

# Jean-Francois Aubry

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	Adaptive Ultrasound Focusing Through the Cranial Bone for Non-invasive Treatment of Brain Disorders.. <i>Advances in Experimental Medicine and Biology</i> , <b>2022</b> , 1364, 397-409	3.6	
113	Des innovations aux transferts cliniques et commerciaux : 100 ans après leur découverte, les ultrasons médicaux vivent leur seconde révolution. <i>Annales Des Mines - Responsabilité Et Environnement</i> , <b>2021</b> , N° 103, 33-39	0.1	
112	Combining brain perturbation and neuroimaging in non-human primates. <i>NeuroImage</i> , <b>2021</b> , 235, 118017.	7.9	15
111	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> , <b>2021</b> , 47, 640-650	3.5	0
110	A simple novel approach for detecting blood-brain barrier permeability using GPCR internalization. <i>Neuropathology and Applied Neurobiology</i> , <b>2021</b> , 47, 297-315	5.2	4
109	Extracorporeal Treatment with High Intensity Focused Ultrasound of an Incompetent Perforating Vein in a Patient with Active Venous Ulcers. <i>EJVES Vascular Forum</i> , <b>2021</b> , 50, 1-5	0.4	4
108	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> , <b>2021</b> , 68, 2554-2565	3.2	2
107	Ultrasound modulation of macaque prefrontal cortex selectively alters credit assignment-related activity and behavior.. <i>Science Advances</i> , <b>2021</b> , 7, eabg7700	14.3	0
106	An incoherent HIFU transducer for treatment of the medial branch nerve: Numerical study and in vivo validation. <i>International Journal of Hyperthermia</i> , <b>2020</b> , 37, 1219-1228	3.7	2
105	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> , <b>2020</b> , 67, 1993-2002	3.2	8
104	Efficacy and safety assessment of an ultrasound-based thermal treatment of varicose veins in a sheep model. <i>International Journal of Hyperthermia</i> , <b>2020</b> , 37, 231-244	3.7	4
103	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> , <b>2020</b> , 3, 100018	0.3	1
102	A Basal Forebrain-Cingulate Circuit in Macaques Decides It Is Time to Act. <i>Neuron</i> , <b>2020</b> , 105, 370-384.	13.9	26
101	Non-invasive ultrasonic modulation of visual evoked response by GABA delivery through the blood brain barrier. <i>Journal of Controlled Release</i> , <b>2020</b> , 318, 223-231	11.7	12
100	Vein wall shrinkage induced by thermal coagulation with high-intensity-focused ultrasound: numerical modeling and experiments in sheep. <i>International Journal of Hyperthermia</i> , <b>2020</b> , 37, 1238-1247.	3.7	2
99	Neuronavigated Repetitive Transcranial Ultrasound Stimulation Induces Long-Lasting and Reversible Effects on Oculomotor Performance in Non-human Primates. <i>Frontiers in Physiology</i> , <b>2020</b> , 11, 1042	4.6	10
98	Steering Capabilities of an Acoustic Lens for Transcranial Therapy: Numerical and Experimental Studies. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2020</b> , 67, 27-37	5	16

97	MRI monitoring of temperature and displacement for transcranial focus ultrasound applications. <i>NeuroImage</i> , <b>2020</b> , 204, 116236	7.9	23
96	The macaque anterior cingulate cortex translates counterfactual choice value into actual behavioral change. <i>Nature Neuroscience</i> , <b>2019</b> , 22, 797-808	25.5	66
95	Manipulation of Subcortical and Deep Cortical Activity in the Primate Brain Using Transcranial Focused Ultrasound Stimulation. <i>Neuron</i> , <b>2019</b> , 101, 1109-1116.e5	13.9	115
94	Offline impact of transcranial focused ultrasound on cortical activation in primates. <i>ELife</i> , <b>2019</b> , 8,	8.9	97
93	Noninvasive vascular occlusion with HIFU for venous insufficiency treatment: preclinical feasibility experience in rabbits. <i>Physics in Medicine and Biology</i> , <b>2019</b> , 64, 025003	3.8	9
92	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> , <b>2018</b> , 63, 025003	3.8	43
91	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> , <b>2018</b> , 63, 135012	3.8	8
90	3D-printed adaptive acoustic lens as a disruptive technology for transcranial ultrasound therapy using single-element transducers. <i>Physics in Medicine and Biology</i> , <b>2018</b> , 63, 025026	3.8	43
89	Real-time monitoring of tissue displacement and temperature changes during MR-guided high intensity focused ultrasound. <i>Magnetic Resonance in Medicine</i> , <b>2017</b> , 78, 1911-1921	4.4	17
88	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> , <b>2017</b> , 64, 717-724	3.2	33
87	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> , <b>2017</b> , 33, 635-645	3.7	41
86	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> , <b>2017</b> , 33, 401-410	3.7	8
85	Transcranial ultrasonic stimulation modulates single-neuron discharge in macaques performing an antisaccade task. <i>Brain Stimulation</i> , <b>2017</b> , 10, 1024-1031	5.1	76
84	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> , <b>2016</b> , 42, 2261-9	3.5	11
83	MR-Guided Transcranial Focused Ultrasound. <i>Advances in Experimental Medicine and Biology</i> , <b>2016</b> , 880, 97-111	3.6	24
82	Random calibration for accelerating MR-ARFI guided ultrasonic focusing in transcranial therapy. <i>Physics in Medicine and Biology</i> , <b>2015</b> , 60, 1069-85	3.8	8
81	Head phantoms for transcranial focused ultrasound. <i>Medical Physics</i> , <b>2015</b> , 42, 1518-27	4.4	17
80	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> , <b>2015</b> , 42, 2223-33	4.4	38

79	Magnetic resonance-guided motorized transcranial ultrasound system for blood-brain barrier permeabilization along arbitrary trajectories in rodents. <i>Journal of Therapeutic Ultrasound</i> , <b>2015</b> , 3, 22		29
78	Thermal dose and radiation dose comparison based on cell survival. <i>Journal of Therapeutic Ultrasound</i> , <b>2015</b> , 3,		7
77	Intracranial inertial cavitation threshold and thermal ablation lesion creation using MRI-guided 220-kHz focused ultrasound surgery: preclinical investigation. <i>Journal of Neurosurgery</i> , <b>2015</b> , 122, 152-61 <sup>2</sup>		25
76	Defining the optimal age for focal lesioning in a rat model of transcranial HIFU. <i>Ultrasound in Medicine and Biology</i> , <b>2015</b> , 41, 449-55	3.5	6
75	Focused ultrasound development and clinical adoption: 2013 update on the growth of the field. <i>Journal of Therapeutic Ultrasound</i> , <b>2014</b> , 2, 2		17
74	T1-weighted MRI as a substitute to CT for refocusing planning in MR-guided focused ultrasound. <i>Physics in Medicine and Biology</i> , <b>2014</b> , 59, 3599-614	3.8	18
73	In vivo evidence of porcine cornea anisotropy using supersonic shear wave imaging <b>2014</b> , 55, 7545-52		41
72	Non-invasive ultrasonic surgery of the brain in non-human primates. <i>Journal of the Acoustical Society of America</i> , <b>2013</b> , 134, 1632-9	2.2	24
71	High-intensity Focused Ultrasound. <i>Ultrasound Clinics</i> , <b>2013</b> , 8, 213-226		2
70	How minute sooglossid frogs hear without a middle ear. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2013</b> , 110, 15360-4	11.5	20
69	Low-intensity focused ultrasound modulates monkey visuomotor behavior. <i>Current Biology</i> , <b>2013</b> , 23, 2430-3	6.3	232
68	Image-guided focused ultrasound: state of the technology and the challenges that lie ahead. <i>Imaging in Medicine</i> , <b>2013</b> , 5, 357-370	1	28
67	The road to clinical use of high-intensity focused ultrasound for liver cancer: technical and clinical consensus. <i>Journal of Therapeutic Ultrasound</i> , <b>2013</b> , 1, 13		63
66	Trans-cranial focused ultrasound without hair shaving: feasibility study in an ex vivo cadaver model. <i>Journal of Therapeutic Ultrasound</i> , <b>2013</b> , 1, 24		26
65	Influence of the pressure field distribution in transcranial ultrasonic neurostimulation. <i>Medical Physics</i> , <b>2013</b> , 40, 082902	4.4	123
64	Keyhole acceleration for magnetic resonance acoustic radiation force imaging (MR ARFI). <i>Magnetic Resonance Imaging</i> , <b>2013</b> , 31, 1695-703	3.3	17
63	Statistics of acoustically induced bubble-nucleation events in in vitro blood: a feasibility study. <i>Ultrasound in Medicine and Biology</i> , <b>2013</b> , 39, 1812-25	3.5	17
62	Transcranial ultrasound neuromodulation of the contralateral visual field in awake monkey <b>2013</b> ,		2

61	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> , <b>2013</b> , 29, 598-608	3.7	14
60	Targeting accuracy of transcranial magnetic resonance-guided high-intensity focused ultrasound brain therapy: a fresh cadaver model. <i>Journal of Neurosurgery</i> , <b>2013</b> , 118, 1046-52	3.2	55
59	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> , <b>2013</b> , 119, 307-17	3.2	68
58	Direct phase projection and transcranial focusing of ultrasound for brain therapy. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , <b>2012</b> , 59, 1149-59	3.2	21
57	High-intensity therapeutic ultrasound: metrological requirements versus clinical usage. <i>Metrologia</i> , <b>2012</b> , 49, S259-S266	2.1	9
56	Numerical prediction of frequency dependent 3D maps of mechanical index thresholds in ultrasonic brain therapy. <i>Medical Physics</i> , <b>2012</b> , 39, 455-67	4.4	26
55	Attenuation, scattering, and absorption of ultrasound in the skull bone. <i>Medical Physics</i> , <b>2012</b> , 39, 299-307	4.4	165
54	Photoacoustic-guided ultrasound therapy with a dual-mode ultrasound array. <i>Journal of Biomedical Optics</i> , <b>2012</b> , 17, 061205	3.5	16
53	Monitoring of cornea elastic properties changes during UV-A/riboflavin-induced corneal collagen cross-linking using supersonic shear wave imaging: a pilot study <b>2012</b> , 53, 5948-54		48
52	MR-guided adaptive focusing of therapeutic ultrasound beams in the human head. <i>Medical Physics</i> , <b>2012</b> , 39, 1141-9	4.4	80
51	Optimal transcostal high-intensity focused ultrasound with combined real-time 3D movement tracking and correction. <i>Physics in Medicine and Biology</i> , <b>2011</b> , 56, 7061-80	3.8	48
50	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> , <b>2011</b> , 58, 517-32	3.2	83
49	In vivo bubble nucleation probability in sheep brain tissue. <i>Physics in Medicine and Biology</i> , <b>2011</b> , 56, 7001-85	3.85	62
48	Effects of nonlinear ultrasound propagation on high intensity brain therapy. <i>Medical Physics</i> , <b>2011</b> , 38, 1207-16	4.4	52
47	Adaptive projection method applied to three-dimensional ultrasonic focusing and steering through the ribs. <i>Journal of the Acoustical Society of America</i> , <b>2011</b> , 130, 716-23	2.2	17
46	MR-guided transcranial brain HIFU in small animal models. <i>Physics in Medicine and Biology</i> , <b>2010</b> , 55, 365-88	3.8	62
45	Numerical prediction of frequency dependent 3D maps of mechanical index thresholds in ultrasonic brain therapy <b>2010</b> ,		1
44	Mechanisms of attenuation and heating dissipation of ultrasound in the skull bone: Comparison between simulation models and experiments <b>2010</b> ,		8

43	Transcranial ultrasonic therapy based on time reversal of acoustically induced cavitation bubble signature. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2010</b> , 57, 134-44	5	50
42	Ultrasons focalisés de forte intensité pour la thérapie transcrânienne du cerveau. <i>Irbm</i> , <b>2010</b> , 31, 87-91	4.8	6
41	Time-reversal focusing of therapeutic ultrasound on targeted microbubbles. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 173901	3.4	8
40	Photoacoustic guidance of high intensity focused ultrasound with selective optical contrasts and time-reversal. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 054102	3.4	18
39	Effects of nonlinearity on propagation through the skull <b>2009</b> ,		1
38	Non-invasive transcranial ultrasound therapy based on a 3D CT scan: protocol validation and in vitro results. <i>Physics in Medicine and Biology</i> , <b>2009</b> , 54, 2597-613	3.8	134
37	Cavitation bubble generation and control for HIFU transcranial adaptive focusing <b>2009</b> ,		1
36	Simulation of intracranial acoustic fields in clinical trials of sonothrombolysis. <i>Ultrasound in Medicine and Biology</i> , <b>2009</b> , 35, 1148-58	3.5	97
35	Ultrafast imaging of ultrasound contrast agents. <i>Ultrasound in Medicine and Biology</i> , <b>2009</b> , 35, 1908-16	3.5	70
34	Ultrasonic focusing through the ribs using the DORT method. <i>Medical Physics</i> , <b>2009</b> , 36, 3495-503	4.4	44
33	Radiation force localization of HIFU therapeutic beams coupled with magnetic resonance-elastography treatment monitoring in vivo application to the rat brain <b>2008</b> ,		2
32	Suppression of tissue harmonics for pulse-inversion contrast imaging using time reversal. <i>Physics in Medicine and Biology</i> , <b>2008</b> , 53, 5469-80	3.8	20
31	Transcostal high-intensity-focused ultrasound: ex vivo adaptive focusing feasibility study. <i>Physics in Medicine and Biology</i> , <b>2008</b> , 53, 2937-51	3.8	85
30	Tissue harmonics cancellation using time-reversal <b>2008</b> ,		1
29	Imaging Changes during Therapy: Does it Matter?. <i>Imaging Decisions (Berlin, Germany)</i> , <b>2008</b> , 12, 3-13		2
28	High power phased array prototype for clinical high intensity focused ultrasound : applications to transcostal and transcranial therapy. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , <b>2007</b> , 2007, 234-7		6
27	Compensating for bone interfaces and respiratory motion in high-intensity focused ultrasound. <i>International Journal of Hyperthermia</i> , <b>2007</b> , 23, 141-51	3.7	77
26	In vivo transcranial brain surgery with an ultrasonic time reversal mirror. <i>Journal of Neurosurgery</i> , <b>2007</b> , 106, 1061-6	3.2	98

25	Optimal adaptive focusing through heterogeneous media with the minimally invasive inverse filter. <i>Journal of the Acoustical Society of America</i> , <b>2007</b> , 122, 2715-24	2.2	5
24	Non-Invasive Transcranial Brain Therapy Guided by CT Scans: an In Vivo Monkey Study. <i>AIP Conference Proceedings</i> , <b>2007</b> ,	0	2
23	Non-invasive transcranial ultrasound therapy guided by CT-scans. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , <b>2006</b> , 2006, 683-7		8
22	The Stokes relations linking time reversal and the inverse filter. <i>Journal of the Acoustical Society of America</i> , <b>2006</b> , 119, 1335-1346	2.2	9
21	Time reversal of photoacoustic waves. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 184108	3.4	29
20	Adaptive focusing for transcranial ultrasound imaging using dual arrays. <i>Journal of the Acoustical Society of America</i> , <b>2006</b> , 120, 2737-45	2.2	39
19	Multiobjective optimization with a modified simulated annealing algorithm for external beam radiotherapy treatment planning. <i>Medical Physics</i> , <b>2006</b> , 33, 4718-29	4.4	19
18	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> , <b>2006</b> , 2006, 688-91		15
17	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> , <b>2006</b> , 33, 2124-2124	4.4	3
16	SU-FF-T-116: Calibration of the Perkin Elmer AG9 Flat Panel Portal Imager for Exit Dosimetry. <i>Medical Physics</i> , <b>2006</b> , 33, 2075-2075	4.4	
15	TH-D-ValB-05: Evaluation of Image Quality in Megavoltage Digital Tomosynthesis. <i>Medical Physics</i> , <b>2006</b> , 33, 2281-2281	4.4	
14	Dual-arrays brain imaging prototype: experimental in vitro results <b>2005</b> ,		10
13	Spatio-temporal coding in complex media for optimum beamforming: the iterative time-reversal approach. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , <b>2005</b> , 52, 220-30	3.2	13
12	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> , <b>2005</b> , 118, 3145-3153	2.2	2
11	Adaptive Focusing For Ultrasonic Transcranial Brain Therapy: First In Vivo Investigation On 22 Sheep. <i>AIP Conference Proceedings</i> , <b>2005</b> ,	0	6
10	SU-FF-T-114: Local Minima in Anatomic Aperture-Based IMRT Optimization. <i>Medical Physics</i> , <b>2005</b> , 32, 1976-1976	4.4	
9	Po-Poster - 19: Local minima in anatomic aperture-based IMRT optimization. <i>Medical Physics</i> , <b>2005</b> , 32, 2413-2413	4.4	
8	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> , <b>2004</b> , 60, 30-9	4	135

7	Performing daily prostate targeting with a standard V-EPID and an automated radio-opaque marker detection algorithm. <i>Radiotherapy and Oncology</i> , <b>2004</b> , 73, 61-4	5.3	29
6	High power transcranial beam steering for ultrasonic brain therapy. <i>Physics in Medicine and Biology</i> , <b>2003</b> , 48, 2577-89	3.8	153
5	Experimental demonstration of noninvasive transskull adaptive focusing based on prior computed tomography scans. <i>Journal of the Acoustical Society of America</i> , <b>2003</b> , 113, 84-93	2.2	333
4	Optimal focusing by spatio-temporal inverse filter. I. Basic principles. <i>Journal of the Acoustical Society of America</i> , <b>2001</b> , 110, 37-47	2.2	146
3	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> , <b>2001</b> , 110, 48-58	2.2	78
2	Comparison Between Time Reversal and Inverse Filter Focusing <b>2000</b> , 101-108		
1	Manipulation of subcortical and deep cortical activity in the primate brain using transcranial focused ultrasound stimulation		2