

Brian S Thurow

List of Publications by Year in descending order

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121
papers

1,660
citations

331670

21
h-index

345221

36
g-index

123
all docs

123
docs citations

123
times ranked

638
citing authors

#	ARTICLE	IF	CITATIONS
1	Large-scale structure evolution and sound emission in high-speed jets: real-time visualization with simultaneous acoustic measurements. <i>Journal of Fluid Mechanics</i> , 2005, 544, 277.	3.4	159
2	Volumetric particle image velocimetry with a single plenoptic camera. <i>Measurement Science and Technology</i> , 2015, 26, 115201.	2.6	136
3	Review of ultra-high repetition rate laser diagnostics for fluid dynamic measurements. <i>Measurement Science and Technology</i> , 2013, 24, 012002.	2.6	104
4	Narrow-linewidth megahertz-rate pulse-burst laser for high-speed flow diagnostics. <i>Applied Optics</i> , 2004, 43, 5064.	2.1	74
5	Compressibility effects on turbulence structures of axisymmetric mixing layers. <i>Physics of Fluids</i> , 2003, 15, 1755.	4.0	57
6	Development of Megahertz-Rate Planar Doppler Velocimetry for High Speed Flows. <i>AIAA Journal</i> , 2005, 43, 500-511.	2.6	52
7	Third-generation megahertz-rate pulse burst laser system. <i>Applied Optics</i> , 2009, 48, 2086.	2.1	46
8	Issues with measurements of the convective velocity of large-scale structures in the compressible shear layer of a free jet. <i>Physics of Fluids</i> , 2008, 20, .	4.0	45
9	Comparison of three-dimensional particle tracking and sizing using plenoptic imaging and digital in-line holography. <i>Applied Optics</i> , 2016, 55, 6410.	2.1	43
10	A technique for real-time visualization of flow structure in high-speed flows. <i>Physics of Fluids</i> , 2002, 14, 3449-3452.	4.0	42
11	Volumetric calibration of a plenoptic camera. <i>Applied Optics</i> , 2018, 57, 914.	1.8	40
12	Plenoptic particle image velocimetry with multiple plenoptic cameras. <i>Measurement Science and Technology</i> , 2018, 29, 075202.	2.6	39
13	On the resolution of plenoptic PIV. <i>Measurement Science and Technology</i> , 2016, 27, 084003.	2.6	36
14	Tomographic Reconstruction of a 3-D Flow Field Using a Plenoptic Camera. , 2012, , .		32
15	Development and evaluation of a 3-D microphone array to locate individual acoustic sources in a high-speed jet. <i>Journal of Sound and Vibration</i> , 2004, 276, 649-669.	3.9	31
16	Exploring Noise Sources Using Simultaneous Acoustic Measurements and Real-Time Flow Visualizations in Jets. <i>AIAA Journal</i> , 2002, 40, 2382-2392.	2.6	29
17	Development of a High-Speed Three-Dimensional Flow Visualization Technique. <i>AIAA Journal</i> , 2009, 47, 2857-2865.	2.6	29
18	Three-Dimensional Particle Image Velocimetry Using a Plenoptic Camera. , 2012, , .		28

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19	Filtered refocusing: a volumetric reconstruction algorithm for plenoptic-PIV. Measurement Science and Technology, 2016, 27, 094005.	2.6	28
20	Development of a modular, high-speed plenoptic-camera for 3D flow-measurement. Optics Express, 2019, 27, 13400.	3.4	23
21	Density Measurements of a Turbulent Wake Using Acetone Planar Laser-Induced Fluorescence. AIAA Journal, 2013, 51, 829-839.	2.6	21
22	On the application of background oriented schlieren for wavefront sensing. Measurement Science and Technology, 2014, 25, 015001.	2.6	21
23	Uncertainty characterization of particle location from refocused plenoptic images. Optics Express, 2017, 25, 21801.	3.4	21
24	Volumetric Velocity Measurements in the Wake of a Hemispherical Roughness Element. AIAA Journal, 2017, 55, 2158-2173.	2.6	20
25	Three-dimensional extent of flow stagnation in transcatheter heart valves. Journal of the Royal Society Interface, 2019, 16, 20190063.	3.4	19
26	An examination of MHz rate PIV in a heated supersonic jet. , 2014, , .		18
27	Plenoptic background oriented schlieren imaging. Measurement Science and Technology, 2017, 28, 095404.	2.6	18
28	Light-Field Imaging Toolkit. SoftwareX, 2016, 5, 101-106.	2.6	17
29	Preliminary Development of a 3-D, 3-C PIV Technique using Light Field Imaging. , 2011, , .		16
30	Calibration of a Microlens Array for a Plenoptic Camera. , 2014, , .		16
31	Development of a high-speed plenoptic imaging system and its application to marine biology PIV. Measurement Science and Technology, 2020, 31, 054005.	2.6	13
32	Single-Camera Three-Dimensional Velocity Measurement of a Fin-Generated Shock-Wave/Boundary-Layer Interaction. AIAA Journal, 2020, 58, 4438-4450.	2.6	13
33	MHz Rate Planar Doppler Velocimetry in Supersonic Jets. , 2004, , .		12
34	3-D flow visualization of axisymmetric jets at Reynolds number 6,700 and 10,200. Journal of Visualization, 2012, 15, 309-319.	1.8	12
35	Simultaneous MHz Rate Flow Visualization and Wavefront Sensing for Aero-Optics. , 2003, , .		11
36	Design of a MHz Repetition Rate Pulse Burst Laser System at Auburn University. , 2006, , .		11

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37	Volumetric Measurement of a Shock Wave-Turbulent Boundary Layer Interaction Using Plenoptic Particle Image Velocimetry. , 2016, , .		11
38	Development and uncertainty characterization of 3D particle location from perspective shifted plenoptic images. Optics Express, 2019, 27, 7997.	3.4	11
39	Development of a Background Oriented Schlieren-Based Wavefront Sensor for Aero-Optics. , 2010, , .		10
40	Investigations of Transonic Flow over a Hemisphere using DES and hybrid RANS/LES Turbulence Models. , 2016, , .		10
41	A direct comparison between conventional and plenoptic background oriented schlieren imaging. Measurement Science and Technology, 2019, 30, 064001.	2.6	10
42	Perspective on the development and application of light-field cameras in flow diagnostics. Measurement Science and Technology, 2021, 32, 101001.	2.6	10
43	Three-Dimensional Measurement of the Crater Formation During Plume-Surface Interactions Using Stereo-Photogrammetry. AIAA Journal, 2022, 60, 1316-1331.	2.6	10
44	Acoustic source localization using a 3-D microphone array in a Mach 1.3 jet. , 2002, , .		9
45	Investigations of Flow over a Hemisphere using Numerical Simulations. , 2015, , .		9
46	A Plenoptic Multi-Color Imaging Pyrometer. , 2017, , .		9
47	A Laboratory Framework for Synchronous Near/Far-Field Acoustics and MHz PIV in High-Temperature, Shock-Containing, Jets. , 2012, , .		9
48	An in-depth investigation of large scale structures in a Mach 1.3 axisymmetric jet. , 2001, , .		8
49	Structure of a Supersonic Impinging Rectangular Jet via Real-Time Optical Diagnostics. , 2002, , .		7
50	Compressibility effects on the growth and development of large-scale structures in an axisymmetric jet. , 2002, , .		7
51	Progress Towards Real-Time Planar Doppler Velocimetry. , 2003, , .		7
52	Density Measurements of a High-Speed, Compressible Flow Field Using Acetone Planar Laser Induced Fluorescence (PLIF). , 2011, , .		7
53	Single Camera 3D Measurement of a Shock Wave-Turbulent Boundary Layer Interaction. , 2017, , .		7
54	Comparison of 4-camera Tomographic PIV and Single-camera Plenoptic PIV. , 2018, , .		7

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55	Time-Resolved 3D Flow-Measurement with a Single Plenoptic-Camera. , 2019, , .		7
56	A novel multi-band plenoptic pyrometer for high temperature applications. Measurement Science and Technology, 0, , .	2.6	7
57	Further Development of a High-Speed Three-Dimensional Flow Visualization System. , 2007, , .		6
58	3D Particle Position Reconstruction Accuracy in Plenoptic PIV. , 2014, , .		6
59	Comparing Volumetric Reconstruction Algorithms for Plenoptic-PIV. , 2015, , .		6
60	3-D Visualization of Compressible Flow Using a Plenoptic Camera and Background Oriented Schlieren. , 2016, , .		6
61	Volumetric calibration of a plenoptic camera. , 2017, , .		6
62	Correlation-Based Depth Estimation with a Plenoptic Camera. AIAA Journal, 2017, 55, 435-445.	2.6	6
63	Characterization of Plenoptic Imaging Systems and Efficient Volumetric Estimation From Plenoptic Data. IEEE Journal on Selected Topics in Signal Processing, 2017, 11, 1020-1033.	10.8	6
64	Tomographic background oriented schlieren using plenoptic cameras. Measurement Science and Technology, 2022, 33, 025203.	2.6	6
65	Visualization of Hypersonic Turbulent Boundary Layers Negotiating Convex Curvature. , 2011, , .		5
66	Comparison of Large-Scale Three-Dimensional Features in Zero- and Adverse-Pressure-Gradient Turbulent Boundary Layers. AIAA Journal, 2015, 53, 3686-3699.	2.6	5
67	Visualization of an SBLI using Plenoptic BOS. , 2017, , .		5
68	Determination of noise sources within a high-speed jet via simultaneous acoustic measurements and real-time flow. , 2001, , .		5
69	An experimental effort on the connection of turbulence structures to far-field acoustic radiation in a Mach 1.3 jet. , 2001, , .		4
70	Progress towards a real-time quantitative measurement technique for high-speed flows. , 2001, , .		4
71	High Repetition Rate Planar Velocity Measurements in a Mach 2.0 Compressible Axisymmetric Jet. , 2005, , .		4
72	Preliminary Investigation of Three-Dimensional Flame Measurements with a Plenoptic Camera. , 2014, , .		4

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73	On the relationship between image intensity and velocity in a turbulent boundary layer seeded with smoke particles. <i>Experiments in Fluids</i> , 2014, 55, 1.	2.4	4
74	Volumetric spectral imaging and two-color pyrometry of flames using plenoptic cameras. , 2019, , .		4
75	MHz rate imaging of large-scale structures within a high speed axisymmetric jet. , 2000, , .		3
76	A MHz rate imaging system for study of turbulent and time evolving high speed flows. , 0, , .		3
77	Preliminary Development of a Nearly-Instantaneous Three-Dimensional Imaging Technique for High-Speed Flow Fields. , 2006, , .		3
78	3-D POD Analysis of a Naturally Excited Jet. , 2008, , .		3
79	Investigation of Image Processing Steps for Reconstruction of Three-Dimensional Flow Visualization Images. , 2008, , .		3
80	POD Analysis of 3-D Flow Visualization Images of a Circular Jet with Reynolds Number 9500. , 2009, , .		3
81	Comparison of stereo-PIV and plenoptic-PIV measurements on the wake of a cylinder in NASA ground test facilities. , 2017, , .		3
82	Depth-of-field reduction due to blurring in a relayed plenoptic camera and mitigation via deconvolution. <i>Measurement Science and Technology</i> , 2020, 31, 055403.	2.6	3
83	Design of a multispectral plenoptic camera and its application for pyrometry. <i>Applied Optics</i> , 2022, 61, 2459-2472.	1.8	3
84	Differences in Dynamics of an Ideally Expanded Mach 1.3 Jet During Noise Generation and Relative Quiet Periods. , 2004, , .		2
85	A Burst Mode OPO System for MHz Frame Rate PLIF Imaging Diagnostics. , 2004, , .		2
86	Further Development of a High-Speed 3-D Density Measurement Technique for Aero-Optics. , 2010, , .		2
87	Simultaneous 3-D Flow Visualization with 2-D PIV to Observe a Turbulent Boundary Layer. , 2011, , .		2
88	Enhanced Imaging of Reacting Flows Using 3D Deconvolution and a Plenoptic Camera. , 2015, , .		2
89	A Preliminary Comparison of Three Dimensional Particle Tracking and Sizing using Plenoptic Imaging and Digital In-line Holography. , 2016, , .		2
90	Preliminary Plenoptic PIV Results for Volumetric Measurements of Shock Wave-Boundary Layer Interactions. , 2017, , .		2

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91	Recent Developments using Background Oriented Schlieren with a Plenoptic Camera. , 2018, , .		2
92	Two Camera Plenoptic PIV Applied to Shock Wave-Boundary Layer Interactions. , 2018, , .		2
93	A Novel Multi-band Plenoptic Pyrometer used for Temperature Measurements of Strand Burner Plumes. , 2020, , .		2
94	Rotating three-dimensional velocimetry. Experiments in Fluids, 2021, 62, 1.	2.4	2
95	Optical diagnostics investigation of wake flow fields behind geometrically modified turrets. , 2012, , .		2
96	Simultaneous High-resolution Optical Wavefront and Flow Diagnostics for High-speed Flows. , 2003, , .		1
97	Three-Dimensional Flow Visualization Using a Pulse Burst Laser System. , 2009, , .		1
98	Experimental Investigation of Three-Dimensional Structures in an Adverse Pressure Gradient Turbulent Boundary Layer. , 2012, , .		1
99	Efficient volumetric estimation from plenoptic data. , 2013, , .		1
100	Flow Visualization of Three-Dimensional Large Scale Motions in ZPG and APG Turbulent Boundary Layers. , 2013, , .		1
101	Correlation-based Depth Estimation with a Plenoptic Camera. , 2016, , .		1
102	Preliminary Comparison Between Conventional and Plenoptic Background Oriented Schlieren Imaging. , 2017, , .		1
103	Characterization of Vorticity Transport in the Leading-Edge Vortex of a Rolling Wing using Plenoptic PIV. , 2018, , .		1
104	Characterization and Manipulation of Vorticity Transport On a Rolling Wing. , 2019, , .		1
105	Vortex topology of a pitching and rolling wing in forward flight. Experiments in Fluids, 2020, 61, 1.	2.4	1
106	On the Impact of Subaperture Sampling for Multispectral Scalar Field Measurements. Optics, 2020, 1, 136-154.	1.2	1
107	Scalar-field reconstruction algorithms using plenoptic cameras. , 2019, , .		1
108	Volumetric Velocity Measurements of a Three-Dimensional Shock-Wave/Boundary-Layer Interaction with Flow Actuation Using Two-Camera Plenoptic Particle Image Velocimetry. AIAA Journal, 0, , 1-16.	2.6	1

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109	Temporally Resolved Flow Visualization with Simultaneous 3-D Noise Source Localization in High Speed Jets. , 2003, , .		0
110	Recent enhancements to the OSU burst mode laser and MHz rate imaging systems. , 0, , .		0
111	Further Development of Temporally Resolved PDV and Its Application to Compressible Free Shear Layers. , 2004, , .		0
112	Preliminary Development of a High-Speed 3-D Laser Induced Fluorescence Technique. , 2009, , .		0
113	Initial Development of Acetone Laser Induced Fluorescence (ILIF) for Aero-Optics. , 2009, , .		0
114	3-D Flow Visualization of a Turbulent Boundary Layer. , 2010, , .		0
115	Experimental Investigation of a Turbulent Boundary Layer Using Simultaneous 3-D Flow Visualization and 2-D PIV. , 2012, , .		0
116	Modeling the Effect of Refraction at a Flat Interface on Plenoptic Particle Reconstruction. , 2014, , .		0
117	Comparison of Large Scale Features in Zero and Adverse Pressure Gradient Turbulent Boundary Layers. , 2014, , .		0
118	Two camera plenoptic-PIV. , 2017, , .		0
119	Refinement and Application of 3D Particle Location from Perspective Shifted Plenoptic Images. , 2019, , .		0
120	Preliminary Development of a Single Camera Rotating Volumetric Velocimetry Technique. , 2020, , .		0
121	Editorial: Introduction to the 36th Annual Gallery of Fluid Motion and Summary of 19 Years of Winners (Atlanta, Georgia, USA 2018). Physical Review Fluids, 2019, 4, .	2.5	0