

Bharathram Ganapathisubramani

List of Publications by Year in descending order

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160
papers

5,131
citations

94269

37
h-index

102304

66
g-index

163
all docs

163
docs citations

163
times ranked

2381
citing authors

#	ARTICLE	IF	CITATIONS
1	Characteristics of vortex packets in turbulent boundary layers. Journal of Fluid Mechanics, 2003, 478, 35-46.	1.4	408
2	Effects of upstream boundary layer on the unsteadiness of shock-induced separation. Journal of Fluid Mechanics, 2007, 585, 369-394.	1.4	276
3	Investigation of large-scale coherence in a turbulent boundary layer using two-point correlations. Journal of Fluid Mechanics, 2005, 524, 57-80.	1.4	214
4	Low-frequency dynamics of shock-induced separation in a compression ramp interaction. Journal of Fluid Mechanics, 2009, 636, 397-425.	1.4	180
5	Amplitude and frequency modulation in wall turbulence. Journal of Fluid Mechanics, 2012, 712, 61-91.	1.4	154
6	Large-scale motions in a supersonic turbulent boundary layer. Journal of Fluid Mechanics, 2006, 556, 271.	1.4	152
7	Three-dimensional conditional structure of a high-Reynolds-number turbulent boundary layer. Journal of Fluid Mechanics, 2011, 673, 255-285.	1.4	143
8	Optimal mode decomposition for unsteady flows. Journal of Fluid Mechanics, 2013, 733, 473-503.	1.4	128
9	Performance and mechanism of sinusoidal leading edge serrations for the reduction of turbulence-aerofoil interaction noise. Journal of Fluid Mechanics, 2017, 818, 435-464.	1.4	121
10	Effects of spanwise spacing on large-scale secondary flows in rough-wall turbulent boundary layers. Journal of Fluid Mechanics, 2015, 774, .	1.4	114
11	Investigation of three-dimensional structure of fine scales in a turbulent jet by using cinematographic stereoscopic particle image velocimetry. Journal of Fluid Mechanics, 2008, 598, 141-175.	1.4	111
12	Dual-plane PIV technique to determine the complete velocity gradient tensor in a turbulent boundary layer. Experiments in Fluids, 2005, 39, 222-231.	1.1	102
13	Particle image velocimetry study of fractal-generated turbulence. Journal of Fluid Mechanics, 2012, 711, 306-336.	1.4	97
14	Spectral scaling in boundary layers and pipes at very high Reynolds numbers. Journal of Fluid Mechanics, 2015, 771, 303-326.	1.4	95
15	Axisymmetric Turbulent Wakes with New Nonequilibrium Similarity Scalings. Physical Review Letters, 2013, 111, 144503.	2.9	83
16	Determination of complete velocity gradient tensor by using cinematographic stereoscopic PIV in a turbulent jet. Experiments in Fluids, 2007, 42, 923-939.	1.1	81
17	Experimental investigation of vortex properties in a turbulent boundary layer. Physics of Fluids, 2006, 18, 055105.	1.6	73
18	Effect of turbulence on the wake of a wall-mounted cube. Journal of Fluid Mechanics, 2016, 804, 513-530.	1.4	71

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19	Turbulent separation upstream of a forward-facing step. <i>Journal of Fluid Mechanics</i> , 2013, 724, 284-304.	1.4	69
20	An assessment of the ship drag penalty arising from light calcareous tubeworm fouling. <i>Biofouling</i> , 2016, 32, 451-464.	0.8	65
21	Characteristics of turbulent boundary layers over smooth surfaces with spanwise heterogeneities. <i>Journal of Fluid Mechanics</i> , 2018, 838, 516-543.	1.4	64
22	Performance augmentation mechanism of in-line tandem flapping foils. <i>Journal of Fluid Mechanics</i> , 2017, 827, 484-505.	1.4	63
23	Effects of frontal and plan solidities on aerodynamic parameters and the roughness sublayer in turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2015, 782, 541-566.	1.4	61
24	Amplification of enstrophy in the far field of an axisymmetric turbulent jet. <i>Journal of Fluid Mechanics</i> , 2010, 651, 483-502.	1.4	58
25	Aerodynamic performance of the feathered dinosaur <i>Microraptor</i> and the evolution of feathered flight. <i>Nature Communications</i> , 2013, 4, 2489.	5.8	56
26	The instantaneous structure of secondary flows in turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2019, 862, 845-870.	1.4	55
27	The energy cascade in near-field non-homogeneous non-isotropic turbulence. <i>Journal of Fluid Mechanics</i> , 2015, 771, 676-705.	1.4	54
28	Leading- and trailing-edge effects on the aeromechanics of membrane aerofoils. <i>Journal of Fluids and Structures</i> , 2013, 38, 107-126.	1.5	53
29	Interactions of large-scale free-stream turbulence with turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2016, 802, 79-107.	1.4	50
30	Time evolution of uniform momentum zones in a turbulent boundary layer. <i>Journal of Fluid Mechanics</i> , 2018, 842, 554-590.	1.4	47
31	Effectively visualizing multi-valued flow data using color and texture. , 0, , .		46
32	The evolution of large-scale motions in turbulent pipe flow. <i>Journal of Fluid Mechanics</i> , 2015, 779, 701-715.	1.4	45
33	Aspect-Ratio Effects on Aeromechanics of Membrane Wings at Moderate Reynolds Numbers. <i>AIAA Journal</i> , 2015, 53, 780-788.	1.5	44
34	Characterisation of drag and wake properties of canopy patches immersed in turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2016, 798, 27-49.	1.4	43
35	Evolution of the velocity-gradient tensor in a spatially developing turbulent flow. <i>Journal of Fluid Mechanics</i> , 2014, 756, 252-292.	1.4	42
36	Effects of heterogeneous surface geometry on secondary flows in turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2020, 886, .	1.4	42

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37	Pressure from particle image velocimetry for convective flows: a Taylor's hypothesis approach. <i>Measurement Science and Technology</i> , 2013, 24, 024002.	1.4	41
38	Development of turbulent boundary layers past a step change in wall roughness. <i>Journal of Fluid Mechanics</i> , 2016, 795, 494-523.	1.4	39
39	Drag and near wake characteristics of flat plates normal to the flow with fractal edge geometries. <i>Fluid Dynamics Research</i> , 2013, 45, 061406.	0.6	38
40	The effects of resolution and noise on kinematic features of fine-scale turbulence. <i>Experiments in Fluids</i> , 2011, 51, 1417-1437.	1.1	36
41	Aeromechanics of membrane and rigid wings in and out of ground-effect at moderate Reynolds numbers. <i>Journal of Fluids and Structures</i> , 2016, 62, 318-331.	1.5	35
42	Experimental estimation of fluctuating velocity and scalar gradients in turbulence. <i>Experiments in Fluids</i> , 2012, 53, 925-942.	1.1	34
43	Turbulent Flow Over Large Roughness Elements: Effect of Frontal and Plan Solidity on Turbulence Statistics and Structure. <i>Boundary-Layer Meteorology</i> , 2018, 167, 99-121.	1.2	34
44	Full-field pressure from snapshot and time-resolved volumetric PIV. <i>Experiments in Fluids</i> , 2016, 57, 1.	1.1	33
45	On the fluid-structure interaction of flexible membrane wings for MAVs in and out of ground-effect. <i>Journal of Fluids and Structures</i> , 2017, 70, 214-234.	1.5	33
46	Aeroacoustic Performance of Fractal Spoilers. <i>AIAA Journal</i> , 2012, 50, 2695-2710.	1.5	32
47	An Image-Based Model of Fluid Flow Through Lymph Nodes. <i>Bulletin of Mathematical Biology</i> , 2016, 78, 52-71.	0.9	32
48	Influence of three-dimensionality on propulsive flapping. <i>Journal of Fluid Mechanics</i> , 2020, 886, .	1.4	32
49	Pressure from 2D snapshot PIV. <i>Experiments in Fluids</i> , 2019, 60, 32.	1.1	31
50	Geometrical influence on vortex shedding in turbulent axisymmetric wakes. <i>Physics of Fluids</i> , 2015, 27, .	1.6	29
51	Simultaneous skin friction and velocity measurements in high Reynolds number pipe and boundary layer flows. <i>Journal of Fluid Mechanics</i> , 2019, 871, 377-400.	1.4	28
52	Frequency-wavenumber mapping in turbulent shear flows. <i>Journal of Fluid Mechanics</i> , 2015, 783, 166-190.	1.4	27
53	The four-flipper swimming method of plesiosaurs enabled efficient and effective locomotion. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2017, 284, 20170951.	1.2	26
54	Effect of length of two-dimensional obstacles on characteristics of separation and reattachment. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , 2018, 178, 38-48.	1.7	25

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55	Universal scaling law for drag-to-thrust wake transition in flapping foils. Journal of Fluid Mechanics, 2019, 872, .	1.4	25
56	Denosing of time-resolved PIV for accurate measurement of turbulence spectra and reduced error in derivatives. Experiments in Fluids, 2012, 53, 1561-1575.	1.1	24
57	Deflected wake interaction of tandem flapping foils. Journal of Fluid Mechanics, 2020, 903, .	1.4	24
58	Mechanisms of airfoil noise near stall conditions. Physical Review Fluids, 2019, 4, .	1.0	23
59	Statistical properties of streamwise velocity in a supersonic turbulent boundary layer. Physics of Fluids, 2007, 19, .	1.6	22
60	Micro vortex generator control of axisymmetric high-speed laminar boundary layer separation. Shock Waves, 2015, 25, 521-533.	1.0	22
61	Near-wake characteristics of rigid and membrane wings in ground effect. Journal of Fluids and Structures, 2018, 80, 199-216.	1.5	20
62	Edge effects on the fluttering characteristics of freely falling planar particles. Physical Review Fluids, 2018, 3, .	1.0	19
63	Effects of Upstream Coherent Structures on Low-Frequency Motion of Shock-Induced Turbulent Separation. , 2007, , .		18
64	The convection of large and intermediate scale fluctuations in a turbulent mixing layer. Physics of Fluids, 2013, 25, .	1.6	18
65	The interaction between strain-rate and rotation in shear flow turbulence from inertial range to dissipative length scales. Physics of Fluids, 2011, 23, 061704.	1.6	17
66	Vectoring of parallel synthetic jets: a parametric study. Journal of Fluid Mechanics, 2016, 804, 467-489.	1.4	17
67	An alternative floating element design for skin-friction measurement of turbulent wall flows. Experiments in Fluids, 2018, 59, 1.	1.1	17
68	Data-driven sparse reconstruction of flow over a stalled aerofoil using experimental data. Data-Centric Engineering, 2021, 2, .	1.2	17
69	Planar imaging measurements to study the effect of spanwise structure of upstream turbulent boundary layer on shock induced separation. , 2006, , .		16
70	Amplitude and frequency modulation of the small scales in a jet. Journal of Fluid Mechanics, 2015, 772, 756-783.	1.4	16
71	Trajectory of a synthetic jet issuing into high-Reynolds-number turbulent boundary layers. Journal of Fluid Mechanics, 2018, 856, 531-551.	1.4	16
72	Effects of vortex-induced velocity on the development of a synthetic jet issuing into a turbulent boundary layer. Journal of Fluid Mechanics, 2019, 870, 651-679.	1.4	16

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73	Laboratory experiments on the temporal decay of homogeneous anisotropic turbulence. <i>Journal of Fluid Mechanics</i> , 2019, 862, 99-127.	1.4	16
74	Characteristics of drag due to streamwise inhomogeneous roughness. <i>Ocean Engineering</i> , 2021, 223, 108632.	1.9	16
75	The effects of free-stream turbulence on the performance of a model wind turbine. <i>Journal of Renewable and Sustainable Energy</i> , 2021, 13, .	0.8	16
76	Investigation of three dimensionality in the near field of a round jet using stereo PIV. <i>Journal of Turbulence</i> , 2002, 3, N16.	0.5	15
77	Concurrent scale interactions in the far-field of a turbulent mixing layer. <i>Physics of Fluids</i> , 2014, 26, .	1.6	15
78	Tailoring incoming shear and turbulence profiles for lab-scale wind turbines. <i>Wind Energy</i> , 2017, 20, 2021-2035.	1.9	15
79	Wakes of wall-bounded turbulent flows past patches of circular cylinders. <i>Journal of Fluid Mechanics</i> , 2020, 892, .	1.4	15
80	Quantification and adjustment of pixel-locking in particle image velocimetry. <i>Experiments in Fluids</i> , 2015, 56, 1.	1.1	14
81	Modelling high Reynolds number wall-turbulence interactions in laboratory experiments using large-scale free-stream turbulence. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017, 375, 20160091.	1.6	14
82	Skin-friction measurements in a turbulent boundary layer under the influence of free-stream turbulence. <i>Experiments in Fluids</i> , 2017, 58, 1.	1.1	14
83	A comparative study of the velocity and vorticity structure in pipes and boundary layers at friction Reynolds numbers up to. <i>Journal of Fluid Mechanics</i> , 2019, 869, 182-213.	1.4	14
84	Disks settling in turbulence. <i>Journal of Fluid Mechanics</i> , 2020, 883, .	1.4	14
85	Turbulent boundary-layer flow over regular multiscale roughness. <i>Journal of Fluid Mechanics</i> , 2021, 917, .	1.4	14
86	Entrainment effects in periodic forcing of the flow over a backward-facing step. <i>Physical Review Fluids</i> , 2017, 2, .	1.0	14
87	Structure of high and low shear-stress events in a turbulent boundary layer. <i>Physical Review Fluids</i> , 2018, 3, .	1.0	14
88	Robust features of a turbulent boundary layer subjected to high-intensity free-stream turbulence. <i>Journal of Fluid Mechanics</i> , 2018, 851, 416-435.	1.4	13
89	Experiments in Unsteady Forcing of Mach 2 Shock Wave/Boundary Layer Interactions. , 2006, , .		12
90	Statistical structure of momentum sources and sinks in the outer region of a turbulent boundary layer. <i>Journal of Fluid Mechanics</i> , 2008, 606, 225-237.	1.4	12

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91	Influence of internal orifice geometry on synthetic jet performance. Experiments in Fluids, 2019, 60, 1.	1.1	12
92	Axisymmetric flare-induced separation of high-speed transitional boundary layers. , 2012, , .		11
93	Toluene-based planar laser-induced fluorescence imaging of temperature in hypersonic flows. Experiments in Fluids, 2015, 56, 1.	1.1	11
94	Using high resolution X-ray computed tomography to create an image based model of a lymph node. Journal of Theoretical Biology, 2018, 449, 73-82.	0.8	11
95	Full-Field Surface Pressure Reconstruction Using the Virtual Fields Method. Experimental Mechanics, 2019, 59, 1203-1221.	1.1	11
96	Three dimensional wakes of freely falling planar polygons. Experiments in Fluids, 2019, 60, 1.	1.1	11
97	Non-type behaviour of roughness when in-plane wavelength approaches the boundary layer thickness. Journal of Fluid Mechanics, 2021, 911, .	1.4	11
98	Leading edge serrations for the reduction of aerofoil self-noise at low angle of attack, pre-stall and post-stall conditions. International Journal of Aeroacoustics, 2021, 20, 130-156.	0.8	11
99	Coherent structures in transitional pipe flow. Physical Review Fluids, 2016, 1, .	1.0	11
100	Study of the circularity effect on drag of disk-like particles. International Journal of Multiphase Flow, 2019, 110, 189-197.	1.6	10
101	PIV-based pressure estimation in the canopy of urban-like roughness. Experiments in Fluids, 2020, 61, 1.	1.1	10
102	Volumetric flow characterisation of a rectangular orifice impinging synthetic jet with single-camera light-field PIV. Experimental Thermal and Fluid Science, 2021, 123, 110327.	1.5	10
103	Effect of roughness-induced disturbances on axisymmetric hypersonic laminar boundary layer. , 2013, , .		9
104	On the decay of dispersive motions in the outer region of rough-wall boundary layers. Journal of Fluid Mechanics, 2019, 862, .	1.4	9
105	The near-field of a lab-scale wind turbine in tailored turbulent shear flows. Renewable Energy, 2020, 149, 735-748.	4.3	9
106	The effect of cleaning and repainting on the ship drag penalty. Biofouling, 2021, 37, 372-386.	0.8	9
107	Fin sweep angle does not determine flapping propulsive performance. Journal of the Royal Society Interface, 2021, 18, 20210174.	1.5	9
108	Cinematographic Planar Imaging of a Mach 2 Shock Wave/Turbulent Boundary Layer Interaction. , 2005, , .		8

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109	Investigation of turbulent separation in a forward-facing step flow. Journal of Physics: Conference Series, 2011, 318, 022031.	0.3	8
110	Advances in 3D velocimetry. Measurement Science and Technology, 2013, 24, 020301.	1.4	8
111	Spatial spectral characteristics of momentum transport in a turbulent boundary layer. Journal of Fluid Mechanics, 2018, 836, 599-634.	1.4	8
112	Turbulent Boundary Layers Over Multiscale Rough Patches. Boundary-Layer Meteorology, 2019, 172, 1-16.	1.2	8
113	Response of the temporal turbulent boundary layer to decaying free-stream turbulence. Journal of Fluid Mechanics, 2020, 896, .	1.4	8
114	Revisiting rough-wall turbulent boundary layers over sand-grain roughness. Journal of Fluid Mechanics, 2021, 911, .	1.4	8
115	The far wake of porous disks and a model wind turbine: Similarities and differences assessed by hot-wire anemometry. Journal of Renewable and Sustainable Energy, 2022, 14, .	0.8	8
116	Establishment Times of Hypersonic Shock-Wave/Boundary-Layer Interactions in Intermittent Facilities. AIAA Journal, 2017, 55, 2875-2887.	1.5	7
117	Scale interactions in velocity and pressure within a turbulent boundary layer developing over a staggered-cube array. Journal of Fluid Mechanics, 2021, 910, .	1.4	7
118	Uniform-momentum zones in a turbulent boundary layer subjected to freestream turbulence. Journal of Fluid Mechanics, 2021, 915, .	1.4	7
119	Interaction and vectoring of parallel rectangular twin jets in a turbulent boundary layer. Physical Review Fluids, 2021, 6, .	1.0	7
120	PIV measurements of convection velocities in a turbulent mixing layer. Journal of Physics: Conference Series, 2011, 318, 052038.	0.3	6
121	Aeromechanics of Membrane Wings in Ground-Effect. , 2015, , .		6
122	On the Interfoil Spacing and Phase Lag of Tandem Flapping Foil Propulsors. Journal of Ship Production and Design, 2017, 33, 276-282.	0.2	6
123	Development of a rapid plasma decontamination system for decontamination and reuse of filtering facepiece respirators. AIP Advances, 2021, 11, 105311.	0.6	6
124	Wind resource assessment in heterogeneous terrain. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160109.	1.6	5
125	Effect of isolated roughness element height on high-speed laminar-turbulent transition. Journal of Fluid Mechanics, 2017, 818, .	1.4	5
126	Aerodynamic Performance of Electro-Active Acrylic Membrane Wings. AIAA Journal, 2018, 56, 4243-4260.	1.5	5

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127	Comparison between object and image plane cross-correlation for stereoscopic PIV in the presence of pixel locking. Experiments in Fluids, 2020, 61, 1.	1.1	5
128	Reconstruction of surface-pressure fluctuations using deflectometry and the virtual fields method. Experiments in Fluids, 2020, 61, 1.	1.1	5
129	Scalings for rectangular synthetic jet trajectory in a turbulent boundary layer. Journal of Fluid Mechanics, 2021, 915, .	1.4	5
130	Dynamic mode decomposition-based reconstructions for fluid-structure interactions: An application to membrane wings. Journal of Fluids and Structures, 2021, 104, 103315.	1.5	5
131	Law of the wall for small-scale streamwise turbulence intensity in high-Reynolds-number turbulent boundary layers. Physical Review Fluids, 2018, 3, .	1.0	5
132	Spatial characteristics of a zero-pressure-gradient turbulent boundary layer in the presence of free-stream turbulence. Physical Review Fluids, 2019, 4, .	1.0	5
133	Unsteady forcing of turbulence by a randomly actuated impeller array. Experiments in Fluids, 2022, 63, 1.	1.1	5
134	Time-averaged velocity and scalar fields of the flow over and around a group of cylinders: a model experiment for canopy flows. Flow, 2022, 2, .	1.0	4
135	Effective visualization of stereo particle image velocimetry vector fields of a turbulent boundary layer. Journal of Turbulence, 2003, 4, .	0.5	3
136	Aero-Acoustic Performance of Fractal Spoilers. , 2011, , .		3
137	Effects of aspect ratio on fluid-structure interactions in membrane wings. , 2014, , .		3
138	Effects of aspect ratio on rolling and twisting foils. Physical Review Fluids, 2021, 6, .	1.0	3
139	On the Effects of Surface Morphology on the Structure of Wall-Turbulence. Springer Proceedings in Physics, 2016, , 149-154.	0.1	3
140	Linearised Reynolds-averaged predictions of secondary currents in turbulent channels with topographic heterogeneity. Journal of Fluid Mechanics, 2022, 944, .	1.4	3
141	The Classification and Composition of Fine Scale Eddies in a Turbulent Jet. , 2009, , .		2
142	Effect of Leading Edge serrations in reducing aerofoil noise near stall conditions. , 2018, , .		2
143	Surface Pressure Reconstruction from Phase Averaged Deflectometry Measurements Using the Virtual Fields Method. Experimental Mechanics, 2020, 60, 379-392.	1.1	2
144	Settling behaviour of thin curved particles in quiescent fluid and turbulence. Journal of Fluid Mechanics, 2021, 922, .	1.4	2

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145	Characteristics of sources and sinks of momentum in a turbulent boundary layer. Physical Review Fluids, 2018, 3, .	1.0	2
146	Interactive Poster: Illustrating Different Convection Velocities of Turbulent Flow. , 0, , .		1
147	Active Flow Control of a Turbulent Boundary Layer with Large-Window and Stereo-PIV. , 2016, , .		1
148	Aero-electro-mechanical Coupling of Electro-Active Membrane Wings. , 2016, , .		1
149	Aerodynamic Step Input Response of Electro-Active Membrane Wings. , 2017, , .		1
150	Mass transfer from small spheroids suspended in a turbulent fluid. Journal of Fluid Mechanics, 2021, 929, .	1.4	1
151	The Mean Velocity of the Near-Field of a Lab-Scale Wind Turbine in Tailored Turbulent Shear Flows. Springer Proceedings in Physics, 2019, , 317-322.	0.1	1
152	Effects of a trailing-edge flap on stall cell characteristics of a NACA0012 wing. Flow, 2022, 2, .	1.0	1
153	Cinematographic Stereoscopic PIV of a Turbulent Jet: Assessment of Accuracy of 3D Derived Quantities. , 2006, , .		0
154	Characteristics of the Lamb Vector in the Outer Region of a Turbulent Boundary Layer. , 2009, , .		0
155	Interaction Layer Between a Turbulent Boundary Layer and Free-Stream Turbulence. Springer Proceedings in Physics, 2016, , 325-332.	0.1	0
156	From Time to Space and Back: Convection and Wave Velocities in Turbulent Shear Flows. Springer Proceedings in Physics, 2016, , 47-54.	0.1	0
157	Concurrent Scale Interactions in the Far-Field of a Turbulent Mixing Layer. Springer Proceedings in Physics, 2016, , 55-58.	0.1	0
158	Mean and Fluctuating pressure estimation from snapshots of planar PIV measurements. , 2017, , .		0
159	Characteristics of Recirculation Regions on Ribs of Varying Length. Springer Proceedings in Physics, 2016, , 213-221.	0.1	0
160	Tailoring wind turbine wake models to incoming free-stream turbulence. Journal of Physics: Conference Series, 2022, 2265, 022076.	0.3	0