

# Brian J Cantwell

## List of Publications by Year in descending order

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42  
papers

2,992  
citations

279798

23  
h-index

315739

38  
g-index

42  
all docs

42  
docs citations

42  
times ranked

1609  
citing authors

#	ARTICLE	IF	CITATIONS
1	An experimental study of entrainment and transport in the turbulent near wake of a circular cylinder. <i>Journal of Fluid Mechanics</i> , 1983, 136, 321.	3.4	874
2	Scale-Up Tests of High Regression Rate Paraffin-Based Hybrid Rocket Fuels. <i>Journal of Propulsion and Power</i> , 2004, 20, 1037-1045.	2.2	268
3	Topology of fine-scale motions in turbulent channel flow. <i>Journal of Fluid Mechanics</i> , 1996, 310, 269-292.	3.4	238
4	Structure and entrainment in the plane of symmetry of a turbulent spot. <i>Journal of Fluid Mechanics</i> , 1978, 87, 641.	3.4	235
5	Exact solution of a restricted Euler equation for the velocity gradient tensor. <i>Physics of Fluids A, Fluid Dynamics</i> , 1992, 4, 782-793.	1.6	222
6	Nitrogen removal with energy recovery through $N_2O$ decomposition. <i>Energy and Environmental Science</i> , 2013, 6, 241-248.	30.8	114
7	On the behavior of velocity gradient tensor invariants in direct numerical simulations of turbulence. <i>Physics of Fluids A, Fluid Dynamics</i> , 1993, 5, 2008-2013.	1.6	86
8	Dynamics of a low Reynolds number turbulent boundary layer. <i>Journal of Fluid Mechanics</i> , 2000, 404, 87-115.	3.4	82
9	Modeling of Hybrid Rocket Low Frequency Instabilities. <i>Journal of Propulsion and Power</i> , 2005, 21, 1107-1116.	2.2	78
10	Viscous starting jets. <i>Journal of Fluid Mechanics</i> , 1986, 173, 159-189.	3.4	75
11	Development of Scalable Space-Time Averaged Regression Rate Expressions for Hybrid Rockets. <i>Journal of Propulsion and Power</i> , 2007, 23, 737-747.	2.2	75
12	The effect of Mach number on the stability of a plane supersonic wake. <i>Physics of Fluids A, Fluid Dynamics</i> , 1990, 2, 984-1004.	1.6	60
13	Hybrid rocket propulsion systems for outer planet exploration missions. <i>Acta Astronautica</i> , 2016, 128, 119-130.	3.2	55
14	Visualization of the structure of a pulsed methane-air diffusion flame. <i>Physics of Fluids</i> , 1985, 28, 2317.	1.4	47
15	Similarity transformations for the two-dimensional, unsteady, stream-function equation. <i>Journal of Fluid Mechanics</i> , 1978, 85, 257.	3.4	45
16	A universal velocity profile for smooth wall pipe flow. <i>Journal of Fluid Mechanics</i> , 2019, 878, 834-874.	3.4	39
17	Numerical investigation of the effect of obstacle shape on deflagration to detonation transition in a hydrogen-air mixture. <i>Combustion and Flame</i> , 2019, 209, 278-290.	5.2	38
18	Study of turbulent boundary layer structure using the invariants of the velocity gradient tensor. <i>Experimental Thermal and Fluid Science</i> , 1996, 13, 308-317.	2.7	36

#	ARTICLE	IF	CITATIONS
19	The decay of a viscous vortex pair. <i>Physics of Fluids</i> , 1988, 31, 3213.	1.4	33
20	Surface Structure and Reactivity of Rhodium Oxide. <i>Journal of Physical Chemistry C</i> , 2011, 115, 11036-11044.	3.1	33
21	Vortex drift. I: Dynamic interpretation. <i>Physics of Fluids A, Fluid Dynamics</i> , 1993, 5, 1443-1450.	1.6	30
22	Feasibility of a single port Hybrid Propulsion system for a Mars Ascent Vehicle. <i>Acta Astronautica</i> , 2011, 69, 1066-1072.	3.2	26
23	Investigation of an excited jet diffusion flame at elevated pressure. <i>Journal of Fluid Mechanics</i> , 1989, 200, 309-336.	3.4	24
24	Topological visualisation of focal structures in free shear flows. <i>Flow, Turbulence and Combustion</i> , 1994, 53, 375-386.	0.2	20
25	A universal velocity profile for turbulent wall flows including adverse pressure gradient boundary layers. <i>Journal of Fluid Mechanics</i> , 2022, 933, .	3.4	20
26	Transition in the axisymmetric jet. <i>Journal of Fluid Mechanics</i> , 1981, 104, 369-386.	3.4	19
27	A thermal model for analysis and control of drilling in icy formations on mars. <i>Planetary and Space Science</i> , 2012, 73, 214-220.	1.7	17
28	Experimental Visualization of Hybrid Combustion: Results at Elevated Pressures. <i>Journal of Propulsion and Power</i> , 2020, 36, 33-46.	2.2	17
29	Vortex drift. II: The flow potential surrounding a drifting vortical region. <i>Physics of Fluids A, Fluid Dynamics</i> , 1993, 5, 1451-1455.	1.6	16
30	Integral measures of the zero pressure gradient boundary layer over the Reynolds number range $10^3 \leq Re \leq 10^5$ . <i>Physics of Fluids</i> , 2021, 33, .	4.0	15
31	Self-similar, slightly compressible, free vortices. <i>Journal of Fluid Mechanics</i> , 2000, 423, 293-315.	3.4	10
32	Optically Resolved Fuel Regression of a Clear Polymethylmethacrylate Hybrid Rocket Motor. <i>Journal of Propulsion and Power</i> , 2020, 36, 763-772.	2.2	10
33	Diode Laser Ignition Mechanism for Hybrid Propulsion Systems. <i>Journal of Propulsion and Power</i> , 2020, 36, 901-911.	2.2	7
34	Hypergolic Ignition of Lithium-Aluminum-Hydride-Doped Paraffin Wax and Nitric Acid. <i>Journal of Propulsion and Power</i> , 2020, 36, 435-445.	2.2	7
35	Diode Laser Ignition of a Poly(Methyl Methacrylate) and Gaseous Oxygen Hybrid Motor. <i>Journal of Propulsion and Power</i> , 2020, 36, 773-782.	2.2	6
36	Numerical simulation of transonic separated flows over low-aspect-ratio wings. <i>Journal of Aircraft</i> , 1987, 24, 531-539.	2.4	5

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37	Symmetries and analytical solutions of the Hamiltonâ€“Jacobiâ€“Bellman equation for a class of optimal control problems. Optimal Control Applications and Methods, 2016, 37, 749-764.	2.1	5
38	A Universal Velocity Profile for Near-Wall Flows. , 2021, , .		4
39	Anatomy of a turbulent spot. Physics of Fluids, 1977, 20, S291.	1.4	1
40	Elliptic Curves and Three-Dimensional Flow Patterns. Nonlinear Dynamics, 2000, 22, 29-38.	5.2	0
41	The Wax Rocket. IEEE Spectrum, 2014, 51, 49-53.	0.7	0
42	Spectral Properties of the Universal Velocity Profile for Wall Bounded Flows. , 2022, , .		0