Brian J Cantwell

List of Publications by Year
in descending order

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	Spectral Properties of the Universal Velocity Profile for Wall Bounded Flows. , 2022, , .		0
2	A universal velocity profile for turbulent wall flows including adverse pressure gradient boundary layers. Journal of Fluid Mechanics, 2022, 933, .	3.4	20
3	A Universal Velocity Profile for Near-Wall Flows. , 2021, , .		4
4	Integral measures of the zero pressure gradient boundary layer over the Reynolds number range â‰ˆRï„<âˆž. Physics of Fluids, 2021, 33, .	4.0	15
5	Experimental Visualization of Hybrid Combustion: Results at Elevated Pressures. Journal of Propulsion and Power, 2020, 36, 33-46.	2.2	17
6	Optically Resolved Fuel Regression of a Clear Polymethylmethacrylate Hybrid Rocket Motor. Journal of Propulsion and Power, 2020, 36, 763-772.	2.2	10
7	Diode Laser Ignition Mechanism for Hybrid Propulsion Systems. Journal of Propulsion and Power, 2020, 36, 901-911.	2.2	7
8	Diode Laser Ignition of a Poly(Methyl Methacrylate) and Gaseous Oxygen Hybrid Motor. Journal of Propulsion and Power, 2020, 36, 773-782.	2.2	6
9	Hypergolic Ignition of Lithiumâ€“Aluminumâ€“Hydride-Doped Paraffin Wax and Nitric Acid. Journal of Propulsion and Power, 2020, 36, 435-445.	2.2	7
10	A universal velocity profile for smooth wall pipeÂflow. Journal of Fluid Mechanics, 2019, 878, 834-874.	3.4	39
11	Numerical investigation of the effect of obstacle shape on deflagration to detonation transition in a hydrogenâ€“air mixture. Combustion and Flame, 2019, 209, 278-290.	5.2	38
12	Symmetries and analytical solutions of the Hamiltonâ€“Jacobiâ€“Bellman equation for a class of optimal controlÂproblems. Optimal Control Applications and Methods, 2016, 37, 749-764.	2.1	5
13	Hybrid rocket propulsion systems for outer planet exploration missions. Acta Astronautica, 2016, 128, 119-130.	3.2	55
14	The Wax Rocket. IEEE Spectrum, 2014, 51, 49-53.	0.7	0
15	Nitrogen removal with energy recovery through N₂O decomposition. Energy and Environmental Science, 2013, 6, 241-248.	30.8	114
16	A thermal model for analysis and control of drilling in icy formations on mars. Planetary and Space Science, 2012, 73, 214-220.	1.7	17
17	Surface Structure and Reactivity of Rhodium Oxide. Journal of Physical Chemistry C, 2011, 115, 11036-11044.	3.1	33
18	Feasibility of a single port Hybrid Propulsion system for a Mars Ascent Vehicle. Acta Astronautica, 2011, 69, 1066-1072.	3.2	26

#	Article	IF	Citations
19	Development of Scalable Space-Time Averaged Regression Rate Expressions for Hybrid Rockets. Journal of Propulsion and Power, 2007, 23, 737-747.	2.2	75
20	Modeling of Hybrid Rocket Low Frequency Instabilities. Journal of Propulsion and Power, 2005, 21, 1107-1116.	2.2	78
21	Scale-Up Tests of High Regression Rate Paraffin-Based Hybrid Rocket Fuels. Journal of Propulsion and Power, 2004, 20, 1037-1045.	2.2	268
22	Dynamics of a low Reynolds number turbulent boundary layer. Journal of Fluid Mechanics, 2000, 404, 87-115.	3.4	82
23	Self-similar, slightly compressible, free vortices. Journal of Fluid Mechanics, 2000, 423, 293-315.	3.4	10
24	Elliptic Curves and Three-Dimensional Flow Patterns. Nonlinear Dynamics, 2000, 22, 29-38.	5.2	0
25	Topology of fine-scale motions in turbulent channel flow. Journal of Fluid Mechanics, 1996, 310, 269-292.	3.4	238
26	Study of turbulent boundary layer structure using the invariants of the velocity gradient tensor. Experimental Thermal and Fluid Science, 1996, 13, 308-317.	2.7	36
27	Topological visualisation of focal structures in free shear flows. Flow, Turbulence and Combustion, 1994, 53, 375-386.	0.2	20
28	On the behavior of velocity gradient tensor invariants in direct numerical simulations of turbulence. Physics of Fluids A, Fluid Dynamics, 1993, 5, 2008-2013.	1.6	86
29	Vortex drift. I: Dynamic interpretation. Physics of Fluids A, Fluid Dynamics, 1993, 5, 1443-1450.	1.6	30
30	Vortex drift. II: The flow potential surrounding a drifting vortical region. Physics of Fluids A, Fluid Dynamics, 1993, 5, 1451-1455.	1.6	16
31	Exact solution of a restricted Euler equation for the velocity gradient tensor. Physics of Fluids A, Fluid Dynamics, 1992, 4, 782-793.	1.6	222
32	The effect of Mach number on the stability of a plane supersonic wake. Physics of Fluids A, Fluid Dynamics, 1990, 2, 984-1004.	1.6	60
33	Investigation of an excited jet diffusion flame at elevated pressure. Journal of Fluid Mechanics, 1989, 200, 309-336.	3.4	24
34	The decay of a viscous vortex pair. Physics of Fluids, 1988, 31, 3213.	1.4	33
35	Numerical simulation of transonic separated flows over low-aspect-ratio wings. Journal of Aircraft, 1987, 24, 531-539.	2.4	5
36	Viscous starting jets. Journal of Fluid Mechanics, 1986, 173, 159-189.	3.4	75

#	Article	IF	Citations
37	Visualization of the structure of a pulsed methaneâ€“air diffusion flame. Physics of Fluids, 1985, 28, 2317.	1.4	47
38	An experimental study of entrainment and transport in the turbulent near wake of a circular cylinder. Journal of Fluid Mechanics, 1983, 136, 321.	3.4	874
39	Transition in the axisymmetric jet. Journal of Fluid Mechanics, 1981, 104, 369-386.	3.4	19
40	Structure and entrainment in the plane of symmetry of a turbulent spot. Journal of Fluid Mechanics, 1978, 87, 641.	3.4	235
41	Similarity transformations for the two-dimensional, unsteady, stream-function equation. Journal of Fluid Mechanics, 1978, 85, 257.	3.4	45
42	Anatomy of a turbulent spot. Physics of Fluids, 1977, 20, S291.	1.4	1