

Jonathan Poggie

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7598657/publications.pdf>

Version: 2024-02-01

124
papers

1,729
citations

331538

21
h-index

345118

36
g-index

124
all docs

124
docs citations

124
times ranked

579
citing authors

#	ARTICLE	IF	CITATIONS
1	Magnetic control of flow past a blunt body: Numerical validation and exploration. <i>Physics of Fluids</i> , 2002, 14, 1720-1731.	1.6	114
2	Resolution effects in compressible, turbulent boundary layer simulations. <i>Computers and Fluids</i> , 2015, 120, 57-69.	1.3	102
3	Quantitative visualization of compressible turbulent shear flows using condensate-enhanced Rayleigh scattering. <i>Experiments in Fluids</i> , 2004, 37, 438-454.	1.1	83
4	Plasma Control of a Turbulent Shock Boundary-Layer Interaction. <i>AIAA Journal</i> , 2013, 51, 1789-1804.	1.5	80
5	Laminar-Turbulent Transition in a Mach 8 Elliptic Cone Flow. <i>AIAA Journal</i> , 1999, 37, 1080-1087.	1.5	76
6	Numerical simulation of nanosecond-pulse electrical discharges. <i>Plasma Sources Science and Technology</i> , 2013, 22, 015001.	1.3	71
7	Selective upstream influence on the unsteadiness of a separated turbulent compression ramp flow. <i>Physics of Fluids</i> , 2019, 31, .	1.6	58
8	Spectral Characteristics of Separation Shock Unsteadiness. <i>AIAA Journal</i> , 2015, 53, 200-214.	1.5	50
9	Plasma-Sheath Transition in the Magnetized Plasma-Wall Problem for Collisionless Ions. <i>IEEE Transactions on Plasma Science</i> , 2004, 32, 2217-2226.	0.6	48
10	Shock unsteadiness in a reattaching shear layer. <i>Journal of Fluid Mechanics</i> , 2001, 429, 155-185.	1.4	47
11	Traveling Instability Waves in a Mach 8 Flow over an Elliptic Cone. <i>AIAA Journal</i> , 2000, 38, 251-258.	1.5	44
12	Numerical Study of Plasma-Assisted Aerodynamic Control for Hypersonic Vehicles. <i>Journal of Spacecraft and Rockets</i> , 2009, 46, 568-576.	1.3	42
13	Modeling low pressure collisional plasma sheath with space-charge effect. <i>Physics of Plasmas</i> , 2003, 10, 2578-2585.	0.7	39
14	Simulation of magnetogasdynamic flow control techniques. , 2000, , .		33
15	Experimental evidence for Plotkin model of shock unsteadiness in separated flow. <i>Physics of Fluids</i> , 2005, 17, 018107.	1.6	31
16	Numerical Study of Magnetoaerodynamic Flow Around a Hemisphere. <i>Journal of Spacecraft and Rockets</i> , 2010, 47, 816-827.	1.3	30
17	Wavelet Analysis of Wall-Pressure Fluctuations in a Supersonic Blunt-Fin Flow. <i>AIAA Journal</i> , 1997, 35, 1597-1603.	1.5	29
18	An implicit technique for 3-D turbulent MGD with the generalized Ohm's law. , 2001, , .		29

#	ARTICLE	IF	CITATIONS
19	Flow structure and unsteadiness in a highly confined shock-waveâ€“boundary-layer interaction. <i>Physical Review Fluids</i> , 2019, 4, .	1.0	29
20	Detached-Eddy Simulation of a Supersonic Reattaching Shear Layer. <i>AIAA Journal</i> , 2017, 55, 3722-3733.	1.5	26
21	Elements of a numerical procedure for 3-D MGD flow control analysis. , 2002, , .		25
22	Closed-Loop Stall Control System. <i>Journal of Aircraft</i> , 2010, 47, 1747-1755.	1.7	25
23	Computational Study of Impregnated Ablator for Improved Magnetohydrodynamic Heat Shield. <i>Journal of Spacecraft and Rockets</i> , 2013, 50, 927-936.	1.3	25
24	Numerical Simulation of Direct Current Glow Discharges for High-Speed Flow Control. <i>Journal of Propulsion and Power</i> , 2008, 24, 916-922.	1.3	23
25	Hypersonic Flow over a Cylinder with a Nanosecond Pulse Electrical Discharge. <i>Journal of Thermophysics and Heat Transfer</i> , 2014, 28, 18-26.	0.9	21
26	HIFIRE-5b Heat Flux and Boundary-Layer Transition. , 2017, , .		21
27	Control of separated flow in a reflected shock interaction using a magnetically-accelerated surface discharge. <i>Physics of Fluids</i> , 2012, 24, .	1.6	20
28	HIFIRE-5b Heat Flux and Boundary-Layer Transition. <i>Journal of Spacecraft and Rockets</i> , 2018, 55, 1315-1328.	1.3	19
29	Flow Control of Swept Shock-Wave/Boundary-Layer Interaction Using Plasma Actuators. <i>Journal of Spacecraft and Rockets</i> , 2018, 55, 1198-1207.	1.3	19
30	Implicit Technique for Three-Dimensional Turbulent Magnetoaerodynamics. <i>AIAA Journal</i> , 2003, 41, 2179-2191.	1.5	17
31	Numerical Exploration of Flow Control with Glow Discharges. , 2004, , .		17
32	A positivity-preserving high order discontinuous Galerkin scheme for convectionâ€“diffusion equations. <i>Journal of Computational Physics</i> , 2018, 366, 120-143.	1.9	15
33	Electrode boundary conditions in magnetogasdynamic flow control. , 2002, , .		13
34	Plasma-Based Hypersonic Flow Control. , 2006, , .		13
35	Large-Scale Structures in a Compressible Mixing Layer over a Cavity. <i>AIAA Journal</i> , 2003, 41, 2410-2419.	1.5	12
36	Numerical Simulation of Nanosecond-Pulse Electrical Discharges. , 2012, , .		12

#	ARTICLE	IF	CITATIONS
37	Effect of Forcing on a Supersonic Compression Ramp Flow. AIAA Journal, 2019, 57, 3765-3772.	1.5	12
38	Large-Eddy Simulations of Separated Supersonic Flow with Plasma Control. , 2013, , .		11
39	Computations of Turbulent Flow over a Sharp Fin at Mach 5. Journal of Thermophysics and Heat Transfer, 2016, 30, 394-402.	0.9	11
40	Large-scale unsteadiness in a compression ramp flow confined by sidewalls. Physical Review Fluids, 2021, 6, .	1.0	11
41	Modeling the Propagation of a Shock Wave Through a Glow Discharge. AIAA Journal, 2000, 38, 1411-1418.	1.5	10
42	High-Order Compact Difference Methods for Glow Discharge Modeling. , 2009, , .		10
43	Laminar and Turbulent Flow Calculations for the HIFiRE-5b Flight Test. , 2017, , .		10
44	Computational Studies of High-Speed Flow Control with Weakly-Ionized Plasma. , 2005, , .		9
45	A PARALLELIZED 3D FLOATING RANDOM-WALK ALGORITHM FOR THE SOLUTION OF THE NONLINEAR POISSON-BOLTZMANN EQUATION. Progress in Electromagnetics Research, 2006, 57, 237-252.	1.6	9
46	High-Order Numerical Methods for Electrical Discharge Modeling. , 2010, , .		9
47	Computational and Experimental Analysis of Mach 5 Air Flow over a Cylinder with a Nanosecond Pulse Discharge. , 2012, , .		9
48	Control of High-Angle-of-Attack Reentry Flow with Plasma Actuators. Journal of Spacecraft and Rockets, 2013, 50, 337-346.	1.3	9
49	Supersonic Corner Flow Predictions Using the Quadratic Constitutive Relation. AIAA Journal, 2016, 54, 2077-2088.	1.5	9
50	Multi-scale interactions in a compressible boundary layer. Journal of Turbulence, 2017, 18, 760-780.	0.5	9
51	HIFiRE-5b Flow Computations and Attitude Determination via Comparison with Flight Data. Journal of Spacecraft and Rockets, 2018, 55, 1356-1368.	1.3	9
52	Response of a turbulent boundary layer to rapid freestream acceleration. Physics of Fluids, 2020, 32, .	1.6	9
53	Plasma-Based Control of Shock-Wave / Boundary-Layer Interaction. , 2006, , .		8
54	Numerical Study of Energy Deposition Requirements for Aerodynamic Control of Hypersonic Vehicles. , 2008, , .		8

#	ARTICLE	IF	CITATIONS
55	Role of Charged Particle Inertia in Pulsed Electrical Discharges. , 2010, , .		8
56	Compressible Turbulent Boundary Layer Simulations: Resolution Effects and Turbulence Modeling. , 2015, , .		8
57	Multi-fluid modelling of pulsed discharges for flow control applications. International Journal of Computational Fluid Dynamics, 2015, 29, 180-191.	0.5	8
58	Effects of Power Deposition on the Aerodynamic Forces on a Slender Body. AIAA Journal, 2018, 56, 2911-2917.	1.5	8
59	Effect of Total Temperature on Boundary-Layer Stability at Mach 6. AIAA Journal, 2000, 38, 1754-1755.	1.5	7
60	Transition from the constant ion mobility regime to the ion-atom charge-exchange regime for bounded collisional plasmas. Physics of Plasmas, 2005, 12, 023502.	0.7	7
61	Large-Scale Structures in Implicit Large-Eddy Simulation of Compressible Turbulent Flow. , 2014, , .		7
62	Large-scale unsteadiness in a compressible, turbulent reattaching shear layer. Experiments in Fluids, 2015, 56, 1.	1.1	7
63	Unsteady characteristics of compressible reattaching shear layers. Physics of Fluids, 2020, 32, 066103.	1.6	7
64	Detached Eddy Simulation of Blunt-Fin-Induced Shock-Wave/Boundary-Layer Interaction. AIAA Journal, 2022, 60, 2097-2114.	1.5	7
65	The dynamics and control of fluctuating pressure loads in the reattachment region of a supersonic free shear layer. , 1992, , .		6
66	Numerical Simulation of DC and RF Glow Discharges. , 2007, , .		6
67	Three Dimensional Simulations of Hypersonic MHD Flow Control. , 2009, , .		6
68	Challenges in numerical simulation of nanosecond-pulse discharges. Journal Physics D: Applied Physics, 2019, 52, 304002.	1.3	6
69	Effect of total temperature on boundary layer stability at Mach 6. , 1999, , .		5
70	Discharge Modeling for Flow Control Applications. , 2008, , .		5
71	Compact Difference Methods for Discharge Modeling in Aerodynamics. , 2009, , .		5
72	Aerodynamic Heating in the Gap Between a Missile Body and a Control Fin. Journal of Spacecraft and Rockets, 2022, 59, 1111-1124.	1.3	5

#	ARTICLE	IF	CITATIONS
73	Quantitative visualization of supersonic flow using Rayleigh scattering. , 1996, , .		4
74	Numerical Study of Plasma-Assisted Aerodynamic Control for Hypersonic Vehicles. , 2008, , .		4
75	Numerical Study of Electromagnetic Aerodynamic Control of Hypersonic Vehicles. , 2009, , .		4
76	Numerical Investigation of Shock-wave/Boundary-Layer Interaction Control Using Plasma Actuators. , 2011, , .		4
77	Exploration of MHD Flow Control for a Hypersonic Blunt Elliptic Cone with an Impregnated Ablator. , 2011, , .		4
78	Detached Eddy Simulation of Supersonic Wing-Elevon Cove Boundary-Layer Ingestion. , 2020, , .		4
79	Control of Shock-Wave / Boundary-Layer Interaction Using Volumetric Energy Deposition. , 2008, , .		3
80	Numerical Study of Magnetoaerodynamic Flow Around a Hemisphere. , 2010, , .		3
81	Numerical Study of a MHD-Heat Shield. , 2010, , .		3
82	Hypersonic Flow Computations for an Elliptic Cone at High Angle of Incidence. Journal of Spacecraft and Rockets, 2012, 49, 496-506.	1.3	3
83	Exploration of Plasma Control for Supersonic Turbulent Flow over a Compression Ramp. , 2012, , .		3
84	Spectral Characteristics of Separation Shock Unsteadiness. , 2013, , .		3
85	Computational Analysis of Shock Wave Turbulent Boundary Layer Interaction. , 2014, , .		3
86	Supersonic Corner Flow Predictions using the Quadratic Constitutive Relation. , 2015, , .		3
87	Supersonic Flow Control of Swept Shock Wave / Turbulent Boundary Layer Interactions using Plasma Actuators. , 2017, , .		3
88	Unsteadiness in a Compressible Reattaching Shear Layer. , 2019, , .		3
89	Wavelet analysis of wall-pressure fluctuations in a supersonic blunt-fin flow. AIAA Journal, 1997, 35, 1597-1603.	1.5	3
90	Traveling instability waves in a Mach 8 flow over an elliptic cone. AIAA Journal, 2000, 38, 251-258.	1.5	3

#	ARTICLE	IF	CITATIONS
91	A two-dimensional stochastic algorithm for the solution of the non-linear Poisson-Boltzmann equation: validation with finite-difference benchmarks. International Journal for Numerical Methods in Engineering, 2006, 66, 72-84.	1.5	2
92	Use of Impregnated Ablator for Improved Magnetohydrodynamic-Heat Shield Concept. , 2011, , .		2
93	Simulation of Unstart in Hypersonic Flow with a Dual-Mode Scramjet Model. , 2019, , .		2
94	Dynamic Mode Decomposition of a Highly Confined Shock-Wave/Boundary-Layer Interaction. , 2021, , .		2
95	Laminar-turbulent transition in a Mach 8 elliptic cone flow. AIAA Journal, 1999, 37, 1080-1087.	1.5	2
96	Shock unsteadiness in a reattaching shear layer. , 2000, , .		1
97	A Meshless Stochastic Algorithm for the Solution of the Nonlinear Poisson-Boltzmann Equation in the Context of Plasma Discharge Modeling: 1D Analytical Benchmark. , 2005, , .		1
98	High-Speed Flow Control with Electrical Discharges. , 2011, , .		1
99	On the validation of fluid plasma model for pulsed DBD plasma actuator simulations against full kinetic approach. , 2013, , .		1
100	Turbulence Structure and Large-Scale Unsteadiness in Shock-Wave / Boundary Layer Interaction. , 2017, , .		1
101	Unsteadiness of Shock-Wave/Boundary-Layer Interaction with Sidewalls. , 2020, , .		1
102	Effects of Freestream Acoustic Disturbances on Hypersonic Boundary Layer Stability. , 2020, , .		1
103	Computation of Backwards-Facing Step-Ramp Induced Shock-Wave Boundary-Layer Interaction. , 2020, , .		1
104	Unsteady Aspects of Shock-Wave / Boundary-Layer Interaction Resulting from Control Surface Deflection. , 2021, , .		1
105	Unsteady Aspects of Shock-Wave/Boundary-Layer Interaction Resulting from Control Surface Deflection. AIAA Journal, 0, , 1-11.	1.5	1
106	Simulation of a High Reynolds Number Compressible Turbulent Boundary Layer Developing in the Presence of a Sinusoidal Plane. , 2022, , .		1
107	Plasma Sheath Modeling in the Presence of Collisions. , 2002, , 673.		0
108	Numerical Investigation of Oblique Shock-Wave/Turbulent Boundary-Layer Interaction Control Using Plasma Actuators. , 2011, , .		0

#	ARTICLE	IF	CITATIONS
109	Numerical Simulation of a Nanosecond-Pulse Discharge in Mach 5 Flow. , 2013, , .		0
110	Implicit Large-Eddy-Simulation of Compressible Flow. , 2014, , .		0
111	Detached-Eddy Simulation of a Reattaching Shear Layer in Compressible Turbulent Flow. , 2014, , .		0
112	Causal relationship between large outer structures and small-scale near-wall turbulence in a compressible boundary layer at Mach=2.3. , 2016, , .		0
113	Effects of curvature in high-speed inlets. , 2018, , .		0
114	Numerical Simulation of Sidewall Influence on Supersonic Compression Ramp Interactions. , 2018, , .		0
115	Statistical Analysis of Unsteadiness in a Compressible Reattaching Flow. , 2019, , .		0
116	Effect of Local Field Approximation in Simulations of Gas Discharges. , 2019, , .		0
117	Stability of Cylindrical and Conical Hypersonic Boundary Layers. , 2019, , .		0
118	Simulating military conflict with a continuous flow model. Journal of the Operational Research Society, 2022, 73, 273-284.	2.1	0
119	Preliminary Computational Study of Transition on a Flared Cone Using Random Forcing. , 2021, , .		0
120	A Preliminary Study of Roughness Effects on a Compressible Turbulent Boundary Layer. , 2021, , .		0
121	Modeling the propagation of a shock wave through a glow discharge. AIAA Journal, 2000, 38, 1411-1418.	1.5	0
122	Effect of total temperature on boundary-layer stability at Mach 6. AIAA Journal, 2000, 38, 1754-1755.	1.5	0
123	Spectral Scaling in a Supersonic Reattaching Shear Layer. , 2015, , .		0
124	Computational Study of Transition on a Flared Cone Using Random Forcing. , 2022, , .		0