David W Casbeer

List of Publications by Year
in descending order

123 papers	2,684 citations	304602 22 h-index	254106 43 g-index
123 all docs	123 docs citations	123 times ranked	1661 citing authors

#	Article	IF	Citations
1	Cooperative forest fire surveillance using a team of small unmanned air vehicles. International Journal of Systems Science, 2006, 37, 351-360.	3.7	425
2	Decentralised event-triggered cooperative control with limited communication. International Journal of Control, 2013, 86, 1479-1488.	1.2	206
3	Periodic Event-Triggered Synchronization of Linear Multi-Agent Systems With Communication Delays. IEEE Transactions on Automatic Control, 2017, 62, 366-371.	3.6	158
4	Cooperative Strategies for Optimal Aircraft Defense from an Attacking Missile. Journal of Guidance, Control, and Dynamics, 2015, 38, 1510-1520.	1.6	92
5	Finite-Time Connectivity-Preserving Consensus of Networked Nonlinear Agents With Unknown Lipschitz Terms. IEEE Transactions on Automatic Control, 2016, 61, 1700-1705.	3.6	73
6	Multiple Pursuer Multiple Evader Differential Games. IEEE Transactions on Automatic Control, 2021, 66, 2345-2350.	3.6	62
7	Multi-UAV routing for persistent intelligence surveillance & reconnaissance missions. , 2017, , .		60
8	Cooperative Missile Guidance for Active Defense of Air Vehicles. IEEE Transactions on Aerospace and Electronic Systems, 2018, 54, 706-721.	2.6	60
9	Distributed information filtering using consensus filters. , 2009, , .		58
10	Genetic Fuzzy Trees and their Application Towards Autonomous Training and Control of a Squadron of Unmanned Combat Aerial Vehicles. Unmanned Systems, 2015, 03, 185-204.	2.7	51
11	Tightly Bounding the Shortest Dubins Paths Through a Sequence of Points. Journal of Intelligent and Robotic Systems: Theory and Applications, 2017, 88, 495-511.	2.0	46
12	Active target defense using first order missile models. Automatica, 2017, 78, 139-143.	3.0	45
13	Path planning for cooperative routing of air-ground vehicles. , 2016, , .		43
14	Active target defense differential game. , 2014, , .		41
15	Coordinate frame free Dubins vehicle circumnavigation using only rangeâ€based measurements. International Journal of Robust and Nonlinear Control, 2017, 27, 2937-2960.	2.1	39
16	Design and Analysis of State-Feedback Optimal Strategies for the Differential Game of Active Defense. IEEE Transactions on Automatic Control, 2018, , 1-1.	3.6	39
17	A Geometric Approach for the Cooperative Two-Pursuer One-Evader Differential Game. IFAC-PapersOnLine, 2017, 50, 15209-15214.	0.5	38
18	Active target defence differential game: fast defender case. IET Control Theory and Applications, 2017, 11, 2985-2993.	1.2	37

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19	Cooperative aircraft defense from an attacking missile. , 2014, , .		36
20	The Multi-pursuer Single-Evader Game. Journal of Intelligent and Robotic Systems: Theory and Applications, 2019, 96, 193-207.	2.0	35
21	Optimal Strategies for a Class of Multi-Player Reach-Avoid Differential Games in 3D Space. IEEE Robotics and Automation Letters, 2020, 5, 4257-4264.	3.3	33
22	Discrete double integrator consensus. , 2008, , .		31
23	Decentralised eventâ€triggered consensus of double integrator multiâ€agent systems with packet losses and communication delays. IET Control Theory and Applications, 2016, 10, 1835-1843.	1.2	31
24	Differential Game of Guarding a Target. Journal of Guidance, Control, and Dynamics, 2017, 40, 2991-2998.	1.6	30
25	Cooperative Routing for an Airâ€“Ground Vehicle Teamâ€”Exact Algorithm, Transformation Method, and Heuristics. IEEE Transactions on Automation Science and Engineering, 2020, 17, 537-547.	3.4	30
26	Toward a Solution of the Active Target Defense Differential Game. Dynamic Games and Applications, 2019, 9, 165-216.	1.1	28
27	An extension of consensus-based auction algorithms for decentralized, time-constrained task assignment. , 2010, , .		26
28	Pursuit-evasion of an Evader by Multiple Pursuers. , 2018, , .		26
29	An event-triggered control approach for the leader-tracking problem with heterogeneous agents. International Journal of Control, 2018, 91, 1209-1221.	1.2	25
30	Towards a PDE-based large-scale decentralized solution for path planning of UAVs in shared airspace. Aerospace Science and Technology, 2020, 105, 105965.	2.5	23
31	Optimal UAV Route Planning for Persistent Monitoring Missions. IEEE Transactions on Robotics, 2021, 37, 550-566.	7.3	23
32	Strategies for Defending a Coastline Against Multiple Attackers. , 2019, , .		22
33	Decentralized event-triggered consensus of Linear Multi-agent Systems under Directed Graphs. , 2015, , .		21
34	Optimal Strategies of the Differential Game in a Circular Region. , 2020, 4, 492-497.		21
35	Multiple-Pursuer, Single-Evader Border Defense Differential Game. Journal of Aerospace Information Systems, 2020, 17, 407-416.	1.0	21
36	Cooperative control with general linear dynamics and limited communication: Centralized and decentralized event-triggered control strategies. , 2014, , .		20

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37	Cooperative Two-Pursuer One-Evader Blocking Differential Game. , 2019, , .		20
38	Active Target defense differential game with a fast Defender. , 2015, , .		18
39	Optimal Target Capture Strategies in the Target-Attacker-Defender Differential Game. , 2018, , .		18
40	Column generation for a UAV assignment problem with precedence constraints. International Journal of Robust and Nonlinear Control, 2011, 21, 1421-1433.	2.1	17
41	A Multi-Team Extension of the Consensus-Based Bundle Algorithm. , 2011, , .		17
42	Unmanned Aerial Vehicle Circumnavigation Using Noisy Range-Based Measurements Without Global Positioning System Information. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2015, 137, .	0.9	17
43	The Capture-the-Flag Differential Game. , 2018, , .		17
44	Two-on-One Pursuit. Journal of Guidance, Control, and Dynamics, 2019, 42, 1638-1644.	1.6	17
45	Dubins paths through a sequence of points: Lower and upper bounds. , 2016, , .		15
46	GPS Denied UAV Routing with Communication Constraints. Journal of Intelligent and Robotic Systems: Theory and Applications, 2016, 84, 691-703.	2.0	15
47	Practical considerations for implementing an autonomous, persistent, intelligence, surveillance, and reconnaissance system. , 2017, , .		15
48	Cooperative target defense differential game with a constrained-maneuverable Defender. , 2015, , .		14
49	Cooperative Pursuit by Multiple Pursuers of a Single Evader. Journal of Aerospace Information Systems, 2020, 17, 371-389.	1.0	14
50	Event-triggered cooperative control with general linear dynamics and communication delays. , 2014, , .		13
51	Singular analysis of a multi-agent, turn-constrained, defensive game. , 2016, , .		13
52	Two-Pursuer, One-Evader Pursuit Evasion Differential Game. , 2018, , .		13
53	Scalable and Exact MILP Methods for UAV Persistent Visitation Problem. , 2018, , .		13
54	Routing of two Unmanned Aerial Vehicles with communication constraints. , 2014, , .		12

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55	Markov inequality rule for switching among time optimal controllers in a multiple vehicle intercept problem. Automatica, 2018, 87, 274-280.	3.0	12
56	The Target Differential Game with Two Defenders. Journal of Intelligent and Robotic Systems: Theory and Applications, 2018, 89, 87-106.	2.0	12
57	Persistent Intelligence, Surveillance, and Reconnaissance Using Multiple Autonomous Vehicles With Asynchronous Route Updates. IEEE Robotics and Automation Letters, 2020, 5, 5550-5557.	3.3	12
58	Minâ€“max time efficient inspection of ground vehicles by a UAV team. Robotics and Autonomous Systems, 2020, 125, 103370.	3.0	11
59	Average Bridge Consensus: Dealing With Active-Passive Sensors. , 2015, , .		10
60	An event-triggered consensus approach for distributed clock synchronization. , 2017, , .		10
61	Pursuit in the Presence of a Defender. Dynamic Games and Applications, 2019, 9, 652-670.	1.1	10
62	A stochastic approach to small UAV feedback control for target tracking and blind spot avoidance. , 2017, , .		9
63	Robust Policies for a Multiple-Pursuer Single-Evader Differential Game. Dynamic Games and Applications, 2020, 10, 202-221.	1.1	9
64	A Two-team Linear Quadratic Differential Game of Defending a Target. , 2020, , .		9
65	Single Pursuer and Two Cooperative Evaders in the Border Defense Differential Game. Journal of Aerospace Information Systems, 2020, 17, 229-239.	1.0	9
66	UAV Trajectory Planning With Probabilistic Geo-Fence via Iterative Chance-Constrained Optimization. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 5859-5870.	4.7	9
67	Optimal Dubins Paths to Intercept a Moving Target on a Circle. , 2019, , .		9
68	Circumnavigation of an unknown target using UAVs with range and range rate measurements. , 2013, , .		8
69	Coordinate frame free Dubins vehicle circumnavigation. , 2014, , .		8
70	Market Approach to Length Constrained Min-Max Multiple Depot Multiple Traveling Salesman Problem. , 2020, , .		8
71	UAV circumnavigation of an unknown target without location information using noisy range-based measurements. , 2014, , .		7
72	Escape Regions of the Active Target Defense Differential Game. , 2015, , .		7

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73	Optimal Threshold Policy for Sequential Weapon Target Assignment. IFAC-PapersOnLine, 2016, 49, 7-10.	0.5	7
74	Aircraft Defense Differential Game with Non-Zero Capture Radius. IFAC-PapersOnLine, 2017, 50, 14200-14205.	0.5	7
75	Singular Trajectories in the Two Pursuer One Evader Differential Game. , 2019, , .		7
76	Scalable Markov chain approximation for a safe intercept navigation in the presence of multiple vehicles. Autonomous Robots, 2019, 43, 575-588.	3.2	7
77	The Complete Differential Game of Active Target Defense. Journal of Optimization Theory and Applications, 2021, 191, 675-699.	0.8	7
78	Maximum Observation of a Faster Non-Maneuvering Target by a Slower Observer. , 2020, , .		7
79	Cooperative control with general linear dynamics and limited communication: Periodic updates. , 2014, , .		6
80	Model-based event-triggered multi-vehicle coordinated tracking control using reduced order models. Journal of the Franklin Institute, 2014, 351, 4271-4286.	1.9	6
81	UAV Coordinated Decision Making and Mission Management. , 2014, , .		6
82	The target differential game with two defenders. , 2016, , .		6
83	Monotone Optimal Threshold Feedback Policy for Sequential Weapon Target Assignment. Journal of Aerospace Information Systems, 2017, 14, 68-72.	1.0	6
84	Multitarget Localization on Road Networks with Hidden Markov Raoâ€“Blackwellized Particle Filters. Journal of Aerospace Computing, Information, and Communication, 2017, 14, 573-596.	0.8	6
85	Pursuit on a graph under partial information from sensors. , 2017, , .		6
86	Continuous-time intruder isolation using Unattended Ground Sensors on graphs. , 2014, , .		5
87	Consensus-based simultaneous arrival of multiple UAVs with constrained velocity. , 2015, , .		5
88	Stochastic optimal control navigation with the avoidance of unsafe configurations. , 2016, , .		5
89	Intruder Isolation on a General Road Network Under Partial Information. IEEE Transactions on Control Systems Technology, 2017, 25, 222-234.	3.2	5
90	Distributed algorithms for the average bridge consensus. , 2017, , .		5

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91	Average Reward Dynamic Programming Applied to a Persistent Visitation and Data Delivery Problem. , 2017, , .		5
92	Randomized Continuous Monitoring of a Target by Agents with Turn Radius Constraints. , 2019, , .		5
93	Graph search of a moving ground target by a UAV aided by ground sensors with local information. Autonomous Robots, 2020, 44, 831-843.	3.2	5
94	Multi-unmanned aerial vehicle multi acoustic source localization. Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 2021, 235, 273-294.	0.7	5
95	Finite-time consensus of networked Lipschitz nonlinear agents under communication constraints. , 2013, , .		4
96	Scalable value approximation for multiple target tail-chase with collision avoidance. , 2016, , .		4
97	Coordinated Air-Ground Vehicle Routing with Timing Constraints. , 2019, , .		4
98	Cooperative Air-Ground Vehicle Routing using Chance-Constrained Optimization. , 2020, , .		4
99	Lower Bounding Linear Program for the Perimeter Patrol Optimization Problem. Journal of Guidance, Control, and Dynamics, 2014, 37, 558-565.	1.6	3
100	Bayesian hidden Markov models for UAV-enabled target localization on road networks with soft-hard data. Proceedings of SPIE, 2015, , .	0.8	3
101	Towards cost-effective distributed information fusion with partially active sensors in directed networks. , 2016, , .		3
102	Pursuit of a Moving Target with Known Constant Speed on a Directed Acyclic Graph under Partial Information. SIAM Journal on Control and Optimization, 2016, 54, 2259-2273.	1.1	3
103	Optimizing multiple UAV cooperative ground attack missions. , 2017, , .		3
104	Cooperative surveillance in the presence of time sensitive data. , 2017, , .		3
105	Linear Quadratic Formulation of the Target Defense Differential Game. , 2019, , .		3
106	Leader-Follower Formation Feedback Control Composed of Turning Rate and Velocity Controllers. , 2020, , .		3
107	Shortest Dubins Paths to Intercept a Target Moving on a Circle. Journal of Guidance, Control, and Dynamics, 2022, 45, 2107-2120.	1.6	3
108	Distributed coestimation in heterogeneous sensor networks. International Journal of Control, 2021, 94, 2032-2046.	1.2	2

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109	Genetic Algorithm Approach for UAV Persistent Visitation Problem. , 2018, , .		2
110	A Lagrangian Algorithm for Multiple Depot Traveling Salesman Problem With Revisit Period Constraints. IEEE Transactions on Automation Science and Engineering, 2023, 20, 690-702.	3.4	2
111	Decentralized Sub-Optimal Minimum-Time Consensus. , 2014, , .		1
112	Distributed Coestimation in Heterogeneous Sensor Networks with Time-Varying Active and Passive Node Roles. , 2018, , .		1
113	Maximizing the Target's Longevity in the Active Target Defense Differential Game. , 2019, , .		1
114	A sequential partial information bomberâ€defender shooting problem. Naval Research Logistics, 2020, 67, 223-235.	1.4	1
115	Reaching consensus in the sense of probability. , 2013, , .		0
116	Transformation of a hierarchical mamdani fuzzy system to a single fuzzy system representation. , 2017, , .		0
117	Adaptive Event-triggered Cooperative Control of Uncertain Networked Systems. IFAC-PapersOnLine, 2018, 51, 82-87.	0.5	0
118	Navigation with Multi-obstacle Avoidance Composed of Stochastic Optimal Controllers. , 2019, , .		0
119	Intercepting a Target Moving on a Racetrack Path. , 2020, , .		0
120	Swarming Artificial Intelligence for Networked Teams (SAINT). , 2021, , .		0
121	Decentralized 3D PDE Based Collaborative Trajectory Planning and Target Surrounding for Swarm of UAVs in Cluttered Environment. , 2018, , .		0
122	Introduction to the Special Issue on Multi-agent Coordination and Control. Journal of Aerospace Information Systems, 2020, 17, 370-370.	1.0	0
123	Continuous Monitoring of a Path-Constrained Moving Target by Multiple Unmanned Aerial Vehicles. Journal of Guidance, Control, and Dynamics, 0, , 1-10.	1.6	0