Ronald A Roy

List of Publications by Citations

96 papers	4,080 citations	31 h-index	63 g-index
123 ext. papers	4,548 ext. citations	3.1 avg, IF	5.18 L-index

#	Paper	IF	Citations
96	Sonoluminescence and bubble dynamics for a single, stable, cavitation bubble. *Journal of the Acoustical Society of America*, **1992**, 91, 3166-3183	2.2	604
95	Applications of Acoustics and Cavitation to Noninvasive Therapy and Drug Delivery. *Annual Review of Fluid Mechanics*, **2008**, 40, 395-420	22	321
94	Role of acoustic cavitation in the delivery and monitoring of cancer treatment by high-intensity focused ultrasound (HIFU). *International Journal of Hyperthermia*, **2007**, 23, 105-20	3.7	295
93	Measurements of bubble-enhanced heating from focused, MHz-frequency ultrasound in a tissue-mimicking material. *Ultrasound in Medicine and Biology*, **2001**, 27, 1399-412	3.5	269
92	Comparison of multibubble and single-bubble sonoluminescence spectra. *Physical Review Letters*, **1995**, 75, 2602-2605	7.4	164
91	Cavitational mechanisms in ultrasound-accelerated fibrinolysis. *Ultrasound in Medicine and Biology*, **2007**, 33, 924-33	3.5	122
90	An acoustic backscattering technique for the detection of transient cavitation produced by microsecond pulses of ultrasound. *Journal of the Acoustical Society of America*, **1990**, 87, 2451-8	2.2	119
89	Experimental validation of a tractable numerical model for focused ultrasound heating in flow-through tissue phantoms. *Journal of the Acoustical Society of America*, **2004**, 116, 2451-8	2.2	115
88	Thresholds for cavitation produced in water by pulsed ultrasound. *Ultrasonics*, **1988**, 26, 280-5	3.5	114
87	Liver hemostasis using high-intensity focused ultrasound. *Ultrasound in Medicine and Biology*, **1997**, 23, 1413-20	3.5	109
86	Temporal and spatial detection of HIFU-induced inertial and hot-vapor cavitation with a diagnostic ultrasound system. *Ultrasound in Medicine and Biology*, **2009**, 35, 603-15	3.5	99
85	Detection of ultrasound-modulated photons in diffuse media using the photorefractive effect. *Optics Letters*, **2004**, 29, 2509-11	3	95
84	Bjerknes force and bubble levitation under single-bubble sonoluminescence conditions. *Journal of the Acoustical Society of America*, **1997**, 102, 1522-1527	2.2	82
83	The correlation between bubble-enhanced HIFU heating and cavitation power. *IEEE Transactions on Biomedical Engineering*, **2010**, 57, 175-84	5	78
82	Dynamics of gas bubbles in viscoelastic fluids. I. Linear viscoelasticity. *Journal of the Acoustical Society of America*, **2000**, 107, 3167-78	2.2	78
81	Acoustic microcavitation: its active and passive acoustic detection. *Journal of the Acoustical Society of America*, **1991**, 90, 1515-26	2.2	75
80	Physical mechanisms governing the hydrodynamic response of an oscillating ultrasonic file. *International Endodontic Journal*, **1994**, 27, 197-207	5.4	71

79	Dynamics of gas bubbles in viscoelastic fluids. II. Nonlinear viscoelasticity. *Journal of the Acoustical Society of America*, **2000**, 108, 1640-50	2.2	68
78	The acoustic emissions from single-bubble sonoluminescence. *Journal of the Acoustical Society of America*, **1998**, 103, 1377-1382	2.2	67
77	Acoustic cavitation produced by microsecond pulses of ultrasound: a discussion of some selected results. *Journal of the Acoustical Society of America*, **1992**, 91, 1113-9	2.2	66
76	Nucleating cavitation from laser-illuminated nano-particles. *Acoustics Research Letters Online: ARLO* , **2005**, 6, 138-143		63
75	Gold nanoparticle targeted photoacoustic cavitation for potential deep tissue imaging and therapy. *Biomedical Optics Express*, **2013**, 4, 66-76	3.5	59
74	Bubble dynamics and size distributions during focused ultrasound insonation. *Journal of the Acoustical Society of America*, **2004**, 116, 3423-31	2.2	53
73	Sound emissions by a laboratory bubble cloud. *Journal of the Acoustical Society of America*, **1994**, 95, 3171-3182	2.2	49
72	A precise technique for the measurement of acoustic cavitation thresholds and some preliminary results. *Journal of the Acoustical Society of America*, **1985**, 78, 1799-805	2.2	44
71	Phase speed and attenuation in bubbly liquids inferred from impedance measurements near the individual bubble resonance frequency. *Journal of the Acoustical Society of America*, **2005**, 117, 1895-910	2.2	42
70	Ultrasonic enhancement of photoacoustic emissions by nanoparticle-targeted cavitation. *Optics Letters*, **2010**, 35, 2127-9	3	38
69	Phase velocity measurements in bubbly liquids using a fiber optic laser interferometer. *Journal of the Acoustical Society of America*, **1995**, 97, 1621-1624	2.2	37
68	Optical pulse width measurements of sonoluminescence in cavitation-bubble fields. *Journal of the Acoustical Society of America*, **1997**, 101, 1994-2002	2.2	36
67	In vitro detection of cavitation induced by a diagnostic ultrasound system. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **1992**, 39, 95-101	3.2	34
66	Dynamics and control of cavitation during high-intensity focused ultrasound application. *Acoustics Research Letters Online: ARLO*, **2005**, 6, 182-187		32
65	An improved water-filled impedance tube. *Journal of the Acoustical Society of America*, **2003**, 113, 3245-52	2.2	29
64	Comparisons of sonoluminescence from single-bubbles and cavitation fields: bridging the gap. *Ultrasonics Sonochemistry*, **1997**, 4, 61-4	8.9	27
63	An audible demonstration of the speed of sound in bubbly liquids. *American Journal of Physics*, **2008**, 76, 975-981	0.7	26
62	Observations of acoustic streaming fields around an oscillating ultrasonic file. *Dental Traumatology*, **1992**, 8, 189-94	4.5	25

61	Real-time monitoring of high-intensity focused ultrasound lesion formation using acousto-optic sensing. *Ultrasound in Medicine and Biology*, **2011**, 37, 239-52	3.5	24
60	Fusion of conventional ultrasound imaging and acousto-optic sensing by use of a standard pulsed-ultrasound scanner. *Optics Letters*, **2005**, 30, 744-6	3	24
59	The vibratory pattern of ultrasonic files driven piezoelectrically. *International Endodontic Journal*, **1993**, 26, 120-4	5.4	23
58	Mechanical characterization of microparticles by scattered ultrasound. *Journal of the Acoustical Society of America*, **1990**, 87, 2332-41	2.2	23
57	Quantitative characterization of turbid media using pressure contrast acousto-optic imaging. *Optics Letters*, **2009**, 34, 2850-2	3	22
56	Photo- and Sono-Dynamic Therapy: A Review of Mechanisms and Considerations for Pharmacological Agents Used in Therapy Incorporating Light and Sound. *Current Pharmaceutical Design*, **2019**, 25, 401-412	3.3	21
55	An investigation of the acoustic emissions from a bubble plume. *Journal of the Acoustical Society of America*, **1991**, 89, 2452-2455	2.2	18
54	Imaging in diffuse media with pulsed-ultrasound-modulated light and the photorefractive effect. *Applied Optics*, **2005**, 44, 4041-8	1.7	17
53	Low-frequency scattering from submerged bubble clouds. *Journal of the Acoustical Society of America*, **1992**, 92, 2993-2996	2.2	17
52	Potentiating intra-arterial sonothrombolysis for acute ischemic stroke by the addition of the ultrasound contrast agents (Optison® & SonoVue(®)). *Journal of Thrombosis and Thrombolysis*, **2011**, 31, 71-84	5.1	16
51	Low-frequency underwater sound generation by impacting transient cylindrical water jets. *Journal of the Acoustical Society of America*, **1993**, 94, 2809-2820	2.2	16
50	Computations of the acoustically induced phase shifts of optical paths in acoustophotonic imaging with photorefractive-based detection. *Applied Optics*, **2005**, 44, 3735-46	1.7	14
49	Evidence of dispersion in an artificial water-saturated sand sediment. *Journal of the Acoustical Society of America*, **2007**, 121, 824-32	2.2	13
48	Low-frequency acoustic emissions in fresh and salt water. *Journal of the Acoustical Society of America*, **1994**, 96, 1766-1772	2.2	13
47	Conventional and hypobaric activation of an ultrasound contrast agent. *Ultrasound in Medicine and Biology*, **1998**, 24, 1143-50	3.5	12
46	Nonlinear coupling between the surface and volume modes of an oscillating bubble. *Journal of the Acoustical Society of America*, **1995**, 98, 2764-2771	2.2	12
45	Bubble production by capillary-gravity waves. *Journal of the Acoustical Society of America*, **1994**, 95, 1913-1921	2.2	12
44	Thermal dose dependent optical property changes of ex vivo chicken breast tissues between 500 and 1100 nm. *Physics in Medicine and Biology*, **2014**, 59, 3249-60	3.8	9

43	Modeling cavitation nucleation from laser-illuminated nanoparticles subjected to acoustic stress. *Journal of the Acoustical Society of America*, **2011**, 130, 3252-63	2.2	8
42	Detecting cavitation in mercury exposed to a high-energy pulsed proton beam. *Journal of the Acoustical Society of America*, **2010**, 127, 2231-9	2.2	8
41	Dynamics of gas bubbles in time-variant temperature fields. *Journal of Fluid Mechanics*, **2010**, 663, 209-232	3.7	8
40	Mitigation of Damage to Solid Surfaces From the Collapse of Cavitation Bubble Clouds. *Journal of Fluids Engineering, Transactions of the ASME*, **2010**, 132,	2.1	8
39	Cavitation Sonophysics **1999**, 25-38		7
38	HIFU-induced changes in optical scattering and absorption of tissue over nine orders of thermal dose. *Physics in Medicine and Biology*, **2018**, 63, 245001	3.8	7
37	Characterizing shock waves in hydrogel using high speed imaging and a fiber-optic probe hydrophone. *Physics of Fluids*, **2017**, 29, 057101	4.4	6
36	Measuring tissue properties and monitoring therapeutic responses using acousto-optic imaging. *Annals of Biomedical Engineering*, **2012**, 40, 474-85	4.7	6
35	The low-frequency sound speed of fluid-like gas-bearing sediments. *Journal of the Acoustical Society of America*, **2008**, 123, EL99-104	2.2	6
34	Amplitude degradation of time-reversed pulses in nonlinear absorbing thermoviscous fluids. *Ultrasonics*, **2000**, 38, 885-9	3.5	6
33	The underwater sounds produced by impacting snowflakes. *Journal of the Acoustical Society of America*, **1999**, 106, 1765-1770	2.2	6
32	Preliminary experimental observations of the effects of buoyancy on single-bubble sonoluminescence in microgravity and hypergravity. *Journal of the Acoustical Society of America*, **1996**, 100, 2717-2717	2.2	6
31	Sensing a buried resonant object by single-channel time reversal. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2009**, 56, 1429-41	3.2	5
30	Monitoring the Development of HIFU-Induced Cavitation Activity. *AIP Conference Proceedings*, **2006**,	0	5
29	Laser-induced acoustic imaging of buried land mines: experiment and modeling **2001**, 4394, 627		5
28	Variations in power output of the Piezon-Master 400 ultrasonic endodontic unit. *International Endodontic Journal*, **1994**, 27, 26-31	5.4	5
27	The influence of droplet concentration on phase change and inertial cavitation thresholds associated with acoustic droplet vaporization. *Journal of the Acoustical Society of America*, **2020**, 148, EL375	2.2	5
26	Bubble dynamics near the onset of single-bubble sonoluminescence. *Physical Review E*, **2004**, 70, 066301	2.4	4

25	Some observations on the breakage of ultrasonic files driven piezoelectrically. *Dental Traumatology* , **1994**, 10, 71-6	4.5	4
24	Artificial Bubble Cloud Targets for Underwater Acoustic Remote Sensing. *Journal of Atmospheric and Oceanic Technology*, **1995**, 12, 1287-1302	2	4
23	Measurements of the acoustic emission from glowing bubbles. *Journal of the Acoustical Society of America*, **1996**, 100, 2717-2717	2.2	4
22	Modeling-based design and assessment of an acousto-optic guided high-intensity focused ultrasound system. *Journal of Biomedical Optics*, **2017**, 22, 17001	3.5	3
21	Illuminating Sound: Imaging Tissue Optical Properties with Ultrasound. *Acoustics Today*, **2007**, 3, 17	0	3
20	The effects of buoyancy on sonoluminescing bubbles. *Acoustics Research Letters Online: ARLO*, **2000** , 1, 13-18		3
19	Detection of HIFU lesions in Excised Tissue Using Acousto-Optic Imaging **2009**,		2
18	Photoacoustic thermometry for therapeutic hyperthermia **2009**,		2
17	Therapeutic Bubbles: Basic Principles of Cavitation in Therapeutic Ultrasound. *AIP Conference Proceedings*, **2006**,	0	2
16	Monitoring HIFU Lesion Formation In Vitro Via The Driving Voltage. *AIP Conference Proceedings*, **2006**,	0	2
15	SVD-Based Separation of Stable and Inertial Cavitation Signals Applied to Passive Cavitation Mapping During HIFU. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2019**, 66, 857-866	3.2	1
14	Experimental characterisation of light emission during shock-driven cavity collapse **2013**,		1
13	Nanoparticle-targeted photoacoustic cavitation for tissue imaging **2010**,		1
12	Monitoring and guidance of high intensity focused ultrasound exposures in real time using acousto-optic imaging: feasibility and demonstration ex vivo **2010**,		1
11	Sensing the optical properties of diffusive media by acousto-optic pressure contrast imaging **2009**,		1
10	Thermal Lesion Development in Bubble-Mediated HIFU: Modeling. *AIP Conference Proceedings*, **2006**,	0	1
9	Enhanced detection of acousto-photonic scattering using a photorefractive crystal **2004**,		1
8	Modeling of optoacoustic signal generation for high resolution near-surface imaging with experimental verification **2005**, 5697, 224		1

7	Characterization of individual submicron perfluorocarbon gas bubbles by ultrasonic backscatter. *Acoustics Research Letters Online: ARLO*, **2005**, 6, 175-181		1
6	Reply to [On the measurement and interpretation of cavitation thresholds] [J. Acoust. Soc. Am. 82, 690–691 (1987)]. *Journal of the Acoustical Society of America*, **1987**, 82, 691-691	2.2	1
5	Acoustic scattering from a bubbly-liquid-filled compliant cylinder. *Acoustics Research Letters Online: ARLO*, **2001**, 2, 103-108		1
4	Fdtd Simulation of Transcranial Focusing Using Ultrasonic Phase-Conjugate Arrays. *Acoustical Imaging*, **1997**, 61-66		1
3	Genetic engineering biofilms in situ using ultrasound-mediated DNA delivery. *Microbial Biotechnology*, **2021**, 14, 1580-1593	6.3	0
2	Bubbles. Foreword. *Journal of the Acoustical Society of America*, **2011**, 130, 3183	2.2	
1	Ambient acceleration dependence of single-bubble sonoluminescence. *Journal of the Acoustical Society of America*, **2011**, 130, 3282-8	2.2	