

Margaret Lucas

List of Publications by Citations

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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.

93
papers

1,211
citations

18
h-index

30
g-index

112
ext. papers

1,411
ext. citations

2.8
avg, IF

4.33
L-index

#	Paper	IF	Citations
93	Modelling the effects of superimposed ultrasonic vibrations on tension and compression tests of aluminium. <i>Journal of Materials Processing Technology</i> , 2007 , 186, 179-190	5.3	143
92	A design approach for longitudinal-torsional ultrasonic transducers. <i>Sensors and Actuators A: Physical</i> , 2013 , 198, 99-106	3.9	73
91	Superimposed ultrasonic oscillations in compression tests of aluminium. <i>Ultrasonics</i> , 2006 , 44 Suppl 1, e511-5	3.5	57
90	Influence of ultrasonics on upsetting of a model paste. <i>Ultrasonics</i> , 2002 , 40, 43-8	3.5	57
89	Enhanced vibration performance of ultrasonic block horns. <i>Ultrasonics</i> , 2002 , 40, 365-9	3.5	56
88	Methods for reducing cutting temperature in ultrasonic cutting of bone. <i>Ultrasonics</i> , 2006 , 44 Suppl 1, e37-42	3.5	41
87	Ultrasonic rock sampling using longitudinal-torsional vibrations. <i>Ultrasonics</i> , 2010 , 50, 447-52	3.5	36
86	TORSIONAL AND BENDING VIBRATION MEASUREMENT ON ROTORS USING LASER TECHNOLOGY. <i>Journal of Sound and Vibration</i> , 1999 , 226, 441-467	3.9	36
85	A finite element model for ultrasonic cutting. <i>Ultrasonics</i> , 2006 , 44 Suppl 1, e503-9	3.5	30
84	Segmental mandibular reconstruction by microincremental automatic distraction osteogenesis: an animal study. <i>British Journal of Oral and Maxillofacial Surgery</i> , 2001 , 39, 356-64	1.4	30
83	The influence of piezoceramic stack location on nonlinear behavior of Langevin transducers. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2013 , 60, 1126-33	3.2	27
82	A radial mode ultrasonic horn for the inactivation of Escherichia coli K12. <i>Ultrasonics Sonochemistry</i> , 2008 , 15, 101-9	8.9	26
81	Design and Characterisation of Ultrasonic Cutting Tools. <i>CIRP Annals - Manufacturing Technology</i> , 2001 , 50, 149-152	4.9	25
80	Breath sounds, asthma, and the mobile phone. <i>Lancet, The</i> , 2001 , 358, 1343-4	4.0	25
79	A preliminary investigation into optimising the response of vibrating systems used for ultrasonic cutting. <i>Journal of Sound and Vibration</i> , 2004 , 272, 1047-1069	3.9	23
78	Coupling and degenerating modes in longitudinal-torsional step horns. <i>Ultrasonics</i> , 2012 , 52, 980-8	3.5	20
77	Research applications and opportunities in power ultrasonics. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2009 , 223, 2949-2965	1.3	20

76	A cymbal transducer for power ultrasonics applications. <i>Sensors and Actuators A: Physical</i> , 2014 , 210, 182-189	3.9	18
75	Temperature Effects in Ultrasonic Cutting of Natural Materials. <i>CIRP Annals - Manufacturing Technology</i> , 2005 , 54, 195-198	4.9	18
74	A novel multiple blade ultrasonic cutting device. <i>Ultrasonics</i> , 2004 , 42, 69-74	3.5	17
73	Ultrasonic cutting & fracture mechanics model. <i>Ultrasonics</i> , 1996 , 34, 197-203	3.5	17
72	Automatic wheeze detection based on auditory modelling. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , 2005 , 219, 219-27	1.7	16
71	Modelling wall boundary conditions in an elasto-viscoplastic material forming process. <i>Journal of Materials Processing Technology</i> , 2000 , 107, 267-275	5.3	16
70	An ultrasonic orthopaedic surgical device based on a cymbal transducer. <i>Ultrasonics</i> , 2016 , 72, 24-33	3.5	16
69	Ultrasonic rock sampling using longitudinal-torsional vibrations. <i>Physics Procedia</i> , 2010 , 3, 125-134		15
68	Vibration sensitivity in the design of ultrasonic forming dies. <i>Ultrasonics</i> , 1996 , 34, 35-41	3.5	15
67	A Parametric Study for the Design of an Optimized Ultrasonic Percussive Planetary Drill Tool. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2017 , 64, 577-589	3.2	14
66	Understanding nonlinear vibration behaviours in high-power ultrasonic surgical devices. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2015 , 471, 20140906 ²⁻⁴		14
65	Maximization of the effective impulse delivered by a high-frequency/low-frequency planetary drill tool. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2011 , 58, 2387-96	3.2	14
64	A numerical and experimental study of the indentation mechanics of plasticine. <i>Journal of Strain Analysis for Engineering Design</i> , 2002 , 37, 141-150	1.3	14
63	The Effect of Ultrasonic Excitation in Metal Forming Tests. <i>Applied Mechanics and Materials</i> , 2010 , 24-25, 311-316	0.3	13
62	Enhanced vibration control of an ultrasonic cutting process. <i>Ultrasonics</i> , 1996 , 34, 205-211	3.5	13
61	A Strategy for Delivering High Torsionality in Longitudinal-Torsional Ultrasonic Devices. <i>Applied Mechanics and Materials</i> , 2011 , 70, 339-344	0.3	12
60	Modal analysis of ultrasonic block horns by ESPI. <i>Ultrasonics</i> , 1999 , 37, 149-157	3.5	12
59	A brief overview of space applications for ultrasonics. <i>Ultrasonics</i> , 2012 , 52, 975-9	3.5	11

58	Architectures for ultrasonic planetary sample retrieval tools. <i>Ultrasonics</i> , 2011 , 51, 1026-35	3.5	10
57	A study of weld quality in ultrasonic spot welding of similar and dissimilar metals. <i>Journal of Physics: Conference Series</i> , 2012 , 382, 012013	0.3	10
56	Quantitative modal analysis using electronic speckle pattern interferometry. <i>Optics and Lasers in Engineering</i> , 1999 , 31, 147-161	4.6	9
55	Frequency analysis of an ultrasonically excited thick cylinder. <i>International Journal of Mechanical Sciences</i> , 1990 , 32, 205-214	5.5	9
54	Ultrasonic Needles for Bone Biopsy. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2017 , 64, 433-440	3.2	8
53	Redesign of Ultrasonic Block Horns for Improved Vibration Performance. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 1997 , 119, 410-414	1.6	8
52	Ultrasonic Compression Tests on Aluminium. <i>Applied Mechanics and Materials</i> , 2006 , 3-4, 99-104	0.3	8
51	Strategies for Reducing Stress in Ultrasonic Cutting Systems. <i>Strain</i> , 2005 , 41, 11-18	1.7	8
50	Designing a Hollow Langevin Transducer for Ultrasonic Coring. <i>Applied Mechanics and Materials</i> , 2010 , 24-25, 65-70	0.3	7
49	Ultrasonic rock drilling devices using longitudinal-torsional compound vibration 2009 ,		7
48	Bending vibration measurement on rotors by laser vibrometry. <i>Optics Letters</i> , 1996 , 21, 296-8	3	7
47	The effect of Ti-6Al-4V microstructure on the performance of ultrasonic soft tissue cutting tips 2017 ,		6
46	Smart cymbal transducers with nitinol end caps tunable to multiple operating frequencies. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2014 , 61, 1709-19	3.2	6
45	The Development of the European Ultrasonic Planetary Core Drill (UPCD) 2015 ,		5
44	A finite element model of ultrasonic extrusion. <i>Journal of Physics: Conference Series</i> , 2009 , 181, 012027	0.3	5
43	An electronic speckle pattern interferometer for two-dimensional strain measurement. <i>Measurement Science and Technology</i> , 1996 , 7, 1740-1747	2	5
42	Effects of Modal Interactions on Vibration Performance in Ultrasonic Cutting. <i>CIRP Annals - Manufacturing Technology</i> , 2003 , 52, 193-196	4.9	5
41	Study of Ultrasonic Upsetting under Radial and Longitudinal Die Vibration. <i>Materials Science Forum</i> , 2003 , 440-441, 389-396	0.4	5

40	Characterising the Strain and Temperature Fields in a Surrogate Bone Material Subject to Power Ultrasonic Excitation. <i>Strain</i> , 2013 , 49, n/a-n/a	1.7	4
39	An ultrasonic corer for planetary rock sample retrieval. <i>Journal of Physics: Conference Series</i> , 2009 , 181, 012048	0.3	4
38	Nonlinear and Parametric Vibrations in Ultrasonic Cutting Systems. <i>Materials Science Forum</i> , 2003 , 440-441, 397-406	0.4	4
37	Optimisation of the vibrational response of ultrasonic cutting systems. <i>IMA Journal of Applied Mathematics</i> , 2005 , 70, 645-656	1	4
36	Effect of ultrasonic vibration on wedge indentation of a model elastoviscoplastic material 2002 ,		4
35	Whole-field modal analysis using electronic speckle pattern interferometry 1996 , 2868, 352		4
34	A Comparison of Past, Present and Future Bone Surgery Tools. <i>International Journal of Orthopaedics (Hong Kong)</i> , 2015 , 2, 266-269	0.7	4
33	Ultrasonic compaction of granular geological materials. <i>Ultrasonics</i> , 2017 , 76, 136-144	3.5	3
32	A Comparison of Two Configurations for a Dual-Resonance Cymbal Transducer. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2018 , 65, 489-496	3.2	3
31	Optimization of the Horn, Free-Mass, and Support Architecture of a Solid Ultrasonic Rock Coring System 2010 ,		3
30	Characterising the acoustoplastic effect in an ultrasonically assisted metal forming process. <i>IOP Conference Series: Materials Science and Engineering</i> , 2012 , 42, 012017	0.4	3
29	An analytical model of a longitudinal-torsional ultrasonic transducer. <i>Journal of Physics: Conference Series</i> , 2012 , 382, 012061	0.3	3
28	The effects of ultrasonics in fragmentation of saturated porous rock samples 2012 ,		3
27	A numerical and experimental study of ultrasonic metal welding. <i>IOP Conference Series: Materials Science and Engineering</i> , 2012 , 42, 012015	0.4	3
26	Limitations in the use of median frequency for lung sound analysis. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , 2000 , 214, 265-75	1.7	3
25	A study of the natural vibratory response of stator structures to improve condition monitoring strategies for induction motors. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 1998 , 212, 57-68	1.3	3
24	Differential scanning calorimetry of superelastic Nitinol for tunable cymbal transducers. <i>Journal of Intelligent Material Systems and Structures</i> , 2016 , 27, 1376-1387	2.3	2
23	An analytical model of cymbal transducer dynamics. Radial vibration of a piezoelectric disc. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2011 , 225, 1077-1086	1.3	2

22	Finite Element Modelling in Ultrasonic Sheet Metal Forming. <i>Advanced Materials Research</i> , 2012 , 445, 3-8	0.5	2
21	Vibration characterisation of cymbal transducers for power ultrasonic applications. <i>Journal of Physics: Conference Series</i> , 2012 , 382, 012063	0.3	2
20	A Simple, Lightweight And Low-Reaction Deployable Architecture for Subsurface Sample Retrieval 2009 ,		2
19	A Finite Element Model for Ultrasonic Cutting of Toffee. <i>Applied Mechanics and Materials</i> , 2006 , 5-6, 519-526	0.3	2
18	Dynamics Characterisation of Cymbal Transducers for Power Ultrasonics Applications. <i>Physics Procedia</i> , 2016 , 87, 29-34		2
17	A Miniaturized Class IV Flextensional Ultrasonic Transducer. <i>Physics Procedia</i> , 2016 , 87, 10-15		2
16	Limits and Opportunities for Miniaturizing Ultrasonic Surgical Devices Based on a Langevin Transducer. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2021 , 68, 2543-2553	3.2	2
15	Comparison of Longitudinal-Mode and Longitudinal- Torsional Mode Ultrasonic Bone Biopsy Devices 2018 ,		2
14	Full and Half-Wavelength Ultrasonic Percussive Drills. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2018 , 65, 2150-2159	3.2	2
13	A longitudinal-torsional mode ultrasonic needle for deep penetration into bone. <i>Ultrasonics</i> , 2022 , 106756	3.2	2
12	Design of a Slender Tuned Ultrasonic Needle for Bone Penetration. <i>Physics Procedia</i> , 2015 , 70, 10-13		1
11	A Motion Control System Design for an Ultrasonic Percussive Coring/Drilling Unit 2015 ,		1
10	An ultrasonically assisted sagittal saw for large bone surgeries 2015 ,		1
9	Optimization of Ultrasonic Horns for Momentum Transfer and Survivability in High-Frequency/Low Frequency Planetary Drill Tools 2011 ,		1
8	A Study Of An Ultrasonically Assisted Metal Forming Test 2011 ,		1
7	Applications of Power Ultrasonics in Engineering. <i>Applied Mechanics and Materials</i> , 2008 , 13-14, 11-20	0.3	1
6	Ultrasonic Cutting with High-Gain Blades. <i>Applied Mechanics and Materials</i> , 2004 , 1-2, 45-50	0.3	1
5	Extracting modal parameters of ultrasonic bar horns from ESPI FRF data. <i>Ultrasonics</i> , 1999 , 37, 231-238	3.5	1

4	Incorporating direct metal laser sintered complex shaped Ti-6Al-4V components in ultrasonic surgical devices. <i>Journal of the Acoustical Society of America</i> , 2021 , 150, 2163	2.2	1
3	A Parametric Study for the Design of an Optimized Ultrasonic Percussive Planetary Drill Tool		0
2	Inspiration from Victorian times in Ultrasonic Surgical Tool Design. <i>Journal of Physics: Conference Series</i> , 2012 , 382, 012044	0.3	
1	Design of an Ultrasonic Blade for Cutting Bone. <i>Applied Mechanics and Materials</i> , 2006 , 3-4, 79-84	0.3	