

Ella M Atkins

List of Publications by Year in descending order

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Version: 2024-02-01

117
papers

5,608
citations

331259

21
h-index

85405

71
g-index

119
all docs

119
docs citations

119
times ranked

3325
citing authors

#	ARTICLE	IF	CITATIONS
1	Game-Theoretic Modeling of Multi-Vehicle Interactions at Uncontrolled Intersections. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 1428-1442.	4.7	35
2	Scalable Vehicle Team Continuum Deformation Coordination With Eigen Decomposition. IEEE Transactions on Automatic Control, 2022, 67, 2514-2521.	3.6	1
3	Urban Metric Maps for Small Unmanned Aircraft Systems Motion Planning. Journal of Aerospace Information Systems, 2022, 19, 37-52.	1.0	6
4	Airspace Geofencing and Flight Planning for Low-Altitude, Urban, Small Unmanned Aircraft Systems. Applied Sciences (Switzerland), 2022, 12, 576.	1.3	20
5	Cooperative Multilift Slung Load Transportation Using Haptic Admittance Control Guidance. Journal of Guidance, Control, and Dynamics, 2022, 45, 1899-1912.	1.6	3
6	The Smart Black Box: A Value-Driven High-Bandwidth Automotive Event Data Recorder. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 1484-1496.	4.7	9
7	Smart Black Box 2.0: Efficient High-Bandwidth Driving Data Collection Based on Video Anomalies. Algorithms, 2021, 14, 57.	1.2	3
8	BiTraP: Bi-Directional Pedestrian Trajectory Prediction With Multi-Modal Goal Estimation. IEEE Robotics and Automation Letters, 2021, 6, 1463-1470.	3.3	67
9	Multi-Unmanned-Aerial-Vehicle Wildfire Boundary Estimation Using a Semantic Segmentation Neural Network. Journal of Aerospace Information Systems, 2021, 18, 231-249.	1.0	1
10	Development, implementation, and experimental outdoor evaluation of quadcopter controllers for computationally limited embedded systems. Annual Reviews in Control, 2021, 52, 372-389.	4.4	7
11	Mission Implementation of a Geofence System for UAS. , 2021, , .		0
12	Volumization and Inverse Volumization for Low-Altitude Airspace Geofencing. , 2021, , .		1
13	A Mass-Conservation Model for Stability Analysis and Finite-Time Estimation of Spread of COVID-19. IEEE Transactions on Computational Social Systems, 2021, 8, 930-937.	3.2	3
14	Statistical Properties and Airspace Capacity for Unmanned Aerial Vehicle Networks Subject to Sense-and-Avoid Safety Protocols. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 5890-5903.	4.7	3
15	Geofence Definition and Deconfliction for UAS Traffic Management. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 5880-5889.	4.7	18
16	Improving Attitude Estimation Using Gaussian-Process-Regression-Based Magnetic Field Maps. Sensors, 2021, 21, 6351.	2.1	3
17	Guest Editorial Introduction to the Special Issue on Unmanned Aircraft System Traffic Management. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 5874-5879.	4.7	0
18	Automated Curb Recognition and Negotiation for Robotic Wheelchairs. Sensors, 2021, 21, 7810.	2.1	3

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19	Robust Science-Optimal Spacecraft Control for Circular Orbit Missions. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50, 923-934.	5.9	14
20	Physics-Based Freely Scalable Continuum Deformation for UAS Traffic Coordination. IEEE Transactions on Control of Network Systems, 2020, 7, 532-544.	2.4	6
21	Polylidar - Polygons From Triangular Meshes. IEEE Robotics and Automation Letters, 2020, 5, 4634-4641.	3.3	4
22	Polylidar3D-Fast Polygon Extraction from 3D Data. Sensors, 2020, 20, 4819.	2.1	5
23	Generating Airspace Geofence Boundary Layers in Wind. Journal of Aerospace Information Systems, 2020, 17, 113-124.	1.0	5
24	Cooperative Aerial Payload Transport Guided by an <i>In Situ</i> Human Supervisor. IEEE Transactions on Control Systems Technology, 2019, 27, 1452-1467.	3.2	10
25	Experimental Investigation of Tractor and Pusher Hexacopter Performance. Journal of Aircraft, 2019, 56, 1920-1934.	1.7	11
26	Safe Multiquadcopter System Continuum Deformation Over Moving Frames. IEEE Transactions on Control of Network Systems, 2019, 6, 737-749.	2.4	8
27	Egocentric Vision-based Future Vehicle Localization for Intelligent Driving Assistance Systems. , 2019, , .		60
28	Safe multi-cluster UAV continuum deformation coordination. Aerospace Science and Technology, 2019, 91, 640-655.	2.5	12
29	Multi-Quadcopter Team Leader Path Planning Using Particle Swarm Optimization. , 2019, , .		2
30	Experimental Evaluation of Continuum Deformation with a Five Quadrotor Team. , 2019, , .		8
31	Unsupervised Traffic Accident Detection in First-Person Videos. , 2019, , .		89
32	Formal Specification of Continuum Deformation Coordination. , 2019, , .		1
33	Paths to Autonomous Vehicle Operations for Urban Air Mobility. , 2019, , .		16
34	Geofence Boundary Violation Detection in 3D Using Triangle Weight Characterization with Adjacency. Journal of Intelligent and Robotic Systems: Theory and Applications, 2019, 95, 239-250.	2.0	14
35	Geofencing in Immediate Reaches Airspace for Unmanned Aircraft System Traffic Management. , 2018, , .		16
36	Asymptotic Tracking and Robustness of MAS Transitions Under a New Communication Topology. IEEE Transactions on Automation Science and Engineering, 2018, 15, 16-32.	3.4	10

#	ARTICLE	IF	CITATIONS
37	Shaping low-thrust trajectories with thrust-handling feature. <i>Advances in Space Research</i> , 2018, 61, 879-890.	1.2	34
38	Unmanned Vehicle Autonomy for Long-Duration Surveillance Missions. , 2018, , .		1
39	The Smart Black Box: A Value-Driven Automotive Event Data Recorder. , 2018, , .		8
40	Roof Shape Classification from LiDAR and Satellite Image Data Fusion Using Supervised Learning. <i>Sensors</i> , 2018, 18, 3960.	2.1	43
41	A Reinforcement Learning Based Adaptive Supervisor for Multiple Model Adaptive Estimation and Control. , 2018, , .		0
42	A Data-Driven Approach for Autonomous Motion Planning and Control in Off-Road Driving Scenarios. , 2018, , .		4
43	Continuum Deformation of a Multiple Quadcopter Payload Delivery Team without Inter-Agent Communication. , 2018, , .		6
44	Cooperative aerial lift and manipulation (CALM). <i>Aerospace Science and Technology</i> , 2018, 82-83, 105-118.	2.5	23
45	Comprehensive Risk-based Planning for Small Unmanned Aircraft System Rooftop Landing. , 2018, , .		11
46	Layered Geofences in Complex Airspace Environments. , 2018, , .		13
47	Automatic Classification of Roof Shapes for Multicopter Emergency Landing Site Selection. , 2018, , .		3
48	Multi-Objective Weight Optimization for Trajectory Planning of an Airplane with Structural Damage. <i>Journal of Intelligent and Robotic Systems: Theory and Applications</i> , 2018, 91, 667-690.	2.0	16
49	Emergency Flight Planning for an Energy-Constrained Multicopter. <i>Journal of Intelligent and Robotic Systems: Theory and Applications</i> , 2017, 85, 145-165.	2.0	21
50	Fail-Safe Navigation for Autonomous Urban Multicopter Flight. , 2017, , .		9
51	A graph-theoretic-based method for analyzing conduction problems. <i>Journal of Engineering Mathematics</i> , 2017, 106, 169-201.	0.6	0
52	Evaluating Risk to People and Property for Aircraft Emergency Landing Planning. <i>Journal of Aerospace Information Systems</i> , 2017, 14, 259-278.	1.0	28
53	Continuum Deformation of Multi-Agent Systems Under Directed Communication Topologies. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2017, 139, .	0.9	13
54	Energy-Aware Multiflight Planning for an Unattended Seaplane: Flying Fish. <i>Journal of Aerospace Information Systems</i> , 2017, 14, 73-91.	1.0	3

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55	Unmanned vehicle mission planning given limited sensory information. , 2017, , .		0
56	Optimal State Estimation for Systems Driven by Jumpâ€“Diffusion Process With Application to Road Anomaly Detection. IEEE Transactions on Control Systems Technology, 2017, 25, 1634-1643.	3.2	13
57	Envelope-Aware Flight Management for Loss of Control Prevention Given Rudder Jam. Journal of Guidance, Control, and Dynamics, 2017, 40, 1027-1041.	1.6	18
58	Markov Decision Process Framework for Flight Safety Assessment and Management. Journal of Guidance, Control, and Dynamics, 2017, 40, 817-830.	1.6	8
59	A New Clustering Algorithm for Processing GPS-Based Road Anomaly Reports With a Mahalanobis Distance. IEEE Transactions on Intelligent Transportation Systems, 2017, 18, 1980-1988.	4.7	34
60	Continuum Deformation of a Multi-Quadcopter System in a Payload Delivery Mission. IFAC-PapersOnLine, 2017, 50, 3455-3462.	0.5	5
61	H-infinity Filtering for Cloud-Aided Semi-active Suspension with Delayed Information. Advances in Delays and Dynamics, 2017, , 283-297.	0.4	1
62	Cyber-physical optimization of small unmanned aircraft systems with thermal consideration. , 2016, , .		1
63	Nonlinear control of semi-active suspension systems: A Quasi-Linear Control approach. , 2016, , .		4
64	Enhanced Smoothing Technique for Indirect Optimization of Minimum-Fuel Low-Thrust Trajectories. Journal of Guidance, Control, and Dynamics, 2016, 39, 2500-2511.	1.6	81
65	Verification Guided Refinement of Flight Safety Assessment and Management System for Takeoff. Journal of Aerospace Information Systems, 2016, 13, 357-369.	1.0	11
66	Optimizing Steady Turns for Gliding Trajectories. Journal of Guidance, Control, and Dynamics, 2016, 39, 2627-2637.	1.6	7
67	Simultaneous road profile estimation and anomaly detection with an input observer and a jump diffusion process estimator. , 2016, , .		11
68	Multi-Mode Guidance for an Independent Multicopter Geofencing System. , 2016, , .		22
69	Exploring Non-Aviation Information Sources for Aircraft Emergency Landing Planning. , 2016, , .		6
70	Unmanned Aircraft System Navigation in the Urban Environment: A Systems Analysis. Journal of Aerospace Information Systems, 2016, 13, 143-160.	1.0	12
71	Hâž Filtering for Cloud-Aided Semi-active Suspension with Delayed Road Informationâˆ—âˆ—This work was supported by Ford Motor Company-The University of Michigan Alliance.. IFAC-PapersOnLine, 2015, 48, 275-280.	0.5	14
72	Flight Safety Assessment and Management for Takeoff Using Deterministic Moore Machines. Journal of Aerospace Information Systems, 2015, 12, 599-615.	1.0	8

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73	Optimization and Control of Cyber-Physical Vehicle Systems. <i>Sensors</i> , 2015, 15, 23020-23049.	2.1	80
74	Robust H_∞ control for a class of networked uncertain systems with multiple channels subject to Markovian switching. , 2015, , .		5
75	Road anomaly estimation: Model based pothole detection. , 2015, , .		14
76	Trim State Discovery with Physical Constraints. <i>Journal of Aircraft</i> , 2015, 52, 90-106.	1.7	7
77	Human Intent Prediction Using Markov Decision Processes. <i>Journal of Aerospace Information Systems</i> , 2015, 12, 393-397.	1.0	29
78	Fixed-Wing Unmanned Aircraft In-Flight Pitch and Yaw Control Moment Sensing. <i>Journal of Aircraft</i> , 2015, 52, 403-420.	1.7	10
79	Coupled Cyber-Physical System Modeling and Coregulation of a CubeSat. <i>IEEE Transactions on Robotics</i> , 2015, 31, 443-456.	7.3	38
80	Education in the Crosscutting Sciences of Aerospace and Computing. <i>Journal of Aerospace Information Systems</i> , 2014, 11, 726-737.	1.0	4
81	Cyber-Physical Optimization for Unmanned Aircraft Systems. <i>Journal of Aerospace Information Systems</i> , 2014, 11, 48-60.	1.0	16
82	Cloud aided semi-active suspension control. , 2014, , .		29
83	Safety Margins for Flight Through Stochastic Gusts. <i>Journal of Guidance, Control, and Dynamics</i> , 2014, 37, 2026-2030.	1.6	3
84	Safe landing planning for an energy-constrained multicopter. , 2014, , .		5
85	Cloud aided safety-based route planning. , 2014, , .		19
86	Damaged Airplane Trajectory Planning Based on Flight Envelope and Motion Primitives. <i>Journal of Aircraft</i> , 2014, 51, 1740-1757.	1.7	33
87	Characterizing Energy Usage of a Commercially Available Ground Robot: Method and Results. <i>Journal of Field Robotics</i> , 2014, 31, 441-454.	3.2	23
88	Optimal coverage trajectories for a UGV with tradeoffs for energy and time. <i>Autonomous Robots</i> , 2014, 36, 257-271.	3.2	24
89	Scaling of Airplane Dynamic Response to Stochastic Gusts. <i>Journal of Aircraft</i> , 2014, 51, 1554-1566.	1.7	7
90	Human Productivity in a Workspace Shared with a Safe Robotic Manipulator. <i>Journal of Aerospace Information Systems</i> , 2014, 11, 1-18.	1.0	5

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91	Keeping Ground Robots on the Move Through Battery & Mission Management. Mechanical Engineering, 2014, 136, S1-S6.	0.0	3
92	Envelopes for Flight Through Stochastic Gusts. Journal of Guidance, Control, and Dynamics, 2013, 36, 1464-1476.	1.6	16
93	Experimental Characterization of Lift on a Rigid Flapping Wing. Journal of Aircraft, 2013, 50, 1806-1821.	1.7	5
94	Supervisory traction control for a slipping UGV. , 2013, , .		5
95	Mission-Based Fault Reconfiguration for Spacecraft Applications. Journal of Aerospace Information Systems, 2013, 10, 513-516.	1.0	1
96	Qualitative Failure Analysis for a Small Quadrotor Unmanned Aircraft System. , 2013, , .		15
97	X-HALE: A Very Flexible Unmanned Aerial Vehicle for Nonlinear Aeroelastic Tests. AIAA Journal, 2012, 50, 2820-2833.	1.5	80
98	Cyber-Physical Challenges for Space Systems. , 2012, , .		26
99	Toward Continuous Stateâ€“Space Regulation of Coupled Cyberâ€“Physical Systems. Proceedings of the IEEE, 2012, 100, 60-74.	16.4	32
100	Risk identification and management for safe UAS operation. , 2010, , .		7
101	Methods of trim state discovery. , 2010, , .		1
102	Preference-Based Trajectory Generation. Journal of Aerospace Computing, Information, and Communication, 2009, 6, 142-170.	0.8	2
103	Design and Development Methodology for Resilient Cyber-Physical Systems. , 2008, , .		11
104	Incorporating Resource Safety Verification to Executable Model-based Development for Embedded Systems. , 2008, , .		24
105	Satellite Formation Mission Optimization with a Multi-Impulse Design. Journal of Spacecraft and Rockets, 2007, 44, 425-433.	1.3	3
106	Introduction: Achieving Intelligence in Aerospace Systems. Journal of Aerospace Computing, Information, and Communication, 2007, 4, 751-752.	0.8	1
107	Information consensus in multivehicle cooperative control. IEEE Control Systems, 2007, 27, 71-82.	1.0	2,605
108	Distributed multi-vehicle coordinated control via local information exchange. International Journal of Robust and Nonlinear Control, 2007, 17, 1002-1033.	2.1	1,257

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109	Noise-Minimum Runway-Independent Aircraft Approach Design for Baltimore-Washington International Airport. <i>Journal of Aircraft</i> , 2006, 43, 39-51.	1.7	20
110	Visual Positioning System for an Underwater Space Simulation Environment. <i>Journal of Guidance, Control, and Dynamics</i> , 2006, 29, 858-869.	1.6	6
111	A Modal Operations Paradigm for Robust Vision-based Astronaut Following. <i>Journal of Aerospace Computing, Information, and Communication</i> , 2006, 3, 603-618.	0.8	2
112	Emergency Flight Planning Applied to Total Loss of Thrust. <i>Journal of Aircraft</i> , 2006, 43, 1205-1216.	1.7	89
113	Optimization of a Tetrahedral Satellite Formation. <i>Journal of Spacecraft and Rockets</i> , 2005, 42, 699-710.	1.3	20
114	Multi-Objective Spacecraft Trajectory Optimization with Synthetic Agent Oversight. <i>Journal of Aerospace Computing, Information, and Communication</i> , 2005, 2, 4-24.	0.8	5
115	Noise-Sensitive Final Approach Trajectory Optimization for Runway-Independent Aircraft. <i>Journal of Aerospace Computing, Information, and Communication</i> , 2004, 1, 269-287.	0.8	14
116	An Autonomous Software Safety System for a Dexterous Space Robot. <i>Journal of Aerospace Computing, Information, and Communication</i> , 2004, 1, 564-579.	0.8	3
117	Planning and Resource Allocation for Hard Real-time, Fault-Tolerant Plan Execution. <i>Autonomous Agents and Multi-Agent Systems</i> , 2001, 4, 57-78.	1.3	24