Ella M Atkins

List of Publications by Citations

109 papers	3,865 citations	17 h-index	61 g-index
119 ext. papers	4,906 ext. citations	2.8 avg, IF	5.9 L-index

#	Paper	IF	Citations
109	Information consensus in multivehicle cooperative control. *IEEE Control Systems*, **2007**, 27, 71-82	2.9	1925
108	Distributed multi-vehicle coordinated control via local information exchange. *International Journal of Robust and Nonlinear Control*, **2007**, 17, 1002-1033	3.6	934
107	Emergency Flight Planning Applied to Total Loss of Thrust. *Journal of Aircraft*, **2006**, 43, 1205-1216	1.6	67
106	Optimization and Control of Cyber-Physical Vehicle Systems. *Sensors*, **2015**, 15, 23020-49	3.8	56
105	X-HALE: A Very Flexible Unmanned Aerial Vehicle for Nonlinear Aeroelastic Tests. *AIAA Journal*, **2012**, 50, 2820-2833	2.1	50
104	Enhanced Smoothing Technique for Indirect Optimization of Minimum-Fuel Low-Thrust Trajectories. *Journal of Guidance, Control, and Dynamics*, **2016**, 39, 2500-2511	2.1	50
103	Unsupervised Traffic Accident Detection in First-Person Videos **2019**,		38
102	Cloud aided semi-active suspension control **2014**,		27
101	Roof Shape Classification from LiDAR and Satellite Image Data Fusion Using Supervised Learning. *Sensors*, **2018**, 18,	3.8	27
100	Coupled Cyber□Physical System Modeling and Coregulation of a CubeSat. *IEEE Transactions on Robotics*, **2015**, 31, 443-456	6.5	24
99	Damaged Airplane Trajectory Planning Based on Flight Envelope and Motion Primitives. *Journal of Aircraft*, **2014**, 51, 1740-1757	1.6	24
98	Shaping low-thrust trajectories with thrust-handling feature. *Advances in Space Research*, **2018**, 61, 879-890	2.4	23
97	Human Intent Prediction Using Markov Decision Processes. *Journal of Aerospace Information Systems*, **2015**, 12, 393-397	1	21
96	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	6.1	21
95	Egocentric Vision-based Future Vehicle Localization for Intelligent Driving Assistance Systems **2019**,		20
94	Emergency Flight Planning for an Energy-Constrained Multicopter. *Journal of Intelligent and Robotic Systems: Theory and Applications*, **2017**, 85, 145-165	2.9	18
93	Evaluating Risk to People and Property for Aircraft Emergency Landing Planning. *Journal of Aerospace Information Systems*, **2017**, 14, 259-278	1	17

92	Toward Continuous State-Space Regulation of Coupled Cyber-Physical Systems. *Proceedings of the IEEE*, **2012**, 100, 60-74	14.3	17
91	Characterizing Energy Usage of a Commercially Available Ground Robot: Method and Results. *Journal of Field Robotics*, **2014**, 31, 441-454	6.7	17
90	Optimal coverage trajectories for a UGV with tradeoffs for energy and time. *Autonomous Robots*, **2014**, 36, 257-271	3	17
89	Cloud aided safety-based route planning **2014**,		15
88	Optimization of a Tetrahedral Satellite Formation. *Journal of Spacecraft and Rockets*, **2005**, 42, 699-710	1.5	15
87	Multi-Mode Guidance for an Independent Multicopter Geofencing System **2016**,		14
86	Cyber-Physical Challenges for Space Systems **2012**,		14
85	Noise-Minimum Runway-Independent Aircraft Approach Design for Baltimore-Washington International Airport. *Journal of Aircraft*, **2006**, 43, 39-51	1.6	14
84	BiTraP: Bi-Directional Pedestrian Trajectory Prediction With Multi-Modal Goal Estimation. *IEEE Robotics and Automation Letters*, **2021**, 6, 1463-1470	4.2	14
83	H∞ Filtering for Cloud-Aided Semi-active Suspension with Delayed Road Information. *IFAC-PapersOnLine*, **2015**, 48, 275-280	0.7	13
82	Planning and Resource Allocation for Hard Real-time, Fault-Tolerant Plan Execution. *Autonomous Agents and Multi-Agent Systems*, **2001**, 4, 57-78	2	13
81	Cooperative aerial lift and manipulation (CALM). *Aerospace Science and Technology*, **2018**, 82-83, 105-118	4.9	13
80	Road anomaly estimation: Model based pothole detection **2015**,		12
79	Noise-Sensitive Final Approach Trajectory Optimization for Runway-Independent Aircraft. *Journal of Aerospace Computing, Information, and Communication*, **2004**, 1, 269-287		12
78	Multi-Objective Weight Optimization for Trajectory Planning of an Airplane with Structural Damage. *Journal of Intelligent and Robotic Systems: Theory and Applications*, **2018**, 91, 667-690	2.9	11
77	Geofencing in Immediate Reaches Airspace for Unmanned Aircraft System Traffic Management **2018**,		10
76	Unmanned Aircraft System Navigation in the Urban Environment: A Systems Analysis. *Journal of Aerospace Information Systems*, **2016**, 13, 143-160	1	10
75	Envelopes for Flight Through Stochastic Gusts. *Journal of Guidance, Control, and Dynamics*, **2013**, 36, 1464-1476	4.1	10

74	Qualitative Failure Analysis for a Small Quadrotor Unmanned Aircraft System **2013**,		10
73	Game-Theoretic Modeling of Multi-Vehicle Interactions at Uncontrolled Intersections. *IEEE Transactions on Intelligent Transportation Systems*, **2020**, 1-15	6.1	10
72	Simultaneous road profile estimation and anomaly detection with an input observer and a jump diffusion process estimator **2016**,		9
71	Cyber-Physical Optimization for Unmanned Aircraft Systems. *Journal of Aerospace Information Systems*, **2014**, 11, 48-60	1	9
70	Incorporating Resource Safety Verification to Executable Model-based Development for Embedded Systems **2008**,		9
69	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	2.9	9
68	Continuum Deformation of Multi-Agent Systems Under Directed Communication Topologies. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2017**, 139,	1.6	8
67	Envelope-Aware Flight Management for Loss of Control Prevention Given Rudder Jam. *Journal of Guidance, Control, and Dynamics*, **2017**, 40, 1027-1041	2.1	8
66	Fail-Safe Navigation for Autonomous Urban Multicopter Flight **2017**,		7
65	Risk identification and management for safe UAS operation **2010**,		7
64	Robust Science-Optimal Spacecraft Control for Circular Orbit Missions. *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, **2020**, 50, 923-934	7.3	7
63	Asymptotic Tracking and Robustness of MAS Transitions Under a New Communication Topology. *IEEE Transactions on Automation Science and Engineering*, **2018**, 15, 16-32	4.9	6
62	Optimal State Estimation for Systems Driven by Jump-Diffusion Process With Application to Road Anomaly Detection. *IEEE Transactions on Control Systems Technology*, **2017**, 25, 1634-1643	4.8	6
61	Flight Safety Assessment and Management for Takeoff Using Deterministic Moore Machines. *Journal of Aerospace Information Systems*, **2015**, 12, 599-615	1	6
60	Trim State Discovery with Physical Constraints. *Journal of Aircraft*, **2015**, 52, 90-106	1.6	6
59	Airspace Geofencing and Flight Planning for Low-Altitude, Urban, Small Unmanned Aircraft Systems. *Applied Sciences (Switzerland)*, **2022**, 12, 576	2.6	6
58	Verification Guided Refinement of Flight Safety Assessment and Management System for Takeoff. *Journal of Aerospace Information Systems*, **2016**, 13, 357-369	1	6
57	Layered Geofences in Complex Airspace Environments **2018**,		6

56	Safe multi-cluster UAV continuum deformation coordination. *Aerospace Science and Technology*, **2019**, 91, 640-655	4.9	5
55	Fixed-Wing Unmanned Aircraft In-Flight Pitch and Yaw Control Moment Sensing. *Journal of Aircraft*, **2015**, 52, 403-420	1.6	5
54	Exploring Non-Aviation Information Sources for Aircraft Emergency Landing Planning **2016**,		5
53	Experimental Investigation of Tractor and Pusher Hexacopter Performance. *Journal of Aircraft*, **2019**, 56, 1920-1934	1.6	5
52	Design and Development Methodology for Resilient Cyber-Physical Systems **2008**,		5
51	The Smart Black Box: A Value-Driven High-Bandwidth Automotive Event Data Recorder. *IEEE Transactions on Intelligent Transportation Systems*, **2021**, 22, 1484-1496	6.1	5
50	Comprehensive Risk-based Planning for Small Unmanned Aircraft System Rooftop Landing **2018**,		5
49	Scaling of Airplane Dynamic Response to Stochastic Gusts. *Journal of Aircraft*, **2014**, 51, 1554-1566	1.6	4
48	Human Productivity in a Workspace Shared with a Safe Robotic Manipulator. *Journal of Aerospace Information Systems*, **2014**, 11, 1-18	1	4
47	Experimental Characterization of Lift on a Rigid Flapping Wing. *Journal of Aircraft*, **2013**, 50, 1806-1821	1.6	4
46	Robust H∞ control for a class of networked uncertain systems with multiple channels subject to Markovian switching **2015**,		4
45	Supervisory traction control for a slipping UGV **2013**,		4
44	Aerospace Avionics Systems **2010**,		4
43	Visual Positioning System for an Underwater Space Simulation Environment. *Journal of Guidance, Control, and Dynamics*, **2006**, 29, 858-869	2.1	4
42	Multi-Objective Spacecraft Trajectory Optimization with Synthetic Agent Oversight. *Journal of Aerospace Computing, Information, and Communication*, **2005**, 2, 4-24		4
41	Development, implementation, and experimental outdoor evaluation of quadcopter controllers for computationally limited embedded systems. *Annual Reviews in Control*, **2021**, 52, 372-372	10.3	4
40	Paths to Autonomous Vehicle Operations for Urban Air Mobility **2019**,		4
39	Safe Multiquadcopter System Continuum Deformation Over Moving Frames. *IEEE Transactions on Control of Network Systems*, **2019**, 6, 737-749	4	3

38	Markov Decision Process Framework for Flight Safety Assessment and Management. *Journal of Guidance, Control, and Dynamics*, **2017**, 40, 817-830	2.1	3
37	Continuum Deformation of a Multi-Quadcopter System in a Payload Delivery Mission. *IFAC-PapersOnLine*, **2017**, 50, 3455-3462	0.7	3
36	Education in the Crosscutting Sciences of Aerospace and Computing. *Journal of Aerospace Information Systems*, **2014**, 11, 726-737	1	3
35	Safe landing planning for an energy-constrained multicopter **2014**,		3
34	Automated Curb Recognition and Negotiation for Robotic Wheelchairs. *Sensors*, **2021**, 21,	3.8	3
33	Polylidar - Polygons From Triangular Meshes. *IEEE Robotics and Automation Letters*, **2020**, 5, 4634-4641	4.2	3
32	**2019**,		3
31	The Smart Black Box: A Value-Driven Automotive Event Data Recorder **2018**,		3
30	Generating Airspace Geofence Boundary Layers in Wind. *Journal of Aerospace Information Systems*, **2020**, 17, 113-124	1	2
29	Optimizing Steady Turns for Gliding Trajectories. *Journal of Guidance, Control, and Dynamics*, **2016**, 39, 2627-2637	2.1	2
28	Low-Altitude Rural to Urban Unmanned Aircraft System Operations **2016**, 1-13		2
27	Automatic Classification of Roof Shapes for Multicopter Emergency Landing Site Selection **2018**,		2
26	Cooperative Aerial Payload Transport Guided by an In Situ Human Supervisor. *IEEE Transactions on Control Systems Technology*, **2019**, 27, 1452-1467	4.8	2
25	Safety Margins for Flight Through Stochastic Gusts. *Journal of Guidance, Control, and Dynamics*, **2014**, 37, 2026-2030	2.1	2
24	A Modal Operations Paradigm for Robust Vision-based Astronaut Following. *Journal of Aerospace Computing, Information, and Communication*, **2006**, 3, 603-618		2
23	Satellite Formation Mission Optimization with a Multi-Impulse Design. *Journal of Spacecraft and Rockets*, **2007**, 44, 425-433	1.5	2
22	An Autonomous Software Safety System for a Dexterous Space Robot. *Journal of Aerospace Computing, Information, and Communication*, **2004**, 1, 564-579		2
21	Keeping Ground Robots on the Move Through Battery & Mission Management. *Mechanical Engineering*, **2014**, 136, S1-S6	0.9	2

20	Physics-Based Freely Scalable Continuum Deformation for UAS Traffic Coordination. *IEEE Transactions on Control of Network Systems*, **2020**, 7, 532-544	4	2
19	Nonlinear control of semi-active suspension systems: A Quasi-Linear Control approach **2016**,		2
18	Continuum Deformation of a Multiple Quadcopter Payload Delivery Team without Inter-Agent Communication **2018**,		2
17	Geofence Definition and Deconfliction for UAS Traffic Management. *IEEE Transactions on Intelligent Transportation Systems*, **2021**, 22, 5880-5889	6.1	2
16	Improving Attitude Estimation Using Gaussian-Process-Regression-Based Magnetic Field Maps. *Sensors*, **2021**, 21,	3.8	2
15	Energy-Aware Multiflight Planning for an Unattended Seaplane: Flying Fish. *Journal of Aerospace Information Systems*, **2017**, 14, 73-91	1	1
14	Mission-Based Fault Reconfiguration for Spacecraft Applications. *Journal of Aerospace Information Systems*, **2013**, 10, 513-516	1	1
13	Preference-Based Trajectory Generation. *Journal of Aerospace Computing, Information, and Communication*, **2009**, 6, 142-170		1
12	Introduction: Achieving Intelligence in Aerospace Systems. *Journal of Aerospace Computing, Information, and Communication*, **2007**, 4, 751-752		1
11	H-infinity Filtering for Cloud-Aided Semi-active Suspension with Delayed Information. *Advances in Delays and Dynamics*, **2017**, 283-297	0.3	1
10	Polylidar3D-Fast Polygon Extraction from 3D Data. *Sensors*, **2020**, 20,	3.8	1
9	Formal Specification of Continuum Deformation Coordination **2019**,		1
8	Scalable Vehicle Team Continuum Deformation Coordination with Eigen Decomposition. *IEEE Transactions on Automatic Control*, **2021**, 1-1	5.9	1
7	Smart Black Box 2.0: Efficient High-Bandwidth Driving Data Collection Based on Video Anomalies. *Algorithms*, **2021**, 14, 57	1.8	1
6	A Data-Driven Approach for Autonomous Motion Planning and Control in Off-Road Driving Scenarios **2018**,		1
5	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	4.5	1
4	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	6.1	1
3	Urban Metric Maps for Small Unmanned Aircraft Systems Motion Planning. *Journal of Aerospace Information Systems*, 1-16	1	1

2   A graph-theoretic-based method for analyzing conduction problems. *Journal of Engineering Mathematics*, **2017**, 106, 169-201   1.2

1   Multi-Unmanned-Aerial-Vehicle Wildfire Boundary Estimation Using a Semantic Segmentation Neural Network. *Journal of Aerospace Information Systems*, **2021**, 18, 231-249   1