

# Ronald Adrian

## List of Publications by Citations

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79  
papers

11,781  
citations

41  
h-index

84  
g-index

84  
ext. papers

13,344  
ext. citations

4.1  
avg. IF

6.63  
L-index

#	Paper	IF	Citations
79	Mechanisms for generating coherent packets of hairpin vortices in channel flow. <i>Journal of Fluid Mechanics</i> , <b>1999</b> , 387, 353-396	3.7	1458
78	Vortex organization in the outer region of the turbulent boundary layer. <i>Journal of Fluid Mechanics</i> , <b>2000</b> , 422, 1-54	3.7	1108
77	A particle image velocimetry system for microfluidics. <i>Experiments in Fluids</i> , <b>1998</b> , 25, 316-319	2.5	879
76	Twenty years of particle image velocimetry. <i>Experiments in Fluids</i> , <b>2005</b> , 39, 159-169	2.5	753
75	Hairpin vortex organization in wall turbulence. <i>Physics of Fluids</i> , <b>2007</b> , 19, 041301	4.4	747
74	On the relationships between local vortex identification schemes. <i>Journal of Fluid Mechanics</i> , <b>2005</b> , 535, 189-214	3.7	603
73	Very large-scale motion in the outer layer. <i>Physics of Fluids</i> , <b>1999</b> , 11, 417-422	4.4	556
72	Fully developed turbulent pipe flow: a comparison between direct numerical simulation and experiment. <i>Journal of Fluid Mechanics</i> , <b>1994</b> , 268, 175-210	3.7	545
71	Spanwise structure and scale growth in turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , <b>2003</b> , 490, 37-74	3.7	421
70	Large-scale and very-large-scale motions in turbulent pipe flow. <i>Journal of Fluid Mechanics</i> , <b>2006</b> , 554, 521	3.7	328
69	Large- and very-large-scale motions in channel and boundary-layer flows. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , <b>2007</b> , 365, 665-81	3	278
68	Statistical evidence of hairpin vortex packets in wall turbulence. <i>Journal of Fluid Mechanics</i> , <b>2001</b> , 431, 433-443	3.7	275
67	Particle Image Velocimetry for Complex and Turbulent Flows. <i>Annual Review of Fluid Mechanics</i> , <b>2013</b> , 45, 409-436	2.2	269
66	Whole field measurement of temperature in water using two-color laser induced fluorescence. <i>Experiments in Fluids</i> , <b>1999</b> , 26, 7-15	2.5	244
65	Stochastic estimation of organized turbulent structure: homogeneous shear flow. <i>Journal of Fluid Mechanics</i> , <b>1988</b> , 190, 531-559	3.7	229
64	Transition from laminar to turbulent flow in liquid filled microtubes. <i>Experiments in Fluids</i> , <b>2004</b> , 36, 741-747	2.47	170
63	Flow past a sphere with an oscillation in the free-stream velocity and unsteady drag at finite Reynolds number. <i>Journal of Fluid Mechanics</i> , <b>1992</b> , 237, 323-341	3.7	162

62	PIV study of small-scale flow structure around a Rushton turbine. <i>AICHE Journal</i> , <b>2001</b> , 47, 766-778	3.6	153
61	Large-scale modes of turbulent channel flow: transport and structure. <i>Journal of Fluid Mechanics</i> , <b>2001</b> , 448, 53-80	3.7	150
60	Conditional eddies in isotropic turbulence. <i>Physics of Fluids</i> , <b>1979</b> , 22, 2065		148
59	Turbulent flow over large-amplitude wavy surfaces. <i>Journal of Fluid Mechanics</i> , <b>1984</b> , 140, 27-44	3.7	139
58	On the existence of uniform momentum zones in a turbulent boundary layer. <i>Physics of Fluids</i> , <b>1995</b> , 7, 694-696	4.4	138
57	Autogeneration of near-wall vortical structures in channel flow. <i>Physics of Fluids</i> , <b>1996</b> , 8, 288-290	4.4	124
56	Turbulent thermal convection in wide horizontal fluid layers. <i>Experiments in Fluids</i> , <b>1986</b> , 4, 121-141	2.5	122
55	Unsteady drag on a sphere at finite Reynolds number with small fluctuations in the free-stream velocity. <i>Journal of Fluid Mechanics</i> , <b>1991</b> , 233, 613-631	3.7	118
54	Three-dimensional vortex organization in a high-Reynolds-number supersonic turbulent boundary layer. <i>Journal of Fluid Mechanics</i> , <b>2010</b> , 644, 35-60	3.7	116
53	Particle dispersion in isotropic turbulence under Stokes drag and Basset force with gravitational settling. <i>Journal of Fluid Mechanics</i> , <b>1991</b> , 225, 481-495	3.7	104
52	Subgrid-scale energy transfer and near-wall turbulence structure. <i>Physics of Fluids</i> , <b>1996</b> , 8, 215-224	4.4	101
51	Impingement of a low Reynolds number turbulent circular jet onto a flat plate at normal incidence. <i>Experiments in Fluids</i> , <b>1990</b> , 9, 74-84	2.5	95
50	Effects of polymer stresses on eddy structures in drag-reduced turbulent channel flow. <i>Journal of Fluid Mechanics</i> , <b>2007</b> , 584, 281-299	3.7	92
49	Packet Structure of Surface Eddies in the Atmospheric Boundary Layer. <i>Boundary-Layer Meteorology</i> , <b>2003</b> , 106, 147-170	3.4	86
48	Coherent structures in flow over hydraulic engineering surfaces. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , <b>2012</b> , 50, 451-464	1.9	81
47	Direct numerical simulation of a 30R long turbulent pipe flow at $R^+ = 685$ : large- and very large-scale motions. <i>Journal of Fluid Mechanics</i> , <b>2012</b> , 698, 235-281	3.7	79
46	Structural organization of large and very large scales in turbulent pipe flow simulation. <i>Journal of Fluid Mechanics</i> , <b>2013</b> , 720, 236-279	3.7	69
45	Measurement of temperature field of a Rayleigh-Bénard convection using two-color laser-induced fluorescence. <i>Experiments in Fluids</i> , <b>2004</b> , 37, 331-340	2.5	68

44	Stochastic estimation of conditional structure: a review. <i>Flow, Turbulence and Combustion</i> , <b>1994</b> , 53, 291-303	68
43	Energetic spanwise modes in the logarithmic layer of a turbulent boundary layer. <i>Journal of Fluid Mechanics</i> , <b>2005</b> , 545, 141	3.7 61
42	On flow-blocking particle structures in microtubes. <i>Microfluidics and Nanofluidics</i> , <b>2005</b> , 1, 376-380	2.8 57
41	Double pulsed particle image velocimeter with directional resolution for complex flows. <i>Experiments in Fluids</i> , <b>2004</b> , 6, 119-128	2.5 52
40	Stochastic Estimation of Sub-Grid Scale Motions. <i>Applied Mechanics Reviews</i> , <b>1990</b> , 43, S214-218	8.6 47
39	Turbulent convection in water over ice. <i>Journal of Fluid Mechanics</i> , <b>1975</b> , 69, 753-781	3.7 43
38	Observation of vortex packets in direct numerical simulation of fully turbulent channel flow. <i>Journal of Visualization</i> , <b>2002</b> , 5, 9-19	1.6 35
37	Osborne Reynolds pipe flow: Direct simulation from laminar through gradual transition to fully developed turbulence. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, 7920-4	11.5 33
36	Effects of background noise on generating coherent packets of hairpin vortices. <i>Physics of Fluids</i> , <b>2008</b> , 20, 105107	4.4 25
35	Vortex organization in a turbulent boundary layer overlying sparse roughness elements. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , <b>2012</b> , 50, 465-481	1.9 22
34	Spanwise growth of vortex structure in wall turbulence. <i>Journal of Mechanical Science and Technology</i> , <b>2001</b> , 15, 1741-1749	22
33	PIV space-time resolution of flow behind blast waves. <i>Experiments in Fluids</i> , <b>2010</b> , 49, 193-202	2.5 21
32	Two-Dimensional Velocity Measurements in a Laminar Flame Using Particle Image Velocimetry. <i>Combustion Science and Technology</i> , <b>1986</b> , 67, 73-83	1.5 21
31	Three-dimensional temperature measurement in turbulent thermal convection by extended range scanning liquid crystal thermometry. <i>Journal of Visualization</i> , <b>1999</b> , 1, 355-364	1.6 19
30	The flow structure of jets from transient sources and implications for modeling short-duration explosive volcanic eruptions. <i>Geochemistry, Geophysics, Geosystems</i> , <b>2014</b> , 15, 4831-4845	3.6 17
29	Visualization of blast waves created by exploding bridge wires. <i>Journal of Visualization</i> , <b>2005</b> , 8, 125-135	1.6 17
28	Experimental study on the role of spanwise vorticity and vortex filaments in the outer region of open-channel flow. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , <b>2014</b> , 52, 476-489	1.9 16
27	A Two-Phase Cinematic PIV Method for Bubbly Flows. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , <b>1997</b> , 119, 707-712	2.1 16

26	A High Performance Pulsatile Pump for Aortic Flow Experiments in 3-Dimensional Models. <i>Cardiovascular Engineering and Technology</i> , <b>2016</b> , 7, 148-58	2.2	15
25	Analytic solutions for three dimensional swirling strength in compressible and incompressible flows. <i>Physics of Fluids</i> , <b>2014</b> , 26, 081701	4.4	13
24	Higher Order Moments in the Entrainment Zone of Turbulent Penetrative Thermal Convection. <i>Journal of Heat Transfer</i> , <b>1986</b> , 108, 323-329	1.8	13
23	Space-time formation of very-large-scale motions in turbulent pipe flow. <i>Journal of Fluid Mechanics</i> , <b>2019</b> , 881, 1010-1047	3.7	11
22	Effects of Bileaflet Mechanical Mitral Valve Rotational Orientation on Left Ventricular Flow Conditions. <i>Open Cardiovascular Medicine Journal</i> , <b>2015</b> , 9, 62-8	0.7	11
21	Particle-image velocimetry measurement in the exhaust of a solid rocket motor. <i>Experiments in Fluids</i> , <b>2004</b> , 36, 166-175	2.5	11
20	Structure, scaling, and synthesis of proper orthogonal decomposition modes of inhomogeneous turbulence. <i>Physics of Fluids</i> , <b>2011</b> , 23, 015107	4.4	10
19	Kinematics of local vortex identification criteria. <i>Journal of Visualization</i> , <b>2007</b> , 10, 137-140	1.6	10
18	Structure of Turbulent Boundary Layers <b>2013</b> , 17-24		9
17	Applied physics. Closing in on models of wall turbulence. <i>Science</i> , <b>2010</b> , 329, 155-6	33.3	8
16	Optimal solenoidal interpolation of turbulent vector fields: application to PTV and super-resolution PIV. <i>Experiments in Fluids</i> , <b>2005</b> , 39, 213-221	2.5	8
15	Effect of small roughness elements on thermal statistics of a turbulent boundary layer at moderate Reynolds number. <i>Journal of Fluid Mechanics</i> , <b>2016</b> , 787, 84-115	3.7	8
14	Length and time for development of laminar flow in tubes following a step increase of volume flux. <i>Experiments in Fluids</i> , <b>2015</b> , 56, 1	2.5	7
13	Effect of Reynolds Number on Isotropic Turbulent Dispersion. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , <b>1995</b> , 117, 402-409	2.1	7
12	Particle response to shock waves in solids: dynamic witness plate/PIV method for detonations. <i>Experiments in Fluids</i> , <b>2007</b> , 43, 163-171	2.5	6
11	Karhunen-Loève expansion of the derivative of an inhomogeneous process. <i>Physics of Fluids</i> , <b>1994</b> , 6, 2233-2235	4.4	5
10	Laminar to fully turbulent flow in a pipe: scalar patches, structural duality of turbulent spots and transitional overshoot. <i>Journal of Fluid Mechanics</i> , <b>2020</b> , 896,	3.7	4
9	Comment on A note on Poisson's equation for pressure in a turbulent flow. <i>Physics of Fluids</i> , <b>1982</b> , 25, 577		4

8	Temporal dynamics of large-scale structures for turbulent Rayleigh-Benard convection in a moderate aspect-ratio cylinder. <i>Journal of Fluid Mechanics</i> , <b>2020</b> , 901,	3.7	4
7	The Flying Brick: A Cautionary Note on Testing Flying Robots Using Guide Wires. <i>IEEE Transactions on Robotics</i> , <b>2009</b> , 25, 426-428	6.5	3
6	Rayleigh-Benard convection: experimental study of time-dependent instabilities. <i>Experiments in Fluids</i> , <b>1988</b> , 6, 316-322	2.5	3
5	Single exposure double frame particle image velocimeters <b>1990</b> ,		2
4	Velocity measurements of gas escaping a particle bed during shock-driven expansion. <i>Experiments in Fluids</i> , <b>2020</b> , 61, 1	2.5	2
3	Engineering applications of particle image velocimeters <b>1989</b> ,		1
2	Symposium on Measurement of Fluid Fields. <i>Applied Mechanics Reviews</i> , <b>1994</b> , 47, S314-S314	8.6	
1	Convergence of Galerkin solutions using Karhunen-Loève expansions of inhomogeneous 1-D turbulence. <i>Physics of Fluids A, Fluid Dynamics</i> , <b>1991</b> , 3, 1695-1697		