo measurements of medial branch nerve depth and adjacent osseous structures for ablation of facet-related back pain: Predictors for patient candidacy.. <i>North American Spine Society Journal (NASSJ)</i> , 2020 , 3, 100018	0.3	1
9	Tolerability and Feasibility of X-ray Guided Non-Invasive Ablation of the Medial Branch Nerve with Focused Ultrasound: Preliminary Proof of Concept in a Pre-clinical Model. <i>Ultrasound in Medicine and Biology</i> , 2021 , 47, 640-650	3.5	0
8	Ultrasound modulation of macaque prefrontal cortex selectively alters credit assignment-related activity and behavior.. <i>Science Advances</i> , 2021 , 7, eabg7700	14.3	0

7 Comparison Between Time Reversal and Inverse Filter Focusing **2000**, 101-108

6 SU-FF-T-114: Local Minima in Anatomic Aperture-Based IMRT Optimization. *Medical Physics*, **2005**, 32, 1976-1976 4.4

5 Po-Poster - 19: Local minima in anatomic aperture-based IMRT optimization. *Medical Physics*, **2005**, 32, 2413-2413 4.4

4 SU-FF-T-116: Calibration of the Perkin Elmer AG9 Flat Panel Portal Imager for Exit Dosimetry. *Medical Physics*, **2006**, 33, 2075-2075 4.4

3 TH-D-ValB-05: Evaluation of Image Quality in Megavoltage Digital Tomosynthesis. *Medical Physics*, **2006**, 33, 2281-2281 4.4

2 Des innovations aux transferts cliniques et commerciaux : 100 ans après leur découverte, les ultrasons médicaux vivent leur seconde révolution. *Annales Des Mines - Responsabilité Et Environnement*, **2021**, N° 103, 33-39 0.1

1 Adaptive Ultrasound Focusing Through the Cranial Bone for Non-invasive Treatment of Brain Disorders.. *Advances in Experimental Medicine and Biology*, **2022**, 1364, 397-409 3.6