

# Yingzheng Liu

## List of Publications by Citations

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118  
papers

1,355  
citations

21  
h-index

29  
g-index

153  
ext. papers

1,867  
ext. citations

3.6  
avg, IF

5.69  
L-index

#	Paper	IF	Citations
118	The identification of coherent structures using proper orthogonal decomposition and dynamic mode decomposition. <i>Journal of Fluids and Structures</i> , <b>2014</b> , 49, 53-72	3.1	99
117	Improvements of film cooling effectiveness by using Barchan dune shaped ramps. <i>International Journal of Heat and Mass Transfer</i> , <b>2016</b> , 103, 443-456	4.9	47
116	Flapping dynamics of a low aspect-ratio energy-harvesting membrane immersed in a square cylinder wake. <i>Experimental Thermal and Fluid Science</i> , <b>2013</b> , 46, 151-161	3	42
115	Fast PSP measurements of wall-pressure fluctuation in low-speed flows: improvements using proper orthogonal decomposition. <i>Experiments in Fluids</i> , <b>2016</b> , 57, 1	2.5	38
114	Super-resolution reconstruction of turbulent velocity fields using a generative adversarial network-based artificial intelligence framework. <i>Physics of Fluids</i> , <b>2019</b> , 31, 125111	4.4	38
113	A novel sand-dune-inspired design for improved film cooling performance. <i>International Journal of Heat and Mass Transfer</i> , <b>2017</b> , 110, 908-920	4.9	30
112	Unsteady behavior of a sweeping impinging jet: Time-resolved particle image velocimetry measurements. <i>Experimental Thermal and Fluid Science</i> , <b>2018</b> , 96, 111-127	3	30
111	Fast pressure-sensitive paint for understanding complex flows: from regular to harsh environments. <i>Experiments in Fluids</i> , <b>2020</b> , 61, 1	2.5	30
110	Unsteady analysis of adiabatic film cooling effectiveness behind circular, shaped, and sand-dune-inspired film cooling holes: Measurement using fast-response pressure-sensitive paint. <i>International Journal of Heat and Mass Transfer</i> , <b>2018</b> , 125, 1003-1016	4.9	29
109	Vortex dynamics behind a self-oscillating inverted flag placed in a channel flow: Time-resolved particle image velocimetry measurements. <i>Physics of Fluids</i> , <b>2017</b> , 29, 125104	4.4	28
108	Wake dynamics behind a seal-vibrissa-shaped cylinder: a comparative study by time-resolved particle velocimetry measurements. <i>Experiments in Fluids</i> , <b>2016</b> , 57, 1	2.5	27
107	Time-resolved turbulent velocity field reconstruction using a long short-term memory (LSTM)-based artificial intelligence framework. <i>Physics of Fluids</i> , <b>2019</b> , 31, 075108	4.4	27
106	A novel sprayable fast-responding pressure-sensitive paint based on mesoporous silicon dioxide particles. <i>Sensors and Actuators A: Physical</i> , <b>2018</b> , 279, 390-398	3.9	27
105	Heat transfer of a sweeping jet impinging at narrow spacings. <i>Experimental Thermal and Fluid Science</i> , <b>2019</b> , 103, 89-98	3	26
104	Vortex dynamics and heat transfer behind self-oscillating inverted flags of various lengths in channel flow. <i>Physics of Fluids</i> , <b>2018</b> , 30, 045104	4.4	26
103	Simultaneous PSP and TSP measurements of transient flow in a long-duration hypersonic tunnel. <i>Experiments in Fluids</i> , <b>2016</b> , 57, 1	2.5	26
102	A Review on Fluid-Induced Flag Vibrations. <i>Applied Mechanics Reviews</i> , <b>2019</b> , 71,	8.6	26

101	Dynamic mode decomposition of separated flow over a finite blunt plate: time-resolved particle image velocimetry measurements. <i>Experiments in Fluids</i> , <b>2015</b> , 56, 1	2.5	22
100	Interaction of dual sweeping impinging jets at different Reynolds numbers. <i>Physics of Fluids</i> , <b>2018</b> , 30, 105105	4.4	22
99	Measurement of flow structures and heat transfer behind a wall-proximity square rib using TSP, PIV and split-fiber film. <i>Experiments in Fluids</i> , <b>2016</b> , 57, 1	2.5	21
98	Influence of mainstream flow oscillations on spatio-temporal variation of adiabatic film cooling effectiveness. <i>International Journal of Heat and Mass Transfer</i> , <b>2019</b> , 129, 569-579	4.9	21
97	Lagrangian analysis of sweeping jets measured by time-resolved particle image velocimetry. <i>Experimental Thermal and Fluid Science</i> , <b>2018</b> , 97, 192-204	3	20
96	A dynamic delayed detached-eddy simulation model for turbulent flows. <i>Computers and Fluids</i> , <b>2017</b> , 146, 174-189	2.8	19
95	Heat transfer enhancement of turbulent channel flow using tandem self-oscillating inverted flags. <i>Physics of Fluids</i> , <b>2018</b> , 30, 075108	4.4	19
94	Structure analysis of adiabatic film cooling effectiveness in the near field of a single inclined jet: Measurement using fast-response pressure-sensitive paint. <i>International Journal of Heat and Mass Transfer</i> , <b>2017</b> , 110, 629-642	4.9	18
93	Unsteady analysis of adiabatic film cooling effectiveness for discrete hole with oscillating mainstream flow. <i>Physics of Fluids</i> , <b>2018</b> , 30, 127103	4.4	18
92	Proper orthogonal decomposition-based spatial refinement of TR-PIV realizations using high-resolution non-TR-PIV measurements. <i>Experiments in Fluids</i> , <b>2017</b> , 58, 1	2.5	17
91	A data assimilation model for turbulent flows using continuous adjoint formulation. <i>Physics of Fluids</i> , <b>2018</b> , 30, 105108	4.4	17
90	Flapping dynamics of a piezoelectric membrane behind a circular cylinder. <i>Journal of Fluids and Structures</i> , <b>2015</b> , 55, 347-363	3.1	15
89	Single-shot lifetime-based PSP and TSP measurements on turbocharger compressor blades. <i>Experiments in Fluids</i> , <b>2017</b> , 58, 1	2.5	15
88	Influence of incident vortex street on separated flow around a finite blunt plate: PIV measurement and POD analysis. <i>Journal of Fluids and Structures</i> , <b>2015</b> , 55, 463-483	3.1	15
87	Flow dynamics of a fluidic oscillator with internal geometry variations. <i>Physics of Fluids</i> , <b>2020</b> , 32, 075114	4.4	15
86	Influence of vortex-excited acoustic resonance on flow dynamics in channel with coaxial side-branches. <i>Physics of Fluids</i> , <b>2018</b> , 30, 095105	4.4	15
85	Separated flow over blunt plates with different chord-to-thickness ratios: Unsteady behaviors and wall-pressure fluctuations. <i>Experimental Thermal and Fluid Science</i> , <b>2017</b> , 84, 199-216	3	14
84	Experimental study on hypersonic shockbody interaction between bodies in close proximity using translucent fast pressure- and temperature-sensitive paints. <i>Experiments in Fluids</i> , <b>2020</b> , 61, 1	2.5	14

83	Large-eddy simulation of circular jet mixing: Lip- and inner-ribbed nozzles. <i>Computers and Fluids</i> , <b>2018</b> , 168, 245-264	2.8	14
82	Assessment of film cooling surface quantities using pressure- and temperature-sensitive paint: Comparisons between shaped and sand-dune inspired holes. <i>Experimental Thermal and Fluid Science</i> , <b>2019</b> , 101, 16-26	3	14
81	Effects of Flow Compressibility and Density Ratio on Film Cooling Performance. <i>Journal of Propulsion and Power</i> , <b>2017</b> , 33, 964-974	1.8	13
80	Intensified flow dynamics by second-order acoustic standing-wave mode: Vortex-excited acoustic resonances in channel branches. <i>Physics of Fluids</i> , <b>2019</b> , 31, 035105	4.4	13
79	Heat transfer enhancement of turbulent channel flow using dual self-oscillating inverted flags: Staggered and side-by-side configurations. <i>International Journal of Heat and Mass Transfer</i> , <b>2019</b> , 136, 851-863	4.9	13
78	Computational fluid dynamics of steam flow in a turbine control valve with a bell-shaped spindle. <i>Applied Thermal Engineering</i> , <b>2018</b> , 129, 1333-1347	5.8	13
77	Jet impingement heat transfer of a lobed nozzle: Measurements using temperature-sensitive paint and particle image velocimetry. <i>International Journal of Heat and Fluid Flow</i> , <b>2018</b> , 71, 111-126	2.4	13
76	Evaluation of the in-depth temperature sensing performance of Eu- and Dy-doped YSZ in air plasma sprayed thermal barrier coatings. <i>Surface and Coatings Technology</i> , <b>2017</b> , 316, 210-218	4.4	12
75	Rapid tomographic reconstruction based on machine learning for time-resolved combustion diagnostics. <i>Review of Scientific Instruments</i> , <b>2018</b> , 89, 043101	1.7	12
74	Deep neural network-based strategy for optimal sensor placement in data assimilation of turbulent flow. <i>Physics of Fluids</i> , <b>2021</b> , 33, 025119	4.4	12
73	End-wall heat transfer of a rectangular bluff body at different heights: Temperature-sensitive paint measurement and computational fluid dynamics. <i>Applied Thermal Engineering</i> , <b>2017</b> , 122, 697-705	5.8	11
72	Data assimilation and resolvent analysis of turbulent flow behind a wall-proximity rib. <i>Physics of Fluids</i> , <b>2019</b> , 31, 025118	4.4	11
71	Recovering turbulent flow field from local quantity measurement: turbulence modeling using ensemble-Kalman-filter-based data assimilation. <i>Journal of Visualization</i> , <b>2018</b> , 21, 1043-1063	1.6	11
70	Data mining of a clean signal from highly noisy data based on compressed data fusion: A fast-responding pressure-sensitive paint application. <i>Physics of Fluids</i> , <b>2018</b> , 30, 097103	4.4	11
69	Vortex dynamics during acoustic-mode transition in channel branches. <i>Physics of Fluids</i> , <b>2019</b> , 31, 085109	4.4	10
68	Influence of diametral acoustic mode on cavity flow dynamics: Zonal large eddy simulation and proper orthogonal decomposition. <i>Physics of Fluids</i> , <b>2020</b> , 32, 075103	4.4	10
67	Energy harvesting with two parallel pinned piezoelectric membranes in fluid flow. <i>Journal of Fluids and Structures</i> , <b>2016</b> , 65, 381-397	3.1	10
66	Turbine vane endwall film cooling with barchan-dune shaped ramp in a single-passage transonic wind tunnel. <i>International Journal of Heat and Mass Transfer</i> , <b>2020</b> , 162, 120350	4.9	10

65	Proper orthogonal decomposition of time-resolved LIF visualization: scalar mixing in a round jet. <i>Journal of Visualization</i> , <b>2017</b> , 20, 789-815	1.6	9
64	Jet impingement using an adjustable spreading-angle sweeping jet. <i>Aerospace Science and Technology</i> , <b>2020</b> , 105, 105956	4.9	9
63	Instantaneous pressure determination from unsteady velocity fields using adjoint-based sequential data assimilation. <i>Physics of Fluids</i> , <b>2020</b> , 32, 035101	4.4	9
62	Unsteady analysis of turbulent flow and heat transfer behind a wall-proximity square rib using dynamic delayed detached-eddy simulation. <i>Physics of Fluids</i> , <b>2021</b> , 33, 055104	4.4	9
61	Vortex-excited acoustic resonance in channel with coaxial side-branches: Vortex dynamics and aeroacoustic energy transfer. <i>Physics of Fluids</i> , <b>2018</b> , 30, 125104	4.4	9
60	Acoustics-driven vortex dynamics in channel branches with round intersections: Flow mode transition and three-dimensionality. <i>Physics of Fluids</i> , <b>2020</b> , 32, 025101	4.4	8
59	Spinning behavior of flow-acoustic resonant fields inside a cavity: Vortex-shedding modes and diametral acoustic modes. <i>Physics of Fluids</i> , <b>2020</b> , 32, 085109	4.4	8
58	Missing data recovery using data fusion of incomplete complementary data sets: A particle image velocimetry application. <i>Physics of Fluids</i> , <b>2019</b> , 31, 025105	4.4	7
57	Phase-locking particle image velocimetry measurement of unsteady flow behaviors: Online dynamic mode decomposition using field-programmable gate array. <i>Physics of Fluids</i> , <b>2019</b> , 31, 025109	4.4	7
56	Quantitative stress measurement of elastic deformation using mechanoluminescent sensor: An intensity ratio model. <i>Review of Scientific Instruments</i> , <b>2018</b> , 89, 045006	1.7	7
55	Proper orthogonal decomposition of turbulent flow around a finite blunt plate. <i>Journal of Visualization</i> , <b>2018</b> , 21, 763-777	1.6	7
54	Pressure-sensitive paint with imprinted pattern for full-field endoscopic measurement using a color camera. <i>Sensors and Actuators A: Physical</i> , <b>2019</b> , 290, 28-35	3.9	6
53	Time-resolved reconstruction of turbulent flows using linear stochastic estimation and sequential data assimilation. <i>Physics of Fluids</i> , <b>2020</b> , 32, 075106	4.4	6
52	A novel laminated OLED-BSP system for measurement on moving surfaces. <i>Journal of Visualization</i> , <b>2018</b> , 21, 215-223	1.6	6
51	Flow Structures and Unsteady Behaviors of Film Cooling from Discrete Holes Fed by Internal Crossflow. <i>Journal of Turbomachinery</i> , <b>2020</b> , 142,	1.8	6
50	Effect of oxygen partial pressure on the phosphorescence of different lanthanide ion (Ln <sup>3+</sup> )-doped yttria-stabilised zirconia. <i>Sensors and Actuators B: Chemical</i> , <b>2020</b> , 308, 127666	8.5	6
49	Phosphor-Doped Thermal Barrier Coatings Deposited by Air Plasma Spray for In-Depth Temperature Sensing. <i>Sensors</i> , <b>2016</b> , 16,	3.8	6
48	Numerical Investigation of Creep Fatigue Behavior in a Steam Turbine Inlet Valve Under Cyclic Thermomechanical Loading. <i>Journal of Engineering for Gas Turbines and Power</i> , <b>2017</b> , 139,	1.7	5

47	Unsteady behaviors of separated flow over a finite blunt plate at different inclination angles. <i>Physics of Fluids</i> , <b>2020</b> , 32, 035111	4.4	5
46	Transient thermal behaviors of a scaled turbine valve: Conjugate heat transfer simulation and experimental measurement. <i>International Journal of Heat and Mass Transfer</i> , <b>2019</b> , 141, 116-128	4.9	5
45	Time-resolved particle image velocimetry measurement of vortex dynamics behind tandem self-oscillating inverted flags in a channel flow. <i>Experimental Thermal and Fluid Science</i> , <b>2020</b> , 112, 109982	3.2	5
44	Study on three-dimensional flow structures of a sweeping jet using time-resolved stereo particle image velocimetry. <i>Experimental Thermal and Fluid Science</i> , <b>2020</b> , 110, 109945	3	5
43	Integration of pressure-sensitive paint with persistent phosphor: A light-charged pressure-sensing system. <i>Review of Scientific Instruments</i> , <b>2018</b> , 89, 085003	1.7	5
42	Self-sustained oscillation of the flow in a double-cavity channel: a time-resolved PIV measurement. <i>Journal of Visualization</i> , <b>2020</b> , 23, 245-257	1.6	4
41	Unsteady behavior of wall-detached flow inside a steam turbine control valve. <i>Physics of Fluids</i> , <b>2019</b> , 31, 105101	4.4	4
40	A data assimilation model for wall pressure-driven mean flow reconstruction. <i>Physics of Fluids</i> , <b>2022</b> , 34, 015101	4.4	4
39	The Formation and Evolution of Turbulent Swirling Vortex Rings Generated by Axial Swirlers. <i>Flow, Turbulence and Combustion</i> , <b>2020</b> , 104, 795-816	2.5	4
38	Flapping dynamics of vertically clamped three-dimensional flexible flags in a Poiseuille flow. <i>Physics of Fluids</i> , <b>2020</b> , 32, 071905	4.4	4
37	Heat transfer enhancement in a poiseuille channel flow by using multiple wall-mounted flexible flags. <i>International Journal of Heat and Mass Transfer</i> , <b>2020</b> , 163, 120447	4.9	4
36	Flow prediction using dynamic mode decomposition with time-delay embedding based on local measurement. <i>Physics of Fluids</i> , <b>2021</b> , 33, 095109	4.4	4
35	Flow and surface pressure field measurements on a circular cylinder with impingement of turbulent round jet. <i>Experimental Thermal and Fluid Science</i> , <b>2019</b> , 105, 67-76	3	3
34	Dynamics of compact vortex rings generated by axial swirlers at early stage. <i>Physics of Fluids</i> , <b>2020</b> , 32, 045104	4.4	3
33	Sequential data assimilation with multiple nonlinear models and applications to subsurface flow. <i>Journal of Computational Physics</i> , <b>2017</b> , 346, 356-368	4.1	3
32	Experimental Study of Oscillating Freestream Effect on the Spatiotemporal Distributions of Leading-Edge Film Cooling. <i>Journal of Turbomachinery</i> , <b>2021</b> , 143,	1.8	3
31	Phase-locking particle image velocimetry measurements of acoustic-driven flow interactions between tandem deep cavities. <i>Physics of Fluids</i> , <b>2020</b> , 32, 125115	4.4	3
30	Fluid-structure interaction of a flexible membrane under movement-induced excitation (MIE), extraneously induced excitation (EIE), and coupled MIE/EIE. <i>Physics of Fluids</i> , <b>2021</b> , 33, 065101	4.4	3

29	Simultaneous 3D surface profile and pressure measurement using phase-shift profilometry and pressure-sensitive paint. <i>Review of Scientific Instruments</i> , <b>2021</b> , 92, 035107	1.7	3
28	Hydrodynamic benefits of pectoral fins in a self-propelled flexible plate. <i>Physics of Fluids</i> , <b>2022</b> , 34, 021909	4.4	3
27	Light field enhancement of particle image velocimetry measurement using a profiled window and a ray tracing method. <i>Experimental Thermal and Fluid Science</i> , <b>2019</b> , 106, 25-37	3	2
26	Data assimilation for turbulent mean flow and scalar fields with anisotropic formulation. <i>Experiments in Fluids</i> , <b>2021</b> , 62, 1	2.5	2
25	Dynamics of the jet flow issued from a lobed Nozzle: Tomographic particle image velocimetry measurements. <i>International Journal of Heat and Fluid Flow</i> , <b>2021</b> , 89, 108795	2.4	2
24	Flow structures of a precessing jet in an axisymmetric chamber. <i>Journal of Visualization</i> , <b>2021</b> , 24, 501-516	4.4	2
23	Drag reduction by a flexible afterbody. <i>Physics of Fluids</i> , <b>2021</b> , 33, 122009	4.4	2
22	Spatiotemporal distributions of sweeping jet film cooling with a compact geometry. <i>Physics of Fluids</i> , <b>2022</b> , 34, 025113	4.4	1
21	Transient Thermal Behaviors of Ultra-Supercritical Steam Turbine Control Valves During the Cold Start Warm-Up Process: Conjugate Heat Transfer Simulation and Field Data Validation. <i>Journal of Heat Transfer</i> , <b>2019</b> , 141,	1.8	1
20	Simultaneous measurements of time-resolved velocity and concentration fields behind a sand dune-inspired jet in crossflow. <i>Physics of Fluids</i> , <b>2021</b> , 33, 115101	4.4	1
19	Jet sweeping angle control by fluidic oscillators with master-slave designs. <i>Chinese Journal of Aeronautics</i> , <b>2021</b> , 34, 145-162	3.7	1
18	Thermal stability improvement of sprayable fast-responding pressure-sensitive paint for measurement above 100 °C. <i>Chinese Journal of Aeronautics</i> , <b>2021</b> , 34, 320-326	3.7	1
17	Hydrodynamic benefits of protruding eyes and mouth in a self-propelled flexible stingray. <i>Physics of Fluids</i> , <b>2021</b> , 33, 081915	4.4	1
16	Concentration effect on oxygen quenching behavior of EuxY0.08-xZr0.92O1.96 and DyxY0.08-xZr0.92O1.96 phosphors. <i>Journal of the American Ceramic Society</i> , <b>2022</b> , 105, 428	3.8	1
15	Flow enhancement of tomographic particle image velocimetry measurements using sequential data assimilation. <i>Physics of Fluids</i> , <b>2022</b> , 34, 035101	4.4	1
14	Study of internal time-resolved flow dynamics of a subsonic fluidic oscillator using fast pressure sensitive paint. <i>Experiments in Fluids</i> , <b>2022</b> , 63, 1	2.5	1
13	Active Flow Control in an S-Shaped Duct at Mach 0.4 Using Sweeping Jet Actuators. <i>Experimental Thermal and Fluid Science</i> , <b>2022</b> , 110699	3	1
12	Interaction between separation bubble and impinging vortices over a finite blunt plate. <i>International Journal of Heat and Fluid Flow</i> , <b>2020</b> , 82, 108534	2.4	0



11	Transonic vane film cooling with crescent-shaped craters using an endoscopic pressure-sensitive paint technique. <i>Applied Thermal Engineering</i> , <b>2022</b> , 205, 118081	5.8	○
10	Unsteady flow structures behind a shark denticle replica on the wall: Time-resolved particle image velocimetry measurements. <i>Physics of Fluids</i> , <b>2021</b> , 33, 075109	4.4	○
9	Conditional generative adversarial network driven approach for direct prediction of thermal stress based on two-phase material SEM images. <i>Ceramics International</i> , <b>2021</b> , 47, 34115-34115	5.1	○
8	Temporally resolved reconstruction of sweeping jet flow field based on sub-Nyquist-rate PIV data. <i>Measurement Science and Technology</i> , <b>2021</b> , 32, 125303	2	○
7	Resolving dynamic features of kilohertz pressure fluctuations using fast-responding pressure-sensitive paint: measurement of inclined jet impingement. <i>Experiments in Fluids</i> , <b>2022</b> , 63, 1	2.5	○
6	Dynamic delayed detached-eddy simulation and acoustic analogy analysis of unsteady flow through a sudden expansion pipe. <i>Journal of Visualization</i> , 1	1.6	○
5	Influence of tandem fluttering membranes on flow dynamics and heat transfer in turbulent channel flow. <i>Physics of Fluids</i> , <b>2022</b> , 34, 015118	4.4	
4	Dual-FPGA-PIV measurements of unsteady flow dynamics resonated via the duct acoustic mode with half-wavelength arranged side-branches. <i>Experiments in Fluids</i> , <b>2022</b> , 63, 1	2.5	
3	Fast PSP measurement of three-dimensional low-frequency unsteadiness in sidewall-confined shock wave/turbulent boundary layer interaction. <i>Experimental Thermal and Fluid Science</i> , <b>2022</b> , 134, 110599	3	
2	Phosphorescence-based Temperature and Tactile Multi-functional Flexible Sensing Skin. <i>Sensors and Actuators A: Physical</i> , <b>2021</b> , 332, 113205	3.9	
1	Improved Turbine Vane Endwall Film Cooling by Using Sand-Dune-Inspired Design. <i>Journal of Thermal Science</i> , <b>2022</b> , 31, 958-973	1.9	