Joseph C S Lai

List of Publications by Year
in descending order

122 papers	3,612 citations	156536 32 h-index	169272 56 g-index
123 all docs	123 docs citations	123 times ranked	2086 citing authors

#	Article	IF	Citations
1	Influences of serrated trailing edge on the aerodynamic and aeroacoustic performance of a flapping wing during hovering flight. Physics of Fluids, 2022, 34, .	1.6	15
2	Low radiodensity Î¼CT scans to reveal detailed morphology of the termite leg and its subgenual organ. Arthropod Structure and Development, 2022, 70, 101191.	0.8	1
3	A numerical study of fish adaption behaviors in complex environments with a deep reinforcement learning and immersed boundaryâ€“lattice Boltzmann method. Scientific Reports, 2021, 11, 1691.	1.6	25
4	Dynamic Behaviours of a Filament in a Viscoelastic Uniform Flow. Fluids, 2021, 6, 90.	0.8	4
5	Submillimetre mechanistic designs of termite-built structures. Journal of the Royal Society Interface, 2021, 18, 20200957.	1.5	5
6	Optimal Efficiency and Heaving Velocity in Flapping Foil Propulsion. AIAA Journal, 2021, 59, 2143-2154.	1.5	2
7	Transition to chaos in a two-sided collapsible channel flow. Journal of Fluid Mechanics, 2021, 926, .	1.4	21
8	Towards Overcoming the Challenges of the Prediction of Brake Squeal Propensity. , 2021, , 47-53.		0
9	Revisiting stigmergy in light of multi-functional, biogenic, termite structures as communication channel. Computational and Structural Biotechnology Journal, 2020, 18, 2522-2534.	1.9	15
10	Analysis of unsteady flow effects on the Betz limit for flapping foil power generation. Journal of Fluid Mechanics, 2020, 902, .	1.4	16
11	An immersed boundary-lattice Boltzmann method for fluid-structure interaction problems involving viscoelastic fluids and complex geometries. Journal of Computational Physics, 2020, 415, 109487.	1.9	65
12	Energy harvesting of two inverted piezoelectric flags in tandem, side-by-side and staggered arrangements. International Journal of Heat and Fluid Flow, 2020, 83, 108589.	1.1	20
13	An immersed boundary method for fluidâ€“structureâ€“acoustics interactions involving large deformations and complex geometries. Journal of Fluids and Structures, 2020, 95, 102993.	1.5	30
14	Kinematic optimization of a flapping foil power generator using a multi-fidelity evolutionary algorithm. Renewable Energy, 2019, 132, 543-557.	4.3	16
15	Termites manipulate moisture content of wood to maximize foraging resources. Biology Letters, 2019, 15, 20190365.	1.0	13
16	A Geometry-Adaptive Immersed Boundaryâ€“Lattice Boltzmann Method for Modelling Fluidâ€“Structure Interaction Problems. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2019, , 161-171.	0.1	6
17	Dynamic characteristics of a deformable capsule in a simple shear flow. Physical Review E, 2019, 99, 023101.	0.8	19
18	A non-linear friction work formulation for the analysis of self-excited vibrations. Journal of Sound and Vibration, 2019, 443, 328-340.	2.1	14

#	Article	IF	Citations
19	Aerodynamic characteristics of hoverflies during hovering flight. Computers and Fluids, 2019, 183, 75-83.	1.3	14
20	Key physical wood properties in termite foraging decisions. Journal of the Royal Society Interface, 2018, 15, 20180505.	1.5	15
21	Effects of hawkmoth-like flexibility on the aerodynamic performance of flapping wings with different shapes and aspect ratios. Physics of Fluids, 2018, 30, .	1.6	52
22	Vibro-acoustic and nonlinear analysis of cadavric femoral bone impaction in cavity preparations. MATEC Web of Conferences, 2018, 148, 14007.	0.1	7
23	Vibro-acoustic and nonlinear analysis of cadavric femoral bone impaction in cavity preparations. International Journal of Mechanical Sciences, 2018, 144, 739-745.	3.6	9
24	Effects of flexibility on the hovering performance of flapping wings with different shapes and aspect ratios. Journal of Fluids and Structures, 2018, 81, 69-96.	1.5	48
25	A novel geometry-adaptive Cartesian grid based immersed boundaryâ€“lattice Boltzmann method for fluidâ€“structure interactions at moderate and high Reynolds numbers. Journal of Computational Physics, 2018, 375, 22-56.	1.9	69
26	Cryptic termites avoid predatory ants by eavesdropping on vibrational cues from their footsteps. Ecology Letters, 2017, 20, 212-221.	3.0	48
27	Numerical study of rigid and flexible wing shapes in hover. Journal of Physics: Conference Series, 2017, 822, 012007.	0.3	5
28	Investigation of Oscillating-Foil Power Generation in Constrained Flow. Procedia Engineering, 2017, 199, 3450-3455.	1.2	4
29	Flapping foil power generator performance enhanced with a spring-connected tail. Physics of Fluids, 2017, 29, .	1.6	39
30	Discrete Vortex Method with Flow Separation Corrections for Flapping-Foil Power Generators. AIAA Journal, 2017, 55, 410-418.	1.5	23
31	Effects of wing flexibility on bumblebee propulsion. Journal of Fluids and Structures, 2017, 68, 141-157.	1.5	16
32	The Role of Nonlinearity and Uncertainty in Assessing Disc Brake Squeal Propensity. SAE International Journal of Passenger Cars - Mechanical Systems, 2016, 9, 980-986.	0.4	1
33	Termites utilise clay to build structural supports and so increase foraging resources. Scientific Reports, 2016, 6, 20990.	1.6	35
34	Effects of wing shape, aspect ratio and deviation angle on aerodynamic performance of flapping wings in hover. Physics of Fluids, 2016, 28, .	1.6	64
35	On the potential of uncertainty analysis for prediction of brake squeal propensity. Journal of Sound and Vibration, 2016, 377, 123-132.	2.1	38
36	Instability analysis of friction oscillators with uncertainty in the friction law distribution. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2016, 230, 948-958.	1.1	12

#	Article	IF	Citations
37	On Optimal Oscillating-Foil Power Generation in Free and Constrained Flow. , 2016, , .		5
38	Squeal noise in simple numerical brake models. Journal of Sound and Vibration, 2015, 352, 129-141.	2.1	15
39	Flapping foil power generation: Review and potential in pico-hydro application. , 2015, , .		2
40	Nonlinear transient and chaotic interactions in disc brake squeal. Journal of Sound and Vibration, 2015, 342, 272-289.	2.1	63
41	Effects of time-varying camber deformation on flapping foil propulsion and power extraction. Journal of Fluids and Structures, 2015, 56, 152-176.	1.5	40
42	Pad-mode-induced instantaneous mode instability for simple models of brake systems. Mechanical Systems and Signal Processing, 2015, 62-63, 490-505.	4.4	17
43	An Innovative Signal Processing Method to Extract Antsâ€™ Walking Signals. Acoustics Australia, 2015, 43, 87-96.	1.4	11
44	Flow around an Oscillating Tandem-Wing Power Generator. , 2015, , .		3
45	An FSI solution technique based on the DSD/SST method and its applications. Mathematical Models and Methods in Applied Sciences, 2015, 25, 2257-2285.	1.7	37
46	A statistical approach to estimate the Lyapunov spectrum in disc brake squeal. Journal of Sound and Vibration, 2015, 334, 120-135.	2.1	30
47	Novel Method for Pairing Wood Samples in Choice Tests. PLoS ONE, 2014, 9, e88835.	1.1	5
48	Quantifying Ant Activity Using Vibration Measurements. PLoS ONE, 2014, 9, e90902.	1.1	8
49	A review of progress and challenges in flapping foil power generation. Progress in Aerospace Sciences, 2014, 67, 2-28.	6.3	255
50	Time-varying Flexible Airfoil Shape Effects on Flapping Airfoil Power Extraction. , 2014, , .		2
51	Improving power-extraction efficiency of a flapping plate: From passive deformation to active control. Journal of Fluids and Structures, 2014, 51, 384-392.	1.5	61
52	Experimental and Computational Investigation of the Flow through an Oscillating-Wing Power Generator. , 2014, , .		2
53	Addendum to â€œA review of progress and challenges in flapping foil power generationâ€•[Prog. Aerosp. Sci., in press]. Progress in Aerospace Sciences, 2014, 67, 1.	6.3	17
54	Effective Angle of Attack Control of a Flat Plate Flapping-Foil Turbine. , 2014, , .		2

#	Article	IF	Citations
55	Numerical Simulation of Fully Passive Flapping Foil Power Generation. AIAA Journal, 2013, 51, 2727-2739.	1.5	93
56	A Numerical Analysis of Bumblebee Propulsion. , 2013, , .		1
57	Guidelines for numerical vibration and acoustic analysis of disc brake squeal using simple models of brake systems. Journal of Sound and Vibration, 2013, 332, 2284-2299.	2.1	58
58	The role of pad-modes and nonlinearity in instantaneous mode squeal. Proceedings of Meetings on Acoustics, 2013, , .	0.3	4
59	Foraging choice and replacement reproductives facilitate invasiveness in drywood termites. Biological Invasions, 2011, 13, 1579-1587.	1.2	20
60	Chaos in brake squeal noise. Journal of Sound and Vibration, 2011, 330, 955-975.	2.1	107
61	Statistical analysis of brake squeal noise. Journal of Sound and Vibration, 2011, 330, 2978-2994.	2.1	99
62	Reynolds number, thickness and camber effects on flapping airfoil propulsion. Journal of Fluids and Structures, 2011, 27, 145-160.	1.5	134
63	Effects of distributed structural dynamic modification with additional degrees of freedom on 3D structure. Mechanical Systems and Signal Processing, 2010, 24, 1349-1368.	4.4	11
64	Termites eavesdrop to avoid competitors. Proceedings of the Royal Society B: Biological Sciences, 2009, 276, 4035-4041.	1.2	62
65	Effects of distributed structural dynamic modification with reduced degrees of freedom. Mechanical Systems and Signal Processing, 2009, 23, 2154-2177.	4.4	9
66	Development of a New Oscillating-Wing Wind and Hydropower Generator. , 2009, , .		21
67	Effect of Airfoil Thickness, Camber and Reynolds Number on Plunging Airfoil Propulsion. , 2009, , .		6
68	Aerodynamic Analysis of Flapping-Wing Propellers for HALE Aircraft. , 2009, , .		0
69	Effect of Vibratory Soldier Alarm Signals on the Foraging Behavior of Subterranean Termites (Isoptera: Rhinotermitidae). Journal of Economic Entomology, 2009, 102, 121-126.	0.8	26
70	An extended macroscopic model for solute dispersion in confined porous media. Chemical Engineering Journal, 2008, 137, 614-635.	6.6	14
71	Prediction of the effects on dynamic response due to distributed structural modification with additional degrees of freedom. Mechanical Systems and Signal Processing, 2008, 22, 1809-1825.	4.4	24
72	Simulation and Parameter Variation of Flapping-Wing Motion Based on Dragonfly Hovering. AIAA Journal, 2008, 46, 918-924.	1.5	46

#	Article	IF	Citations
73	Flapping Wing Aerodynamics: Progress and Challenges. AIAA Journal, 2008, 46, 2136-2149.	1.5	438
74	Vortex Lock-In Phenomenon in the Wake of a Plunging Airfoil. AIAA Journal, 2007, 45, 485-490.	1.5	76
75	Termites live in a material world: exploration of their ability to differentiate between food sources. Journal of the Royal Society Interface, 2007, 4, 735-744.	1.5	25
76	Mechanisms Influencing the Efficiency of Oscillating Airfoil Propulsion. AIAA Journal, 2007, 45, 1695-1702.	1.5	119
77	ARMAX modal parameter identification in the presence of unmeasured excitationâ€"II: Numerical and experimental verification. Mechanical Systems and Signal Processing, 2007, 21, 1616-1641.	4.4	21
78	ARMAX modal parameter identification in the presence of unmeasured excitationâ€"I: Theoretical background. Mechanical Systems and Signal Processing, 2007, 21, 1601-1615.	4.4	34
79	On the aerodynamic forces of a plunging airfoil. Journal of Mechanical Science and Technology, 2007, 21, 1388-1397.	0.7	11
80	Flow Characteristics of an Inclined Offset Jet. , 2006, , .		3
81	Discussions on â€œOn the number of modes required for statistical energy analysis-based calculationsâ€• Journal of Sound and Vibration, 2005, 281, 475-480.	2.1	5
82	New approach for evaluation of capillary column inverse gas chromatography. Journal of Chromatography A, 2005, 1078, 144-151.	1.8	2
83	The influence of nonuniform coating and taylor dispersion on the evaluation of capillary column inverse gas chromatography. Journal of Chromatography A, 2005, 1091, 137-144.	1.8	2
84	Sound power radiated from an inverter-driven induction motor. Part 3: statistical energy analysis. IET Electric Power Applications, 2005, 152, 619.	1.4	11
85	Termites assess wood size by using vibration signals. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 3732-3737.	3.3	109
86	Oscillating Foil Propulsion : A Comparison of Navier-Stokes and Inviscid Numerical Methods(Wing and) Tj ETQq0 0 0 rgBT /Overlock 10 T 2005, 2005, 577-582.	0.1	1
87	Sound power radiated from an inverter driven induction motor II: numerical analysis. IET Electric Power Applications, 2004, 151, 341.	1.4	12
88	Control of Shear Cutting Noise: Effectiveness of Passive Control Measures. Noise and Vibration Worldwide, 2002, 33, 6-12.	0.4	1
89	Prediction of acoustic noise from variable-speed induction motors: deterministic versus statistical approaches. IEEE Transactions on Industry Applications, 2002, 38, 1037-1044.	3.3	18
90	Sound power radiated from an inverter-driven induction motor: experimental investigation. IET Electric Power Applications, 2002, 149, 46.	1.4	16

#	Article	IF	Citations
91	AERODYNAMIC DAMPING OF RANDOMLY EXCITED PLATES IN STATIONARY AND MOVING AIR. Journal of Sound and Vibration, 2002, 253, 795-805.	2.1	2
92	VIBRATION POWER TRANSMISSION OVER A RECTANGULAR AREA OF AN INFINITE PLATE SUBJECT TO UNIFORM CONPHASE VELOCITY EXCITATION. Journal of Sound and Vibration, 2002, 257, 265-282.	2.1	2
93	Brake squeal: a literature review. Applied Acoustics, 2002, 63, 391-400.	1.7	184
94	Characteristics of a Plunging Airfoil at Zero Freestream Velocity. AIAA Journal, 2001, 39, 531-534.	1.5	40
95	THE SOUND RADIATION EFFICIENCY OF FINITE LENGTH CIRCULAR CYLINDRICAL SHELLS UNDER MECHANICAL EXCITATION II: LIMITATIONS OF THE INFINITE LENGTH MODEL. Journal of Sound and Vibration, 2001, 241, 825-838.	2.1	14
96	FLOW STRUCTURES GENERATED BY PRESSURE-CONTROLLED SELF-OSCILLATING REED VALVES. Journal of Sound and Vibration, 2001, 247, 213-226.	2.1	7
97	Experimental measurement of surface mobility over a rectangular contact area subject to a uniform conphase velocity excitation. Applied Acoustics, 2001, 62, 867-874.	1.7	2
98	MODELLING THE VIBRATION BEHAVIOUR OF INFINITE STRUCTURES BY FEM. Journal of Sound and Vibration, 2000, 229, 453-466.	2.1	7
99	THE SOUND RADIATION EFFICIENCY OF FINITE LENGTH ACOUSTICALLY THICK CIRCULAR CYLINDRICAL SHELLS UNDER MECHANICAL EXCITATION I: THEORETICAL ANALYSIS. Journal of Sound and Vibration, 2000, 232, 431-447.	2.1	54
100	Surface mobility over a square contact area of an infinite plate: experimental measurements and numerical prediction. Applied Acoustics, 2000, 60, 81-93.	1.7	7
101	Prediction of natural frequencies of finite length circular cylindrical shells. Applied Acoustics, 2000, 59, 385-400.	1.7	65
102	Effects of orthodontic therapy on the facial profile in long and short vertical facial patterns. American Journal of Orthodontics and Dentofacial Orthopedics, 2000, 118, 505-513.	0.8	48
103	VIBRATION ANALYSIS OF AN INDUCTION MOTOR. Journal of Sound and Vibration, 1999, 224, 733-756.	2.1	60
104	INVESTIGATION OF VIBRATION POWER TRANSMISSION OVER A RECTANGULAR EXCITATION AREA USING EFFECTIVE POINT MOBILITY. Journal of Sound and Vibration, 1999, 225, 831-844.	2.1	9
105	Control of shear cutting noise: Effect of blade profile. Applied Acoustics, 1998, 54, 45-58.	1.7	9
106	A new modified low-Reynolds-number k-epsilon model. , 1998, , .		0
107	Effect of wall inclination on the mean flow and turbulence characteristics in a two-dimensional wall jet. International Journal of Heat and Fluid Flow, 1996, 17, 377-385.	1.1	31
108	Some Applications of the Sound Intensity Technique to Noise Control in the Workplace. International Journal of Occupational Safety and Ergonomics, 1996, 2, 1-15.	1.1	1

#	Article	IF	Citations
109	Sound transmission loss measurements using the sound intensity technique Part 1: The effects of reverberation time. Applied Acoustics, 1993, 40, 311-324.	1.7	4
110	Turbulence suppression in an elliptic jet. International Journal of Heat and Fluid Flow, 1992, 13, 93-96.	1.1	4
111	The preferred mode of a tube jet. International Journal of Heat and Fluid Flow, 1991, 12, 284-286.	1.1	4
112	Application of the sound intensity technique to noise source identification: A case study. Applied Acoustics, 1991, 34, 89-100.	1.7	1
113	Application of the sound intensity technique to measurement of field sound transmission loss. Applied Acoustics, 1991, 34, 77-87.	1.7	8
114	Numerical simulation of transient response of heat transfer from a hot-wire anemometer transducer. International Journal of Heat and Fluid Flow, 1985, 6, 57-65.	1.1	6
115	Unsteady effects in mechanically-excited turbulent plane jets. International Journal of Heat and Fluid Flow, 1984, 5, 215-221.	1.1	5
116	Mass Spectrometric Determination of Nitrogen Oxides in Turbocharged Diesel Engine Exhaust. , 1983, , .		0
117	The role of flow characteristics in corrosion-erosion of tube inlets in the inlet channel of shell and tube heat exchangers. Wear, 1979, 54, 87-100.	1.5	11
118	Control of corrosion-erosion of tube inlets of shell and tube heat exchangers. Wear, 1979, 54, 101-112.	1.5	9
119	A Hydrostatic Transmission for a Load-Haul-Dump Vehicle. , 0, , .		0
120	Prediction of acoustic noise from variable speed induction motors: deterministic vs. statistical approaches. , 0, , .		10
121	Acoustic noise prediction in a vector controlled induction machine. , 0, , .		3
122	Metal-Cutting Machinery Noise and Vibration Prediction and Control. , 0, , 966-974.		1