

Mark E Campbell

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

180
papers

2,476
citations

26
h-index

42
g-index

207
ext. papers

3,279
ext. citations

3.8
avg, IF

5.36
L-index

#	Paper	IF	Citations
180	2019,		195
179	Autonomous driving in urban environments: approaches, lessons and challenges. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2010 , 368, 4649-72	3	164
178	Identifying gene and protein mentions in text using conditional random fields. <i>BMC Bioinformatics</i> , 2005 , 6 Suppl 1, S6	3.6	109
177	Team Cornell's Skynet: Robust perception and planning in an urban environment. <i>Journal of Field Robotics</i> , 2008 , 25, 493-527	6.7	87
176	The MIT-Cornell collision and why it happened. <i>Journal of Field Robotics</i> , 2008 , 25, 775-807	6.7	69
175	Six-Axis Vibration Isolation System Using Soft Actuators and Multiple Sensors. <i>Journal of Spacecraft and Rockets</i> , 2002 , 39, 206-212	1.5	64
174	A nonlinear set-membership filter for on-line applications. <i>International Journal of Robust and Nonlinear Control</i> , 2003 , 13, 1337-1358	3.6	63
173	Cooperative Tracking Using Vision Measurements on SeaScan UAVs. <i>IEEE Transactions on Control Systems Technology</i> , 2007 , 15, 613-626	4.8	61
172	Planning Algorithm for Multiple Satellite Clusters. <i>Journal of Guidance, Control, and Dynamics</i> , 2003 , 26, 770-780	2.1	61
171	Optimal Cooperative Reconnaissance Using Multiple Vehicles. <i>Journal of Guidance, Control, and Dynamics</i> , 2007 , 30, 122-132	2.1	56
170	Multiple agent-based autonomy for satellite constellations. <i>Artificial Intelligence</i> , 2003 , 145, 147-180	3.6	52
169	Contingency Planning Over Probabilistic Obstacle Predictions for Autonomous Road Vehicles. <i>IEEE Transactions on Robotics</i> , 2013 , 29, 913-929	6.5	49
168	Sensors and control of a space-based six-axis vibration isolation system. <i>Journal of Sound and Vibration</i> , 2004 , 269, 913-931	3.9	48
167	Optimal Planner for Spacecraft Formations in Elliptical Orbits. <i>Journal of Guidance, Control, and Dynamics</i> , 2006 , 29, 161-171	2.1	38
166	Anytime Stereo Image Depth Estimation on Mobile Devices 2019,		37
165	Stabilization of Spacecraft Flight in Halo Orbits: An ∞ Approach. <i>IEEE Transactions on Control Systems Technology</i> , 2006 , 14, 572-578	4.8	33
164	An integrated system for perception-driven autonomy with modular robots. <i>Science Robotics</i> , 2018 , 3,	18.6	32

163	Pulsed Plasma Thruster System for Microsatellites. <i>Journal of Spacecraft and Rockets</i> , 2005 , 42, 161-170	1.5	31
162	. <i>IEEE Transactions on Robotics</i> , 2014 , 30, 461-474	6.5	30
161	An Adaptable, Probabilistic, Next-Best View Algorithm for Reconstruction of Unknown 3-D Objects. <i>IEEE Robotics and Automation Letters</i> , 2017 , 2, 1540-1547	4.2	28
160	Bayesian Multicategorical Soft Data Fusion for Human-Robot Collaboration. <i>IEEE Transactions on Robotics</i> , 2013 , 29, 189-206	6.5	28
159	Efficient Unbiased Tracking of Multiple Dynamic Obstacles Under Large Viewpoint Changes. <i>IEEE Transactions on Robotics</i> , 2011 , 27, 29-46	6.5	28
158	Map-aided localization in sparse global positioning system environments using vision and particle filtering. <i>Journal of Field Robotics</i> , 2011 , 28, 619-643	6.7	27
157	End-to-End Pseudo-LiDAR for Image-Based 3D Object Detection 2020 ,		27
156	Collision monitoring within satellite clusters. <i>IEEE Transactions on Control Systems Technology</i> , 2005 , 13, 42-55	4.8	26
155	Square Root Sigma Point Filtering for Real-Time, Nonlinear Estimation. <i>Journal of Guidance, Control, and Dynamics</i> , 2004 , 27, 314-317	2.1	26
154	On-line estimation and path planning for multiple vehicles in an uncertain environment. <i>International Journal of Robust and Nonlinear Control</i> , 2004 , 14, 741-766	3.6	26
153	. <i>IEEE Control Systems</i> , 2016 , 36, 83-109	2.9	26
152	Robust Nonlinear Model Predictive Control With Partial State Information. <i>IEEE Transactions on Control Systems Technology</i> , 2008 , 16, 636-651	4.8	25
151	A Vision Based Geolocation Tracking System for UAV's 2006 ,		25
150	Using Stream Functions for Complex Behavior and Path Generation 2003 ,		24
149	Establishing Trajectories for Multi-Vehicle Reconnaissance 2004 ,		23
148	. <i>IEEE Transactions on Aerospace and Electronic Systems</i> , 2012 , 48, 1115-1135	3.7	22
147	Segmentation of dense range information in complex urban scenes 2010 ,		22
146	Estimation architecture for future autonomous vehicles 2002 ,		22

145	2008,		21
144	2006,		20
143	Negative Information for Occlusion Reasoning in Dynamic Extended Multiobject Tracking. <i>IEEE Transactions on Robotics</i> , 2015 , 31, 425-442	6.5	19
142	Scalable Bayesian human-robot cooperation in mobile sensor networks 2008,		17
141	A mixture-model based algorithm for real-time terrain estimation. <i>Journal of Field Robotics</i> , 2006 , 23, 755-775	6.7	17
140	CubeSat design for LEO-based Earth science missions		17
139	Development of a micro pulsed plasma thruster for the Dawgstar nanosatellite 2000,		17
138	Simulation and Flight Test of Autonomous Aircraft Estimation, Planning, and Control Algorithms. <i>Journal of Guidance, Control, and Dynamics</i> , 2007 , 30, 1597-1609	2.1	16
137	RoboFlag games using systems based, hierarchical control		16
136	Tightly-coupled GPS / INS system design for autonomous urban navigation 2008,		14
135	. <i>Proceedings - IEEE International Conference on Robotics and Automation</i> , 2007,		14
134	Statistical modelling of networked human-automation performance using working memory capacity. <i>Ergonomics</i> , 2014 , 57, 295-318	2.9	13
133	Vision-Based Geolocation Tracking System for Uninhabited Aerial Vehicles. <i>Journal of Guidance, Control, and Dynamics</i> , 2010 , 33, 521-532	2.1	13
132	Variational Bayesian Learning of Probabilistic Discriminative Models With Latent Softmax Variables. <i>IEEE Transactions on Signal Processing</i> , 2011 , 59, 3143-3154	4.8	13
131	Fast Consistent Chernoff Fusion of Gaussian Mixtures for Ad Hoc Sensor Networks. <i>IEEE Transactions on Signal Processing</i> , 2012 , 60, 6739-6745	4.8	13
130	A qualitative path planner for robot navigation using human-provided maps. <i>International Journal of Robotics Research</i> , 2013 , 32, 1517-1535	5.7	12
129	On-Line Estimation and Path Planning for Multiple Vehicles in an Uncertain Environment 2002,		12
128	Multiple Agent-Based Autonomy for Satellite Constellations. <i>Lecture Notes in Computer Science</i> , 2000 , 151-165	0.9	11

127	Parametric uncertainty model for control design and analysis. <i>IEEE Transactions on Control Systems Technology</i> , 1999 , 7, 85-96	4.8	11
126	2010 ,		10
125	Development of Structural Uncertainty Models. <i>Journal of Guidance, Control, and Dynamics</i> , 1997 , 20, 841-849	2.1	10
124	Distributed Control of Formation Flying Spacecraft Built on OA 2003 ,		10
123	Posterior representation with a multi-modal likelihood using the gaussian sum filter for localization in a known map. <i>Journal of Field Robotics</i> , 2012 , 29, 240-257	6.7	9
122	Experimental Study of Information Load on Operators of Semi-Autonomous Systems 2003 ,		9
121	Planning Algorithm for Large Satellite Clusters 2002 ,		9
120	Train in Germany, Test in the USA: Making 3D Object Detectors Generalize 2020 ,		9
119	Pedestrian Motion Model Using Non-Parametric Trajectory Clustering and Discrete Transition Points. <i>IEEE Robotics and Automation Letters</i> , 2019 , 4, 2614-2621	4.2	8
118	Decentralized Geolocation and Bias Estimation for Uninhabited Aerial Vehicles with Articulating Cameras. <i>Journal of Guidance, Control, and Dynamics</i> , 2011 , 34, 564-573	2.1	8
117	Flight Results from Tracking Ground Targets Using SeaScan UAVs with Gimbaling Cameras. <i>Proceedings of the American Control Conference</i> , 2007 ,	1.2	8
116	Scalable Sensing, Estimation, and Control Architecture for Large Spacecraft Formations. <i>Journal of Guidance, Control, and Dynamics</i> , 2007 , 30, 289-300	2.1	8
115	Artificial Potential Guided Evolutionary Path Plan for Target Pursuit and Obstacle Avoidance 2003 ,		8
114	Collision avoidance in satellite clusters 2002 ,		8
113	Formation flying mission for the UW Dawgstar satellite		8
112	A micro pulsed plasma thruster (PPT) for the "Dawgstar" spacecraft		8
111	Oh, Now I Get It!*. <i>Journal of Engineering Education</i> , 1999 , 88, 381-383	2.3	8
110	PPT development efforts at PRIMEX Aerospace Company 1999 ,		8

109	Video-guided Camera Control for Target Tracking and Following. <i>IFAC-PapersOnLine</i> , 2019 , 51, 176-183	0.7	7
108	Joint tracking and non-parametric shape estimation of arbitrary extended objects 2015 ,		7
107	Contingency planning over probabilistic hybrid obstacle predictions for autonomous road vehicles 2010 ,		7
106	Variational Bayesian data fusion of multi-class discrete observations with applications to cooperative human-robot estimation 2010 ,		7
105	Probabilistic estimation of Multi-Level terrain maps 2009 ,		7
104	Probabilistic multi-level maps from LIDAR data. <i>International Journal of Robotics Research</i> , 2011 , 30, 1508-1526	0.7	7
103	Multimodal operator decision models 2008 ,		7
102	An approach to magnetic torque attitude control of satellites via 'H/sub /spl infin/' control for LTV systems 2004 ,		7
101	Comparison of Multiple Agent-Based Organizations for Satellite Constellations. <i>Journal of Spacecraft and Rockets</i> , 2002 , 39, 274-283	1.5	7
100	Nonlinear estimation of aircraft models for on-line control customization		7
99	Perception-Informed Autonomous Environment Augmentation with Modular Robots 2018 ,		7
98	Experimental Evaluation and Formal Analysis of High-Level Tasks with Dynamic Obstacle Anticipation on a Full-Sized Autonomous Vehicle. <i>Journal of Field Robotics</i> , 2017 , 34, 897-911	6.7	6
97	. <i>IEEE Transactions on Robotics</i> , 2017 , 33, 313-332	6.5	6
96	LDLS: 3-D Object Segmentation Through Label Diffusion From 2-D Images. <i>IEEE Robotics and Automation Letters</i> , 2019 , 4, 2902-2909	4.2	6
95	Smoothing Algorithm for Nonlinear Systems Using Gaussian Mixture Models. <i>Journal of Guidance, Control, and Dynamics</i> , 2015 , 38, 1438-1451	2.1	6
94	Multi-step prediction of nonlinear Gaussian Process dynamics models with adaptive Gaussian mixtures. <i>International Journal of Robotics Research</i> , 2015 , 34, 1211-1227	5.7	6
93	. <i>Proceedings of the IEEE</i> , 2012 , 100, 604-622	14.3	6
92	Qualitative Relational Mapping for Mobile Robots with Minimal Sensing. <i>Journal of Aerospace Information Systems</i> , 2014 , 11, 497-511	1	6

91	. <i>IEEE Transactions on Systems, Man, and Cybernetics: Systems</i> , 2013 , 43, 886-900	7.3	6
90	Cooperative Estimation Using Mobile Sensor Nodes in the Presence of Communication Loss. <i>Journal of Aerospace Information Systems</i> , 2013 , 10, 114-130	1	6
89	. <i>IEEE Transactions on Aerospace and Electronic Systems</i> , 2011 , 47, 1351-1368	3.7	6
88	Unified mixture-model based terrain estimation with Markov Random Fields 2012 ,		6
87	Discrete and continuous, probabilistic anticipation for autonomous robots in urban environments 2010 ,		6
86	To Drive Is Human. <i>Computer</i> , 2006 , 39, 52-56	1.6	6
85	The MIT [Cornell Collision and Why It Happened. <i>Springer Tracts in Advanced Robotics</i> , 2009 , 509-548	0.5	6
84	Qualitative relational mapping and navigation for planetary rovers. <i>Robotics and Autonomous Systems</i> , 2016 , 83, 73-86	3.5	5
83	An efficient robotic exploration planner with probabilistic guarantees 2016 ,		5
82	Negative observations for multiple hypothesis tracking of dynamic extended objects 2014 ,		5
81	Decentralized Information-Rich Planning and Hybrid Sensor Fusion for Uncertainty Reduction in Human-Robot Missions 2011 ,		5
80	Categorical soft data fusion via variational Bayesian importance sampling with applications to cooperative search 2011 ,		5
79	Cooperative Tracking Flight Test 2007 ,		5
78	Pulsed Plasma Thruster Electromagnetic Compatibility Studies 2003 ,		5
77	Verification procedure for on-orbit controllers for the MIT Middeck Active Control Experiment		5
76	Team Cornell's Skynet: Robust Perception and Planning in an Urban Environment. <i>Springer Tracts in Advanced Robotics</i> , 2009 , 257-304	0.5	5
75	Joint Exploration and Tracking: JET 2018 , 2, 43-48		4
74	Multiple-step prediction using a two stage Gaussian Process model 2014 ,		4

73	Modeling and fusing negative information for dynamic extended multi-object tracking 2013 ,		4
72	A robust qualitative planner for mobile robot navigation using human-provided maps 2011 ,		4
71	An Experimental Evaluation of Bayesian Soft Human Sensor Fusion in Robotic Systems 2012 ,		4
70	Planning for Cooperative Multi-vehicle Reconnaissance. <i>Journal of Aerospace Computing, Information, and Communication</i> , 2007 , 4, 657-675		4
69	Towards Probabilistic Operator-Multiple Robot Decision Models. <i>Proceedings - IEEE International Conference on Robotics and Automation</i> , 2007 ,		4
68	Probabilistic Operator-Multiple Robot Modeling Using Bayesian Network Representation 2007 ,		4
67	Operator Decision Modeling in Cooperative UAV Systems 2006 ,		4
66	Classically Rationalized Low-Order, Robust Structural Controllers. <i>Journal of Guidance, Control, and Dynamics</i> , 1998 , 21, 296-306	2.1	4
65	Unified Terrain Mapping Model With Markov Random Fields. <i>IEEE Transactions on Robotics</i> , 2015 , 31, 290-306	6.5	3
64	HumanRobot Communications of Probabilistic Beliefs via a Dirichlet Process Mixture of Statements. <i>IEEE Transactions on Robotics</i> , 2018 , 34, 1280-1298	6.5	3
63	On estimating simple probabilistic discriminative models with subclasses. <i>Expert Systems With Applications</i> , 2012 , 39, 6659-6664	7.8	3
62	Qualitative Relational Mapping for Planetary Rover Exploration 2013 ,		3
61	Emergence of Pico- and Nanosatellites for Atmospheric Research and Technology Testing 2010 ,		3
60	Execution and analysis of high-level tasks with dynamic obstacle anticipation 2012 ,		3
59	Localization with multi-modal vision measurements in limited GPS environments using Gaussian Sum Filters 2009 ,		3
58	Information-Theoretic Optimization of Periodic Orbits for Persistent Cooperative Geolocation 2008 ,		3
57	Autonomous Cooperative Geo-Location and Coordinated Tracking of Moving Targets 2007 ,		3
56	Validation of Active State Model Based Control Using the SeaScan UAV 2003 ,		3

55	Hybrid Cooperative Reconnaissance Without Communication		3
54	Flight Results from the Middeck Active Control Experiment (MACE). <i>AIAA Journal</i> , 1998 , 36, 432-440	2.1	3
53	MEMS control moment gyroscope design and wafer-based spacecraft chassis study 1999 ,		3
52	Asymptotic linear quadratic control for lightly damped structures. <i>Journal of Guidance, Control, and Dynamics</i> , 1996 , 19, 969-972	2.1	3
51	An Empirical Study of Person Re-Identification with Attributes 2019 ,		3
50	Secure Autonomous Cyber-Physical Systems Through Verifiable Information Flow Control 2018 ,		3
49	Probabilistic qualitative mapping for robots. <i>Robotics and Autonomous Systems</i> , 2017 , 98, 292-306	3.5	2
48	Fully bayesian learning and spatial reasoning with flexible human sensor networks 2015 ,		2
47	Interactive Natural Language-Based Person Search. <i>IEEE Robotics and Automation Letters</i> , 2020 , 5, 1851-1858	1.5	2
46	Q-Link: A general planning architecture for navigation with qualitative relational information. <i>Robotics and Autonomous Systems</i> , 2018 , 108, 51-65	3.5	2
45	Maximum Likelihood Fusion of Stochastic Maps. <i>IEEE Transactions on Signal Processing</i> , 2014 , 62, 2090-2099	1.9	2
44	. <i>IEEE Transactions on Aerospace and Electronic Systems</i> , 2011 , 47, 2779-2791	3.7	2
43	Anticipation as a Method for Overcoming Time Delay in Control of Remote Systems 2010 ,		2
42	Clustering obstacle predictions to improve contingency planning for autonomous road vehicles in congested environments 2011 ,		2
41	Cooperative Geolocation with UAVs Under Communication Constraints 2007 ,		2
40	Bounded Switched Linear Estimator for Smooth Nonlinear Systems. <i>IEEE Transactions on Control Systems Technology</i> , 2007 , 15, 358-368	4.8	2
39	Real Time Optimal Task Allocation in Highly Dynamic Environments 2005 , 131		2
38	Active Model Estimation for Complex Autonomous Systems 2004 , 201-224		2

37	Identification and Parameter Estimation for Control Design. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 1996 , 29, 4138-4143		2
36	The SISO LQG compensator for lightly damped structures		2
35	Classically Rationalized low order robust structural controllers 1994 ,		2
34	Mixed-Integer Linear Programming Models for Multi-Robot Non-Adversarial Search. <i>IEEE Robotics and Automation Letters</i> , 2020 , 5, 6805-6812	4.2	2
33	Human-robot information sharing with structured language generation from probabilistic beliefs 2015 ,		1
32	Variational learning of autoregressive Mixtures of Experts for fully Bayesian hybrid system identification 2011 ,		1
31	Iterative smoothing approach using Gaussian mixture models for nonlinear estimation 2012 ,		1
30	An Empirical Study of Human-Robotic Teams with Three Levels of Autonomy 2009 ,		1
29	Uncertainty effects in model-data correlation 1997 ,		1
28	Actuator and sensor design for controlled structures 1997 ,		1
27	Sensitivity analysis of an optimization-based trajectory planner for autonomous vehicles in urban environments 2008 ,		1
26	A locally most powerful detector for mode perturbation signatures 2008 ,		1
25	State-dependent probabilistic model reduction for evaluation of human-robotic autonomous systems 2007 ,		1
24	Validation of simplified formation models at L2		1
23	Fuel Optimal Maneuvers with Spacecraft Attitude Constraints 2006 ,		1
22	Robust Nonlinear Model Predictive Control with Partial State Information 2003 ,		1
21	Optimal Planning for Tetrahedral Formations Near Elliptical Orbits 2004 ,		1
20	Flight software development for the ION-F formation flying mission		1

19	A docking system for microsattellites based on MEMS actuator arrays 2001 ,		1
18	Online nonlinear guaranteed estimation with application to a high performance aircraft		1
17	Shaping the transmissibility for six-axis active vibration isolators 1999 ,		1
16	On-Orbit Closed-Loop Control Results for the Middeck Active Control Experiment. <i>Journal of Guidance, Control, and Dynamics</i> , 1999 , 22, 267-277	2.1	1
15	The Middeck Active Control Experiment (MACE): using space for technology research and development		1
14	Uncertainty modeling for structural control analysis and synthesis 1996 ,		1
13	Control Analysis for MACE: Methods and Limitations. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 1996 , 29, 1488-1493		1
12	Qualitative Relational Mapping for Autonomous Robotics 2012 ,		1
11	. <i>IEEE Robotics and Automation Letters</i> , 2020 , 5, 6884-6891	4.2	1
10	Exploiting Natural Language for Efficient Risk-Aware Multi-Robot SaR Planning. <i>IEEE Robotics and Automation Letters</i> , 2021 , 6, 3152-3159	4.2	1
9	Estimation and navigation methods with limited information for autonomous urban driving. <i>Engineering Reports</i> , 2019 , 1, e12054	1.2	1
8	Uncertainty Constrained Robotic Exploration: An Integrated Exploration Planner. <i>IEEE Transactions on Control Systems Technology</i> , 2019 , 27, 146-160	4.8	1
7	Autonomous Urban Localization and Navigation with Limited Information 2018 ,		1
6	Formation Optimal Maneuvers Under Inertial Attitude Dynamics. <i>Journal of Spacecraft and Rockets</i> , 2010 , 47, 295-307	1.5	0
5	Joint stereo camera calibration and multi-target tracking using the linear-complexity factorial cumulant filter 2019 ,		0
4	Detection Methods for Mode Perturbation Signatures. <i>IEEE Transactions on Automatic Control</i> , 2012 , 57, 2923-2928	5.9	
3	Reply by the Authors to P. Sengupta. <i>Journal of Guidance, Control, and Dynamics</i> , 2006 , 29, 1486-1486	2.1	
2	Discussion on: A Stacked Model Structure for Off-line Parameter Variation Estimation in Multi-equilibria Nonlinear Systems <i>European Journal of Control</i> , 2006 , 12, 367-370	2.5	

- 1 Overview of Closed Loop Results for MACE. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **1996**, 29, 1494-1499