Brian M Argrow

List of Publications by Year
in descending order

108 papers	1,729 citations	361045 20 h-index	344852 36 g-index
111 all docs	111 docs citations	111 times ranked	1054 citing authors

#	Article	IF	Citations
1	Measurements from the University of Colorado RAAVEN Uncrewed Aircraft System during ATOMIC. Earth System Science Data, 2022, 14, 19-31.	3.7	8
2	Voxelized Photon Monte Carlo Radiation Modeling of Hypersonic Continuum Flows. , 2022, , .		0
3	Low-Speed DSMC Simulations of Hotwire Anemometers at High-Altitude Conditions. Fluids, 2021, 6, 20.	0.8	2
4	University of Colorado and Black Swift Technologies RPAS-based measurements of the lower atmosphere during LAPSE-RATE. Earth System Science Data, 2021, 13, 2515-2528.	3.7	5
5	A Low-Cost Balloon System for High-Cadence, In-Situ Stratospheric Turbulence Measurements. , 2021, , .		2
6	Measurements from mobile surface vehicles during the Lower Atmospheric Profiling Studies at Elevation â€" a Remotely-piloted Aircraft Team Experiment (LAPSE-RATE). Earth System Science Data, 2021, 13, 155-169.	3.7	12
7	Experimental and Numerical Calibration of Hotwire Anemometers for the Study of Stratospheric Turbulence. , 2021, , .		1
8	Machine Self-confidence in Autonomous Systems via Meta-analysis of Decision Processes. Advances in Intelligent Systems and Computing, 2020, , 213-223.	0.5	5
9	Development of Community, Capabilities, and Understanding through Unmanned Aircraft-Based Atmospheric Research: The LAPSE-RATE Campaign. Bulletin of the American Meteorological Society, 2020, 101, E684-E699.	1.7	38
10	A Dispersed Autonomy Architecture for Information-Gathering Drone Swarms. , 2020, , .		3
11	A calibration system for low-velocity flows at stratospheric conditions. , 2020, , .		2
12	Field observation of tornadic supercells by multiple autonomous fixedâ€wing unmanned aircraft. Journal of Field Robotics, 2020, 37, 1077-1093.	3.2	12
13	Analytical Approach for Aero-Optical and Atmospheric Effects in Supersonic Flow Fields. , 2020, , .		0
14	Weather Hazard Risk Quantification for sUAS Safety Risk Management. Journal of Atmospheric and Oceanic Technology, 2020, 37, 1251-1268.	0.5	21
15	Data generated during the 2018 LAPSE-RATE campaign: an introduction and overview. Earth System Science Data, 2020, 12, 3357-3366.	3.7	18
16	Correction: Analytical Approach for Aero-Optical and Atmospheric Effects in Supersonic Flow Fields. , 2020, , .		0
17	Unsteady Heat Transfer for Pressure Vessels in Atmospheric Flight at Orbital Velocities. Journal of Thermophysics and Heat Transfer, 2019, 33, 1037-1054.	0.9	0
18	Numerical Calibration of a Low-Speed sUAS Flush Air Data System. Journal of Atmospheric and Oceanic Technology, 2019, 36, 1577-1590.	0.5	1

#	Article	IF	Citations
19	Development and Deployment of Air-Launched Drifters from Small UAS. Sensors, 2019, 19, 2149.	2.1	7
20	Advancing Unmanned Aerial Capabilities for Atmospheric Research. Bulletin of the American Meteorological Society, 2019, 100, ES105-ES108.	1.7	17
21	Development and Flight Test Results of a Small UAS Distributed Flush Airdata System. Journal of Atmospheric and Oceanic Technology, 2018, 35, 1127-1140.	0.5	9
22	Aircraft Geometry Effects on a Distributed Flush Airdata System. , 2018, , .		1
23	On the Use of Unmanned Aircraft for Sampling Mesoscale Phenomena in the Preconvective Boundary Layer. Journal of Atmospheric and Oceanic Technology, 2018, 35, 2265-2288.	0.5	39
24	A Bird's-Eye View: Development of an Operational ARM Unmanned Aerial Capability for Atmospheric Research in Arctic Alaska. Bulletin of the American Meteorological Society, 2018, 99, 1197-1212.	1.7	46
25	Aerobraking in the Cislunar Economy. , 2017, , .		0
26	Error Sensitivity Analysis of Small UAS Wind-Sensing Systems. , 2017, , .		7
27	Flight Results from a Small UAS Distributed Flush Airdata System. , 2017, , .		1
28	Wind Tunnel Results for a Distributed Flush Airdata System. Journal of Atmospheric and Oceanic Technology, 2017, 34, 1519-1528.	0.5	10
29	The Pilatus unmanned aircraft system for lower atmospheric research. Atmospheric Measurement Techniques, 2016, 9, 1845-1857.	1.2	28
30	Development of Wind Sensing from Small UAS with Distributed Pressure Sensors. , 2016, , .		5
31	Intercomparison of Unmanned Aircraftborne and Mobile Mesonet Atmospheric Sensors. Journal of Atmospheric and Oceanic Technology, 2016, 33, 1569-1582.	0.5	14
32	Toward an Autonomous Airborne Scientist for Studying Severe Local Storms (Invited). , 2016, , .		1
33	Unmanned Aircraft System Design. , 2016, , 159-171.		0
34	Optical Flow Techniques for Wind-Velocity Sensing on a Small Unmanned Aircraft System. , 2015, , .		0
35	A Low-Cost System for Wind Field Estimation Through Sensor Networks and Aircraft Design. , 2015, , .		4
36	Modified Linear Theory Sonic Booms Compared to Experimental and Numerical Results. Journal of Aircraft, 2015, 52, 1821-1837.	1.7	2

#	Article	IF	Citations
37	Overview of Small Fixed-Wing Unmanned Aircraft for Meteorological Sampling. Journal of Atmospheric and Oceanic Technology, 2015, 32, 97-115.	0.5	108
38	Covariance Analysis of Sensors for Wind Field Estimation by Small Unmanned Aircraft. , 2015, , .		2
39	Volumetric geometry for DSMC and the Voldipar code. Computers and Fluids, 2015, 121, 114-132.	1.3	3
40	A Certification Strategy for Small Unmanned Aircraft Performing Nomadic Missions in the U.S. National Airspace System. , 2015, , 2177-2198.		0
41	Rigid-Body Dynamics in Free-Molecular and Transition Flow. Journal of Spacecraft and Rockets, 2014, 51, 239-252.	1.3	3
42	Energy efficient UAS flight planning for characterizing features of supercell thunderstorms. , 2014, , .		5
43	Nonlinear Dynamics of Objects in Transition Flow During Atmospheric Entry. Journal of Spacecraft and Rockets, 2014, 51, 855-872.	1.3	3
44	An Energy-Aware Airborne Dynamic Data-Driven Application System for Persistent Sampling and Surveillance. Procedia Computer Science, 2013, 18, 2008-2017.	1.2	15
45	Semi-Empirical Satellite Accommodation Model for Spherical and Randomly Tumbling Objects. Journal of Spacecraft and Rockets, 2013, 50, 556-571.	1.3	66
46	Unmanned aircraft systems for communication and atmospheric sensing missions. , 2013, , .		4
47	Aerodynamic Analysis Based on Challenging Minisatellite Payload Satellite Lift-to-Drag Measurements. Journal of Spacecraft and Rockets, 2013, 50, 1162-1170.	1.3	9
48	Feasibility of Semi-Passive Surface Accommodation Control in Rarefied Flows. , 2013, , .		0
49	The Collaborative Colorado–Nebraska Unmanned Aircraft System Experiment. Bulletin of the American Meteorological Society, 2012, 93, 39-54.	1.7	65
50	Design and Flight Testing of a 15% Dynamically Scaled HL-20 Vehicle Model. , 2012, , .		1
51	Mission Performance of the Tempest Unmanned Aircraft System in Supercell Storms. Journal of Aircraft, 2012, 49, 1821-1830.	1.7	17
52	Lobe Balancing Design Method to Create Frozen Sonic Booms Using Aircraft Components. Journal of Aircraft, 2012, 49, 1878-1893.	1.7	7
53	Comparison of Sonic Booms from Modified Linear Theory to Flight Test Data. , 2012, , .		5
54	Methodology for Conducting Scaled Sonic-Boom Flight Tests Using Unmanned Aircraft Systems. Journal of Aircraft, 2012, 49, 1234-1244.	1.7	2

#	Article	IF	Citations
55	Sampling Severe Local Storms and Related Phenomena: Using Unmanned Aircraft Systems. IEEE Robotics and Automation Magazine, 2012, 19, 85-95.	2.2	19
56	Measuring Absolute Thermospheric Densities And Accommodation Coefficients Using Paddlewheel Satellites: Past Findings, Present Uses, And Future Mission Concepts. Journal of the Astronautical Sciences, 2011, 58, 531-549.	0.8	5
57	The Tempest UAS: The VORTEX2 Supercell Thunderstorm Penetrator. , 2011, , .		3
58	Guidelines and Best Practices for FAA Certificate of Authorization Applications for Small Unmanned Aircraft. , 2011, , .		9
59	The tempest unmanned aircraft system for in situ observations of tornadic supercells: Design and VORTEX2 flight results. Journal of Field Robotics, 2011, 28, 461-483.	3.2	67
60	Design Methods to Create Frozen Sonic Booms via Lobe Balancing using Aircraft Components. , 2011, , .		0
61	Evaluation of Unmanned Aircraft Systems for Severe Storm Sampling Using Hardware-in-the-Loop Simulations. Journal of Aerospace Computing, Information, and Communication, 2011, 8, 269-294.	0.8	12
62	Drag Coefficients of Satellites with Concave Geometries: Comparing Models and Observations. Journal of Spacecraft and Rockets, 2011, 48, 312-325.	1.3	39
63	Design and validation of a system for targeted observations of tornadic supercells using unmanned aircraft. , 2010, , .		10
64	Semiempirical Model for Satellite Energy-Accommodation Coefficients. Journal of Spacecraft and Rockets, 2010, 47, 951-956.	1.3	90
65	Evaluation of UAS Concepts of Operation for Severe Storm Penetration using Hardware-in-the-Loop Simulations. , 2010, , .		6
66	Real-Time Participant Feedback from the Symposium for Civilian Applications of Unmanned Aircraft Systems. Journal of Intelligent and Robotic Systems: Theory and Applications, 2009, 54, 87-103.	2.0	4
67	Net-Centric Communication and Control for a Heterogeneous Unmanned Aircraft System. Journal of Intelligent and Robotic Systems: Theory and Applications, 2009, 56, 199-232.	2.0	27
68	Distributed Amospheric Sensing Using Small UAS and Doppler Radar. , 2009, , .		8
69	Sonic boom mitigation via shape optimization using an adjoint method and application to a supersonic fighter aircraft. European Journal of Computational Mechanics, 2008, 17, 217-243.	0.6	6
70	Networked Communication, Command, and Control of an Unmanned Aircraft System. Journal of Aerospace Computing, Information, and Communication, 2008, 5, 84-107.	0.8	21
71	Real-Time Participant Feedback from the Symposium for Civilian Applications of Unmanned Aircraft Systems. , 2008, , 87-103.		0
72	Shape Optimization Methodology for Reducing the Sonic Boom Initial Pressure Rise. AIAA Journal, 2007, 45, 1007-1018.	1.5	27

#	ARTICLE	IF	CITATIONS
73	RECUV the University of Colorado's Research and Engineering Center for Unmanned Vehicles. , 2007, , .		0
74	A Low Cost, Rapid Construction Unmanned Aircraft Design. , 2007, , .		1
75	UAS for In Situ Sensing of an Atmospheric Airmass Boundary. , 2007, , .		2
76	Networked UAV Command, Control and Communication. , 2006, , .		14
77	UAV Systems for Sensor Dispersal, Telemetry, and Visualization in Hazardous Environments. , 2005, , .		28
78	Radio Source Localization by a Cooperating UAV Team. , 2005, , .		28
79	A Distributed Avionics Package for Small UAVs. , 2005, , .		16
80	Radio Leashing of an Unmanned Aircraft. , 2005, , .		10
81	Ad Hoc UAV Ground Network (AUGNet). , 2004, , .		110
82	Shape Optimization with F-Function Balancing for Reducing the Sonic Boom Initial Shock Pressure Rise. International Journal of Aeroacoustics, 2004, 3, 361-377.	0.8	7
83	Construction and Validation of a Dense Gas Shock Tube. Journal of Thermophysics and Heat Transfer, 2003, 17, 326-333.	0.9	33
84	TORNADOCHASER: A REMOTELY-PILOTED UAV FOR IN SITU METEOROLOGICAL MEASUREMENTS. , 2002, , .		2
85	Vertical Integration of UAV Senior Projects in the Curriculum 2000. , 2002, , .		1
86	A Shape Optimization Methodology with F-Function Lobe Balancing for Mitigating the Sonic Boom. , 2002, , .		3
87	Theory for producing a single-phase rarefaction shock wave in a shock tube. Journal of Fluid Mechanics, 2001, 445, 37-54.	1.4	43
88	Construction and operation of a dense gas shock tube. , 2001, , .		1
89	Simulations of nonclassical dense gas dynamics. , 2001, , .		4
90	Aerodynamic performance of an osculating-cones waverider at high altitudes. , 2001, , .		18

#	Article	IF	Citations
91	Application of Bethe-Zel'dovich-Thompson Fluids in Organic Rankine Cycle Engines. Journal of Propulsion and Power, 2000, 16, 1118-1124.	1.3	63
92	Bulk Viscosity: Past to Present. Journal of Thermophysics and Heat Transfer, 1999, 13, 337-342.	0.9	115
93	Calculation of supersonic minimum length nozzles for equilibrium flow. Inverse Problems in Science and Engineering, 1999, 7, 65-95.	0.5	5
94	Application of Bethe-Zel'dovich-Thompson fluids in organic Rankine cycle engines. , 1999, , .		0
95	Nonclassical Dense Gas Flows for Simple Geometries. AIAA Journal, 1998, 36, 1842-1847.	1.5	23
96	Sonic boom minimization revisited. , 1998, , .		39
97	Nonclassical dense gas flows for simple geometries. AIAA Journal, 1998, 36, 1842-1847.	1.5	3
98	Two-dimensional shock tube flow for dense gases. Journal of Fluid Mechanics, 1997, 349, 95-115.	1.4	23
99	Nonclassical dense gas flows for simple geometries. , 1997, , .		0
100	Subsonic aerodynamics of an osculating cones waverider. , 1997, , .		8
101	Computational analysis of dense gas shock tube flow. Shock Waves, 1996, 6, 241-248.	1.0	47
102	Fourier transform infrared absorption spectroscopy of jetâ€cooled radicals. Review of Scientific Instruments, 1995, 66, 2430-2441.	0.6	34
103	Linear dependence of the bulk viscosity on shock wave thickness. Physics of Fluids, 1994, 6, 3203-3205.	1.6	20
104	Entropy production in finite-difference schemes. AIAA Journal, 1993, 31, 210-211.	1.5	12
105	A computational analysis of the transonic flow field of two-dimensional minimum length nozzles. , 1989, , .		5
106	Entropy Production in Nonsteady General Coordinates. AIAA Journal, 1987, 25, 1629-1631.	1.5	5
107	Experiments Using Small Unmanned Aircraft to Augment a Mobile Ad Hoc Network. , 0, , 695-718.		10
108	Proactive Teaching And Learning In The Aerospace Engineering Curriculum 2000. , 0, , .		2