

# Lawrence S Ukeiley

## List of Publications by Year in descending order

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136  
papers

3,778  
citations

201674

27  
h-index

149698

56  
g-index

141  
all docs

141  
docs citations

141  
times ranked

1768  
citing authors

#	ARTICLE	IF	CITATIONS
1	Modal Analysis of Fluid Flows: An Overview. AIAA Journal, 2017, 55, 4013-4041.	2.6	1,020
2	Stochastic estimation and proper orthogonal decomposition: Complementary techniques for identifying structure. Experiments in Fluids, 1994, 17, 307-314.	2.4	224
3	Examination of large-scale structures in a turbulent plane mixing layer. Part 1. Proper orthogonal decomposition. Journal of Fluid Mechanics, 1999, 391, 91-122.	3.4	155
4	Collaborative testing of eddy structure identification methods in free turbulent shear flows. Experiments in Fluids, 1998, 25, 197-225.	2.4	123
5	Suppression of Pressure Loads in Cavity Flows. AIAA Journal, 2004, 42, 70-79.	2.6	106
6	Velocity and surface pressure measurements in an open cavity. Experiments in Fluids, 2005, 38, 656-671.	2.4	101
7	Low-dimensional characteristics of a transonic jet. Part 2. Estimate and far-field prediction. Journal of Fluid Mechanics, 2008, 615, 53-92.	3.4	92
8	Low-dimensional characteristics of a transonic jet. Part 1. Proper orthogonal decomposition. Journal of Fluid Mechanics, 2008, 612, 107-141.	3.4	86
9	Examination of large-scale structures in a turbulent plane mixing layer. Part 2. Dynamical systems model. Journal of Fluid Mechanics, 2001, 441, 67-108.	3.4	82
10	Estimation of the Flowfield from Surface Pressure Measurements in an Open Cavity. AIAA Journal, 2003, 41, 969-972.	2.6	70
11	An application of Gappy POD. Experiments in Fluids, 2006, 42, 79-91.	2.4	70
12	Properties of subsonic open cavity flow fields. Physics of Fluids, 2009, 21, .	4.0	68
13	Integration of non-time-resolved PIV and time-resolved velocity point sensors for dynamic estimation of velocity fields. Experiments in Fluids, 2013, 54, 1.	2.4	66
14	On the near Field Pressure of a Transonic Axisymmetric Jet. International Journal of Aeroacoustics, 2004, 3, 43-65.	1.3	62
15	Understanding the Role of Self-Efficacy in Engineering Education. Journal of Engineering Education, 2001, 90, 247-251.	3.0	60
16	Control of Pressure Loads in Geometrically Complex Cavities. Journal of Aircraft, 2008, 45, 1014-1024.	2.4	50
17	Aero-Performance Efficient Noise Reduction for the F404-400 Engine. , 2005, , .		48
18	A study of a 3-D double backward-facing step. Experiments in Fluids, 2009, 47, 427-438.	2.4	48

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19	Suppression of Cavity Loads Using Leading-Edge Blowing. AIAA Journal, 2009, 47, 1132-1144.	2.6	48
20	Structural dynamics and aerodynamics measurements of biologically inspired flexible flapping wings. Bioinspiration and Biomimetics, 2011, 6, 016009.	2.9	46
21	Modified quadratic stochastic estimation of resonating subsonic cavity flow. Journal of Turbulence, 2007, 8, N53.	1.4	45
22	Biglobal instabilities of compressible open-cavity flows. Journal of Fluid Mechanics, 2017, 826, 270-301.	3.4	42
23	Leading edge slot blowing on an open cavity in supersonic flow. Experiments in Fluids, 2012, 53, 187-199.	2.4	39
24	Passive flow control by membrane wings for aerodynamic benefit. Experiments in Fluids, 2013, 54, 1.	2.4	35
25	Spatial Correlations in a Transonic Jet. AIAA Journal, 2007, 45, 1357-1369.	2.6	33
26	Application of multivariate outlier detection to fluid velocity measurements. Experiments in Fluids, 2010, 49, 305-317.	2.4	32
27	Noise Reduction Technology for F/A-18 E/F Aircraft. , 2004, , .		31
28	The Effects of Microjet Injection on an F404 Jet Engine. , 2005, , .		31
29	Downstream evolution of proper orthogonal decomposition eigenfunctions in a lobed mixer. AIAA Journal, 1993, 31, 1392-1397.	2.6	30
30	Effects of Sidewalls and Leading-Edge Blowing on Flows over Long Rectangular Cavities. AIAA Journal, 2019, 57, 106-119.	2.6	29
31	Designing an Anechoic Chamber for the Experimental Study of High Speed Heated Jets. , 2004, , .		28
32	Bicoherence analysis of model-scale jet noise. Journal of the Acoustical Society of America, 2010, 128, EL211-EL216.	1.1	24
33	Suppression of Cavity Flow Oscillations via Three-Dimensional Steady Blowing. AIAA Journal, 2019, 57, 90-105.	2.6	24
34	Multifractal analysis of a lobed mixer flowfield utilizing the proper orthogonal decomposition. AIAA Journal, 1992, 30, 1260-1267.	2.6	23
35	A Computational and Experimental Studies of Flexible Wing Aerodynamics. , 2010, , .		23
36	Flow Field Dynamics in Open Cavity Flows. , 2006, , .		22

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37	Unsteady control of supersonic turbulent cavity flow based on resolvent analysis. Journal of Fluid Mechanics, 2021, 925, .	3.4	22
38	A new anechoic chamber design for testing high-temperature jet flows. , 2001, , .		20
39	The Evolution of the Most Energetic Modes in High Subsonic Mach Number Turbulent Jet. , 2005, , .		20
40	A Multidisciplinary Experimental Study of Flapping Wing Aeroelasticity in Thrust Production. , 2009, , .		20
41	Suppression of Fluctuating Surface Pressures in a Supersonic Cavity Flow. , 2010, , .		18
42	Resolvent Analysis of Compressible Laminar and Turbulent Cavity Flows. AIAA Journal, 2020, 58, 1046-1055.	2.6	18
43	Detached Eddy Simulation of a Supersonic Cavity Flow With and Without Passive Flow Control. , 2011, , .		17
44	Estimating the Shear Layer Velocity Field Above an Open Cavity from Surface Pressure Measurements. , 2002, , .		16
45	Flow Control for Enhanced Store Separation. , 2007, , .		16
46	Control of Three-Dimensional Cavity Flow Using Leading-Edge Slot Blowing. , 2015, , .		16
47	Validation of a Low Reynolds Number Aerodynamic Characterization Facility. , 2009, , .		14
48	Passively controlled supersonic cavity flow using a spanwise cylinder. Experiments in Fluids, 2014, 55, 1.	2.4	14
49	Spanwise effects on instabilities of compressible flow over a long rectangular cavity. Theoretical and Computational Fluid Dynamics, 2017, 31, 555-565.	2.2	14
50	Low-dimensional description of resonating cavity flow. , 2000, , .		13
51	Cell Geometry and Material Property Effects on Membrane and Flow Response. AIAA Journal, 2012, 50, 755-761.	2.6	13
52	Spectral analysis modal methods (SAMMs) using non-time-resolved PIV. Experiments in Fluids, 2020, 61, 1.	2.4	13
53	Characteristics of turbulent boundary layer large scale motions using direct fluctuating wall shear stress measurements. Physical Review Fluids, 2018, 3, .	2.5	13
54	Wind Tunnel Generated Turbulence. , 2011, , .		12

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55	Nonlinear estimation of fluid flow velocity fields. , 2011, , .		12
56	Investigation of turbulent flows via pseudo flow visualization part II: Lobed mixer. Experimental Thermal and Fluid Science, 1996, 13, 167-177.	2.7	11
57	Control of Pressure Loads in Complex Cavity Configurations. , 2007, , .		11
58	Identification of Nonlinear and Near-Field Effects in Jet Noise Using Nonlinearity Indicators. , 2007, , .		11
59	Numerical Simulations of Subsonic and Transonic Open-Cavity Flows. , 2014, , .		11
60	Width and sidewall effects on high speed cavity flows. , 2016, , .		11
61	Proper Orthogonal Decomposition of High-Speed Particle Image Velocimetry in an Open Cavity. AIAA Journal, 2020, 58, 2975-2990.	2.6	11
62	Suppression of Cavity Oscillations via Three-Dimensional Steady Blowing. , 2015, , .		10
63	Dynamic Surface Pressure Based Estimation for Flow Control. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2008, , 183-189.	0.2	10
64	Suppression of Pressure Loads in Resonating Cavities Through Blowing. , 2003, , .		9
65	Low-Dimensional Estimation of Cavity Flow Dynamics. , 2004, , .		9
66	Loads and Acoustics Prediction on Deployed Weapons Bay Doors. Journal of Vibration and Acoustics, Transactions of the ASME, 2017, 139, .	1.6	9
67	Correction: Modal Analysis of Fluid Flows: An Overview. AIAA Journal, 2020, 58, AU9-AU9.	2.6	9
68	Low-dimensional description of variable density flows. , 2001, , .		8
69	Wall Pressure Modes in Subsonic Cavity Flows. , 2005, , .		8
70	Effect of Aspect Ratio on Flat-Plate Membrane Airfoils. , 2012, , .		8
71	Mean Loads from Wind-Tunnel Turbulence on Low-Aspect-Ratio Flat Plates. Journal of Aircraft, 2013, 50, 863-870.	2.4	8
72	Controlling pretension of silicone membranes on micro air vehicle wings. Journal of Strain Analysis for Engineering Design, 2014, 49, 161-170.	1.8	8

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73	Modal Analysis of Fluid Flow: Introduction to the Virtual Collection. AIAA Journal, 2020, 58, 991-993.	2.6	8
74	A low-dimensional description of the compressible axisymmetric shear layer. , 2001, , .		8
75	Contributions of turbulence to subsonic cavity flow wall pressures. Physics of Fluids, 2011, 23, 015104.	4.0	7
76	Controlling Pre-tension of Silicone Membranes on Micro Air Vehicle Flexible Wings. , 2012, , .		7
77	Numerical Investigation of a Cylinder Immersed in a Supersonic Boundary Layer. AIAA Journal, 2012, 50, 257-270.	2.6	7
78	Force and Deformation Measurement on Low Aspect Ratio Membrane Airfoils. , 2013, , .		7
79	Three-Dimensional Averaged Flow Around Flexible Flapping Wings. , 2009, , .		6
80	Nondimensional frequency scaling of aerodynamically-tensioned membranes. Journal of Fluids and Structures, 2014, 48, 14-26.	3.4	6
81	On the acoustics of a circulation control airfoil. Journal of Sound and Vibration, 2017, 388, 85-104.	3.9	6
82	Investigation of turbulent flows via pseudo flow visualization part I: Axisymmetric jet mixing layer. Experimental Thermal and Fluid Science, 1994, 9, 391-404.	2.7	5
83	Effects of Membrane Vibration on the Flow Field Surrounding Flat-Plate Membrane Airfoils. , 2011, , .		5
84	Flow Field Effects of Control on Supersonic Open Cavities. , 2011, , .		5
85	Microfabricated Electrodynamic Synthetic Jet Actuators. Journal of Microelectromechanical Systems, 2018, 27, 95-105.	2.5	5
86	Resolvent Analysis of Compressible Flow over a Long Rectangular Cavity. , 2018, , .		5
87	Low-Order Velocity Estimation and Acoustic Noise Generation by a Turbulent Wall Jet. AIAA Journal, 2018, 56, 4331-4347.	2.6	5
88	Low-order estimation of the velocity, hydrodynamic pressure, and acoustic radiation for a three-dimensional turbulent wall jet. Experimental Thermal and Fluid Science, 2020, 116, 110101.	2.7	5
89	Estimation of Time Dependent Flow Properties in an Open Cavity. , 2005, , .		5
90	Development of low dimensional models for control of compressible flows. , 0, , .		4

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91	Spatial Correlations in a Transonic Jet. , 2004, , .		4
92	Three-Dimensional Averaged Flow Around Rigid Flapping Wings. , 2008, , .		4
93	Experimental Study of Adaptive Control of High-Speed Flow-Induced Cavity Oscillations. Journal of Fluid Science and Technology, 2011, 6, 701-716.	0.6	4
94	Flow Around Flapping Flexible Flat Plate Wings. , 2012, , .		4
95	Flow and Structure Measurements of a Passively Compliant Wing. , 2012, , .		4
96	Integration of non-time-resolved PIV and time-resolved velocity point sensors for dynamic estimation of time-resolved velocity fields. , 2012, , .		4
97	Force estimation from incompressible flow field data using a momentum balance approach. Experiments in Fluids, 2014, 55, 1.	2.4	4
98	Loads and Acoustics Prediction on Deployed Weapons Bay Doors. , 2015, , .		4
99	Hybrid RANS/LES Acoustics Prediction in Supersonic Weapons Cavity. , 2015, , .		4
100	Synchronized Velocity and Pressure Measurements of Supersonic Flow over a Finite Span Cavity with Leading Edge Slot Blowing. , 2016, , .		4
101	Supersonic Cavity Flow Control Using a Spanwise Array of Leading-Edge Tabs. Journal of Aircraft, 2022, 59, 788-798.	2.4	4
102	Calculating Surface Pressure Fluctuations from PIV Data Using Poisson's Equation. , 2007, , .		3
103	Progress on Active Control of Open Cavities. , 2011, , .		3
104	Passively Compliant Membranes in Low Aspect Ratio Wings. , 2013, , .		3
105	Fluid-structure dynamic characterization of an electroactive membrane wing. Journal of Intelligent Material Systems and Structures, 2016, 27, 1510-1522.	2.5	3
106	Pressure-informed velocity estimation in a subsonic jet. Physical Review Fluids, 2022, 7, .	2.5	3
107	Examination of quadrupole sources in a transonic jet. , 2000, , .		2
108	Three Dimensional Stochastic Estimation Applied to Cavity Flow Fields. , 2007, , .		2

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109	Flow Characteristics of a Three-Dimensional Fixed Micro Air Vehicle Wing. , 2008, , .		2
110	Flow Measurements in the Wake of Flexible Flapping Wings. , 2010, , .		2
111	Fluid Dynamic Forces on Plunging Spanwise-Flexible Elliptical Flat Plates at Low Reynolds Numbers. , 2011, , .		2
112	The Influence of Velocity Field Estimation on the Prediction of Far-Field Acoustics. , 2016, , .		2
113	Application of POD to Pulse Burst PIV Data of Flow Over an Open Cavity. , 2018, , .		2
114	Extraction of DMD modes from Pulse-Burst PIV Data of Flow over an Open Cavity. , 2020, , .		2
115	Two-point radiation statistics from large-scale turbulent structures within supersonic jets. International Journal of Aeroacoustics, 2021, 20, 254-282.	1.3	2
116	Experimental investigation of the fluctuating static pressure in a subsonic axisymmetric jet. International Journal of Aeroacoustics, 2021, 20, 196-220.	1.3	2
117	An Integrated Experimental and Computational Approach to Analyze Flexible Flapping Wings in Hover. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 1441-1451.	0.5	2
118	Unsteady Aerodynamics on a Low Aspect Ratio Flat Plate. , 2010, , .		2
119	A Detached Eddy Simulation of a Cylinder Immersed in a Supersonic Boundary Layer. , 2009, , .		1
120	The Investigation of a Cylinder Immersed in a Supersonic Boundary Layer. , 2009, , .		1
121	Aerodynamic Forces on Flexible Flapping Wings. , 2011, , .		1
122	Characterization of Noise Generation on a Canonical Nose Landing Gear Sub-system. , 2013, , .		1
123	Wake Characteristics of a 2D Spanwise Tensioned Membrane with Aerodynamic Loading. , 2014, , .		1
124	An aerodynamic characterization facility for micro air vehicle research. International Journal of Micro Air Vehicles, 2016, 8, 79-91.	1.3	1
125	Development of a Two-Dimensional Wall Shear Stress Sensor for Wind Tunnel Applications. , 2019, , .		1
126	PIV Measurements and Reduced-Order Characterization of a Mach 0.3 Axisymmetric Jet. , 2020, , .		1



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127	Evaluating the Dynamic Loads from Wind Tunnel Turbulence on a Low Aspect Ratio Flat Plate. , 2012, , .		1
128	Acoustic Generation by Pressure-Velocity Interactions in a Three-Dimensional, Turbulent Wall Jet. , 2017, , .		1
129	Spatial Velocity Correlations and Near Field Pressure Measurements From a Heated Transonic Axisymmetric Jet. , 2006, , 487.		0
130	Velocity and Pressure Measurements of a Mach 0.85 Axisymmetric Jet. , 2007, , 963.		0
131	Tip Vortex Development on a Pitching-Plunging Low Aspect Ratio Flat Plate. , 2011, , .		0
132	Leading Edge Vortex Development on a Pitching Flat Plate at Low Reynolds Number. , 2012, , .		0
133	The Study of Fluid Structure Interactions of an Electroactive Membrane Wing. , 2012, , .		0
134	A Method for Estimating Surface Pressure Forces and Far-Field Acoustics. , 2014, , .		0
135	Complementary Numerical and Experimental Efforts for the Study of Cavity Flow and its Control (Invited). , 2008, , .		0
136	Evaluating the Flow Fields Around Low Aspect Ratio Flat Plates in Wind Tunnel Turbulence. , 2013, , .		0