

Eric W Frew

List of Publications by Year in descending order

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Version: 2024-02-01

80
papers

1,790
citations

471509

17
h-index

361022

35
g-index

80
all docs

80
docs citations

80
times ranked

1284
citing authors

#	ARTICLE	IF	CITATIONS
1	Coordinated Standoff Tracking of Moving Targets Using Lyapunov Guidance Vector Fields. Journal of Guidance, Control, and Dynamics, 2008, 31, 290-306.	2.8	283
2	Airborne Communication Networks for Small Unmanned Aircraft Systems. Proceedings of the IEEE, 2008, 96, 2008-2027.	21.3	199
3	Lyapunov Vector Fields for Autonomous Unmanned Aircraft Flight Control. Journal of Guidance, Control, and Dynamics, 2008, 31, 1220-1229.	2.8	196
4	Networking Issues for Small Unmanned Aircraft Systems. Journal of Intelligent and Robotic Systems: Theory and Applications, 2009, 54, 21-37.	3.4	109
5	Optimizing Cascaded Chains of Unmanned Aircraft Acting as Communication Relays. IEEE Journal on Selected Areas in Communications, 2012, 30, 883-898.	14.0	79
6	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.	6.0	67
7	Maintaining Optimal Communication Chains in Robotic Sensor Networks using Mobility Control. Mobile Networks and Applications, 2009, 14, 281-291.	3.3	66
8	The Collaborative Colorado-Nebraska Unmanned Aircraft System Experiment. Bulletin of the American Meteorological Society, 2012, 93, 39-54.	3.3	65
9	Cooperative Target Localization with a Communication-Aware Unmanned Aircraft System. Journal of Guidance, Control, and Dynamics, 2011, 34, 1352-1362.	2.8	59
10	Sensitivity of Cooperative Target Geolocalization to Orbit Coordination. Journal of Guidance, Control, and Dynamics, 2008, 31, 1028-1040.	2.8	46
11	Efficient Trajectory Development for Small Unmanned Aircraft Dynamic Soaring Applications. Journal of Guidance, Control, and Dynamics, 2015, 38, 519-523.	2.8	29
12	Hierarchical distributed control for search and tracking by heterogeneous aerial robot networks. , 2008, , .		28
13	Net-Centric Communication and Control for a Heterogeneous Unmanned Aircraft System. Journal of Intelligent and Robotic Systems: Theory and Applications, 2009, 56, 199-232.	3.4	27
14	Unmanned Aircraft Guidance for Penetration of Pre-tornadic Storms. Journal of Guidance, Control, and Dynamics, 2010, 33, 99-107.	2.8	23
15	Networked Communication, Command, and Control of an Unmanned Aircraft System. Journal of Aerospace Computing, Information, and Communication, 2008, 5, 84-107.	0.8	21
16	Controlling the Mobility of Network Nodes using Decentralized Extremum Seeking. , 2006, , .		20
17	Target assignment for integrated search and tracking by active robot networks. , 2008, , .		19
18	Sampling Severe Local Storms and Related Phenomena: Using Unmanned Aircraft Systems. IEEE Robotics and Automation Magazine, 2012, 19, 85-95.	2.0	19

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19	Mission Performance of the Tempest Unmanned Aircraft System in Supercell Storms. Journal of Aircraft, 2012, 49, 1821-1830.	2.4	17
20	Advancing Unmanned Aerial Capabilities for Atmospheric Research. Bulletin of the American Meteorological Society, 2019, 100, ES105-ES108.	3.3	17
21	Maintaining Optimal Communication Chains Robotic Sensor Networks using Mobility Control. , 2007, , .		17
22	A Distributed Avionics Package for Small UAVs. , 2005, , .		16
23	Phase Transitions for Controlled Mobility in Wireless Ad Hoc Networks. , 2006, , .		16
24	Cooperative Standoff Tracking of Uncertain Moving Targets using Active Robot Networks. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	16
25	Tracking Dynamic Star Curves Using Guidance Vector Fields. Journal of Guidance, Control, and Dynamics, 2017, 40, 1488-1495.	2.8	16
26	An Energy-Aware Airborne Dynamic Data-Driven Application System for Persistent Sampling and Surveillance. Procedia Computer Science, 2013, 18, 2008-2017.	2.0	15
27	Communication-Aware Information-Gathering Experiments with an Unmanned Aircraft System. Journal of Field Robotics, 2017, 34, 736-756.	6.0	15
28	Spatio-temporal characterization of airborne radio frequency environments. , 2011, , .		14
29	Forward Adaptive Transfer of Gaussian Process Regression. Journal of Aerospace Information Systems, 2017, 14, 214-231.	1.4	14
30	Information-Theoretic Integration of Sensing and Communication for Active Robot Networks. Mobile Networks and Applications, 2009, 14, 267-280.	3.3	13
31	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
32	Field observation of tornadic supercells by multiple autonomous fixed-wing unmanned aircraft. Journal of Field Robotics, 2020, 37, 1077-1093.	6.0	12
33	Experiments Using Small Unmanned Aircraft to Augment a Mobile Ad Hoc Network. , 0, , 695-718.		10
34	Design and validation of a system for targeted observations of tornadic supercells using unmanned aircraft. , 2010, , .		10
35	Improving data ferrying by iteratively learning the radio frequency environment. , 2014, , .		10
36	Wind Tunnel Results for a Distributed Flush Airdata System. Journal of Atmospheric and Oceanic Technology, 2017, 34, 1519-1528.	1.3	10

#	ARTICLE	IF	CITATIONS
37	Multi-Agent Autonomy: Advancements and Challenges in Subterranean Exploration. , 2022, 2, 1068-1104.		10
38	Guidelines and Best Practices for FAA Certificate of Authorization Applications for Small Unmanned Aircraft. , 2011, , .		9
39	Experimental Assessment of Online Dynamic Soaring Optimization for Small Unmanned Aircraft. , 2016, , .		9
40	A Gazebo/ROS-based Communication-Realistic Simulator for Networked sUAS. , 2020, , .		9
41	Transfer learning for dynamic RF environments. , 2012, , .		8
42	Cascaded Optimization of Aircraft Trajectories for Persistent Data Ferrying. Journal of Aerospace Information Systems, 2014, 11, 807-820.	1.4	8
43	Implementing path planning and guidance layers for dynamic soaring and persistence missions. , 2015, , .		8
44	Assessment of Finescale Local Wind Forecasts Using Small Unmanned Aircraft Systems. Journal of Aerospace Information Systems, 2020, 17, 182-192.	1.4	8
45	Distributed cooperative control for joint optimization of sensor coverage and target tracking. , 2017, , .		7
46	Development and Deployment of Air-Launched Drifters from Small UAS. Sensors, 2019, 19, 2149.	3.8	7
47	Active Sensing by Unmanned Aircraft Systems in Realistic Communication Environments. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 62-67.	0.4	6
48	Mutual Information based communication aware path planning: A game theoretic perspective. , 2016, , .		6
49	A Communication-Aware Mutual Information Measure for Distributed Autonomous Robotic Information Gathering. IEEE Robotics and Automation Letters, 2019, 4, 3137-3144.	5.1	6
50	Evaluation of UAS Concepts of Operation for Severe Storm Penetration using Hardware-in-the-Loop Simulations. , 2010, , .		6
51	Receding Horizon Control under Uncertainty Using Optimal Input Design and the Unscented Transform. , 2006, , .		5
52	Fast convergence in semi-anonymous potential games. , 2013, , .		5
53	Development of Wind Sensing from Small UAS with Distributed Pressure Sensors. , 2016, , .		5
54	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.	9.9	5

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55	Toward model free atmospheric sensing by aerial robot networks in strong wind fields. , 2009, , .		4
56	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.	3.4	4
57	Reduction of Computational Complexity for Guidance of Unmanned Aircraft Through Strong Wind Fields. , 2009, , .		4
58	Real-time estimation of wireless ground-to-air communication parameters. , 2012, , .		4
59	Unmanned aircraft systems for communication and atmospheric sensing missions. , 2013, , .		4
60	Efficient Trajectory Development for UAS Dynamic Soaring Applications. , 2014, , .		4
61	Integrating Nonparametric Learning with Path Planning for Data-Ferry Communications. Journal of Aerospace Information Systems, 2015, 12, 784-799.	1.4	4
62	Online Hybrid RF Propagation Model for Communication-Aware sUAS Relay Application. , 2018, , .		4
63	Fast bandwidth allocation policies for persistent data ferrying. , 2013, , .		3
64	Co-optimization of communication, sensing, and computation for information gathering using cloud computing. , 2017, , .		3
65	Particle Methods for Integrated Sensor Fusion and Cooperative Planning for Tracking Emitters using Airborne Directional Sensors. , 2019, , .		3
66	A Dispersed Autonomy Architecture for Information-Gathering Drone Swarms. , 2020, , .		3
67	Online evaluation of communication models derived via transfer learning. , 2012, , .		2
68	Cognitive radio development for UAS applications. , 2015, , .		2
69	Energy-Aware Aircraft Trajectory Generation Using Pseudospectral Methods with Differential Flatness. , 2017, , .		2
70	Distributed Optimization of Nonlinear, Non-Gaussian, Communication-Aware Information using Particle Methods. , 2020, , .		2
71	Layered Approach to Networked Command and Control of Complex UAS. , 2015, , 781-811.		1
72	Fast Link Scheduling Policies for Persistent Data Ferrying. Journal of Aerospace Information Systems, 2016, 13, 433-449.	1.4	1

#	ARTICLE	IF	CITATIONS
73	Toward an Autonomous Airborne Scientist for Studying Severe Local Storms (Invited). , 2016, , .		1
74	A Communication-aware Information Measure for Cooperative Information Gathering by Robotic Sensor Networks. , 2019, , .		1
75	A Comparison of Filters for UAS-Based Localization of Stationary RF Sources. , 2015, , .		1
76	Synergistic Offline-Online Control Synthesis via Local Gaussian Process Regression. , 2021, , .		1
77	Storm-chasing drones. Xrds, 2014, 20, 18-23.	0.3	0
78	Autonomous decision making for pseudo-Lagrangian drifter deployment from sUAS. , 2020, , .		0
79	A Distributed, Greedy Planner for Multiple sUAS using Expected Downstream Information Gain. , 2020, , .		0
80	Energy-Aware Path Optimization for Persistent Sampling of Severe Storms. , 2015, , .		0