Branko Ristic

List of Publications by Year
in descending order

139 papers	3,313 citations	201385 27 h-index	189595 50 g-index
143 all docs	143 docs citations	143 times ranked	1750 citing authors

#	ARTICLE	IF	CITATIONS
1	A Tutorial on Bernoulli Filters: Theory, Implementation and Applications. IEEE Transactions on Signal Processing, 2013, 61, 3406-3430.	3.2	248
2	A Metric for Performance Evaluation of Multi-Target Tracking Algorithms. IEEE Transactions on Signal Processing, 2011, 59, 3452-3457.	3.2	225
3	Tracking a manoeuvring target using angle-only measurements: algorithms and performance. Signal Processing, 2003, 83, 1223-1238.	2.1	137
4	A particle filter for joint detection and tracking of color objects. Image and Vision Computing, 2007, 25, 1271-1281.	2.7	113
5	Sensor control for multi-object state-space estimation using random finite sets. Automatica, 2010, 46, 1812-1818.	3.0	109
6	A Note on the Reward Function for PHD Filters with Sensor Control. IEEE Transactions on Aerospace and Electronic Systems, 2011, 47, 1521-1529.	2.6	109
7	Improved SMC implementation of the PHD filter. , 2010, , .		86
8	Information driven search for point sources of gamma radiation. Signal Processing, 2010, 90, 1225-1239.	2.1	77
9	Bernoulli Forward-Backward Smoothing for Joint Target Detection and Tracking. IEEE Transactions on Signal Processing, 2011, 59, 4473-4477.	3.2	77
10	A study of cognitive strategies for an autonomous search. Information Fusion, 2016, 28, 1-9.	11.7	75
11	Polynomial time–frequency distributions and time-varying higher order spectra: Application to the analysis of multicomponent FM signals and to the treatment of multiplicative noise. Signal Processing, 1998, 67, 1-23.	2.1	72
12	<title>Comparison of the particle filter with range-parameterized and modified polar EKFs for angle-only tracking</title>. , 2000, , .		70
13	Bayesian Multi-Object Filtering With Amplitude Feature Likelihood for Unknown Object SNR. IEEE Transactions on Signal Processing, 2010, 58, 26-37.	3.2	68
14	Particle Filters for Random Set Models. , 2013, , .		68
15	Bernoulli Particle/Box-Particle Filters for Detection and Tracking in the Presence of Triple Measurement Uncertainty. IEEE Transactions on Signal Processing, 2012, 60, 2138-2151.	3.2	67
16	The TBM global distance measure for the association of uncertain combat ID declarations. Information Fusion, 2006, 7, 276-284.	11.7	65
17	Detection and parameter estimation of multiple radioactive sources. , 2007, , .		61
18	Radiological Source Detection and Localisation Using Bayesian Techniques. IEEE Transactions on Signal Processing, 2009, 57, 4220-4231.	3.2	61

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19	On target classification using kinematic data. Information Fusion, 2004, 5, 15-21.	11.7	57
20	On Localisation of a Radiological Point Source. , 2007, , .		57
21	Calibration of Multi-Target Tracking Algorithms Using Non-Cooperative Targets. IEEE Journal on Selected Topics in Signal Processing, 2013, 7, 390-398.	7.3	53
22	Evaluation of Bayesian source estimation methods with Prairie Grass observations and Gaussian plume model: A comparison of likelihood functions and distance measures. Atmospheric Environment, 2017, 152, 519-530.	1.9	52
23	Comparison of Recursive Algorithms for Emitter Localisation using TDOA Measurements from a Pair of UAVs. IEEE Transactions on Aerospace and Electronic Systems, 2011, 47, 1723-1732.	2.6	51
24	An Introduction to Box Particle Filtering [Lecture Notes]. IEEE Signal Processing Magazine, 2013, 30, 166-171.	4.6	47
25	Target motion analysis using range-only measurements: algorithms, performance and application to ISAR data. Signal Processing, 2002, 82, 273-296.	2.1	46
26	Kalman filter and joint tracking and classification based on belief functions in the TBM framework. Information Fusion, 2007, 8, 16-27.	11.7	45
27	Target tracking via multiâ€static Doppler shifts. IET Radar, Sonar and Navigation, 2013, 7, 508-516.	0.9	44
28	Bernoulli Particle Filter with Observer Control for Bearings-Only Tracking in Clutter. IEEE Transactions on Aerospace and Electronic Systems, 2012, 48, 2405-2415.	2.6	39
29	Recursive estimation of emitter location using TDOA measurements from two UAVs. , 2007, , .		38
30	Statistical spectrum occupancy prediction for dynamic spectrum access: a classification. Eurasip Journal on Wireless Communications and Networking, 2018, 2018, .	1.5	35
31	Monitoring and prediction of an epidemic outbreak using syndromic observations. Mathematical Biosciences, 2012, 240, 12-19.	0.9	33
32	Bernoulli filter for joint detection and tracking of an extended object in clutter. IET Radar, Sonar and Navigation, 2013, 7, 26-35.	0.9	33
33	Performance evaluation of multi-target tracking using the OSPA metric. , 2010, , .		31
34	Detecting Anomalies from a Multitarget Tracking Output. IEEE Transactions on Aerospace and Electronic Systems, 2014, 50, 798-803.	2.6	29
35	Information driven localisation of a radiological point source. Information Fusion, 2008, 9, 317-326.	11.7	27
36	Autonomous Multi-Robot Search for a Hazardous Source in a Turbulent Environment. Sensors, 2017, 17, 918.	2.1	27

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37	An overview of particle methods for random finite set models. Information Fusion, 2016, 31, 110-126.	11.7	26
38	KLD sampling with Gmapping proposal for Monte Carlo localization of mobile robots. Information Fusion, 2019, 49, 79-88.	11.7	26
39	Least committed basic belief density induced by a multivariate Gaussian: Formulation with applications. International Journal of Approximate Reasoning, 2008, 48, 419-436.	1.9	25
40	Achievable accuracy in Gaussian plume parameter estimation using a network of binary sensors. Information Fusion, 2015, 25, 42-48.	11.7	24
41	Tracking Airborne Targets Occasionally Hidden in the Blind Doppler. , 2002, 12, 383-393.		23
42	Bayesian likelihood-free localisation of a biochemical source using multiple dispersion models. Signal Processing, 2015, 108, 13-24.	2.1	22
43	A Bernoulli Track-Before-Detect Filter for Interacting Targets in Maritime Radar. IEEE Transactions on Aerospace and Electronic Systems, 2021, 57, 1981-1991.	2.6	22
44	A tutorial on uncertainty modeling for machine reasoning. Information Fusion, 2020, 55, 30-44.	11.7	21
45	Autonomous Search for a Diffusive Source in an Unknown Structured Environment. Entropy, 2014, 16, 789-813.	1.1	20
46	Predicting population extinction from early observations of the Lotka–Volterra system. Applied Mathematics and Computation, 2018, 320, 371-379.	1.4	19
47	Robust target motion analysis using the possibility particle filter. IET Radar, Sonar and Navigation, 2019, 13, 18-22.	0.9	19
48	Localisation of a source of hazardous substance dispersion using binary measurements. Atmospheric Environment, 2016, 142, 114-119.	1.9	18
49	Collaborative infotaxis: Searching for a signal-emitting source based on particle filter and Gaussian fitting. Robotics and Autonomous Systems, 2020, 125, 103414.	3.0	18
50	An approach to threat assessment based on evidential networks. , 2007, , .		17
51	Global cost of assignment in the TBM framework for association of uncertain ID reports. Aerospace Science and Technology, 2007, 11, 303-309.	2.5	16
52	Fusion of Spatially Referring Natural Language Statements with Random Set Theoretic Likelihoods. IEEE Transactions on Aerospace and Electronic Systems, 2013, 49, 932-944.	2.6	16
53	Monte Carlo localisation of a mobile robot using a Doppler–Azimuth radar. Automatica, 2018, 97, 161-166.	3.0	16
54	Decentralised multi-platform search for a hazardous source in a turbulent flow. Information Fusion, 2020, 58, 13-23.	11.7	16

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55	Joint Tracking and Classification of Airbourne Objects using Particle Filters and the Continuous Transferable Belief Model. , 2006, , .		15
56	Bayesian Estimation With Imprecise Likelihoods: Random Set Approach. IEEE Signal Processing Letters, 2011, 18, 395-398.	2.1	15
57	Particle filter for joint estimation of multi-object dynamic state and multi-sensor bias. , 2012, , .		15
58	Detection and tracking using wireless sensor networks. , 2007, , .		14
59	Rao–Blackwell dimension reduction applied to hazardous source parameter estimation. Signal Processing, 2017, 132, 177-182.	2.1	14
60	Bernoulli track–before–detect filter for maritime radar. IET Radar, Sonar and Navigation, 2020, 14, 356-363.	0.9	14
61	Search for targets in a risky environment using multi–objective optimisation. IET Radar, Sonar and Navigation, 2019, 13, 123-127.	0.9	13
62	Smoothed state estimation for nonlinear Markovian switching systems. IEEE Transactions on Aerospace and Electronic Systems, 2008, 44, 1309-1325.	2.6	12
63	Joint detection and tracking using multi-static doppler-shift measurements. , 2012, , .		12
64	Feature-based robot navigation using a Doppler-azimuth radar. International Journal of Control, 2017, 90, 888-900.	1.2	11
65	A Closed-Form Estimator for Bearings-Only Fusion of Heterogeneous Passive Sensors. IEEE Transactions on Signal Processing, 2020, 68, 6681-6695.	3.2	11
66	Recursive Bayesian state estimation from Doppler-shift measurements. , 2011, , .		10
67	Target tracking in the framework of possibility theory: The possibilistic Bernoulli filter. Information Fusion, 2020, 62, 81-88.	11.7	10
68	<title>Application of cumulant TVHOS to the analysis of composite FM signals in multiplicative and additive noise</title>. , 1993, , .		9
69	An information gain driven search for a radioactive point source. , 2007, , .		9
70	Spatio-temporal tracking from natural language statements using outer probability theory. Information Sciences, 2018, 463-464, 56-74.	4.0	9
71	Bernoulli filter for tracking maritime targets using point measurements with amplitude. Signal Processing, 2021, 181, 107919.	2.1	9
72	Achievable accuracy in parameter estimation of a Gaussian plume dispersion model. , 2014, , .		8

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73	Gaussian mixture multitarget–multisensor Bernoulli tracker for multistatic sonobuoy fields. IET Radar, Sonar and Navigation, 2017, 11, 1790-1797.	0.9	8
74	The influence of communication bandwidth on target tracking with angle only measurements from two platforms. Signal Processing, 2001, 81, 1801-1811.	2.1	7
75	RFS-SLAM robot: An experimental platform for RFS based occupancy-grid SLAM. , 2017, , .		7
76	Co-operative estimation for source localisation using binary sensors. , 2017, , .		7
77	Non–myopic sensor scheduling for multistatic sonobuoy fields. IET Radar, Sonar and Navigation, 2017, 11, 1770-1775.	0.9	7
78	Analysis of radar allocation requirements for an IRST aided tracking of anti-ship missiles. , 2006, , .		6
79	Experimental verification of evolutionary estimation algorithms for radioactive source localisation. , 2009, , .		6
80	Networks of chemical sensors: A simple mathematical model for optimisation study. , 2009, , .		6
81	Evaluation of a Particle Filter to Track People for Visual Surveillance. , 2009, , .		6
82	Predicting the progress and the peak of an epidemic. , 2009, , .		6
83	Predicting an epidemic based on syndromic surveillance. , 2010, , .		6
84	A Comparative Study of Track-Before-Detect Algorithms in Radar Sea Clutter. , 2019, , .		6
85	Multi-agent collaborative infotaxis search based on cognition difference. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 485202.	0.7	6
86	Exploiting Doppler in Bernoulli Track-Before-Detect for a Scanning Maritime Radar. IEEE Transactions on Aerospace and Electronic Systems, 2022, 58, 720-728.	2.6	6
87	On Proximity-Based Range-Free Node Localisation in Wireless Sensor Networks. , 2006, , .		5
88	Search for a Radioactive Source: Coordinated Multiple Observers. , 2007, , .		5
89	Modelling and Performance Analysis of a Network of Chemical Sensors with Dynamic Collaboration. International Journal of Distributed Sensor Networks, 2012, 8, 656231.	1.3	5
90	Measurement variance ignorant target motion analysis. Information Fusion, 2018, 43, 27-32.	11.7	5

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91	Intermittent Information-Driven Multi-Agent Area-Restricted Search. Entropy, 2020, 22, 635.	1.1	5
92	Satellite Localization of IoT Devices Using Signal Strength and Doppler Measurements. IEEE Wireless Communications Letters, 2022, 11, 1910-1914.	3.2	5
93	Cram?r-Rao Bound for Multiple Target Tracking Using Intensity Measurements. , 2007, , .		4
94	Calibration of tracking systems using detections from non-cooperative targets. , 2012, , .		4
95	Bernoulli Multi-Target Track-Before-Detect for Maritime Radar. , 2020, , .		4
96	Performance assessment of a system for reasoning under uncertainty. Information Fusion, 2021, 71, 11-16.	11.7	4
97	Observer control for bearings-only tracking using possibility functions. Automatica, 2021, 133, 109888.	3.0	4
98	Analysis of Propagation Delay Effects on Bearings-Only Fusion of Heterogeneous Sensors. IEEE Transactions on Signal Processing, 2021, 69, 6488-6503.	3.2	4
99	Performance evaluation of random set based pedestrian tracking algorithms. , 2013, , .		3
100	Integrated Sensor Systems and Data Fusion for Homeland Protection. Academic Press Library in Signal Processing, 2014, , 1245-1320.	0.8	3
101	Target motion analysis with unknown measurement noise variance. , 2017, , .		3
102	Joint passive sensor scheduling for target tracking. , 2017, , .		3
103	Autonomous Exploration and Mapping with RFS Occupancy-Grid SLAM. Entropy, 2018, 20, 456.	1.1	3
104	Bernoulli Filter for Track-Before-Detect: Swerling-1 Target in K-distributed Clutter. , 2019, , .		3
105	Exploiting Doppler in Bernoulli Track-Before-Detect. , 2021, , .		3
106	Target tracking using range-only measurements: application to ISAR mode of Ingara radar. , 2001, 4473, 258.		2
107	<title>Particle filter for tracking linear Gaussian target with nonlinear observations</title>. , 2003, 5096, 59.		2
108	Fusion of uncertain combat identity declarations and implication rules using the belief function theory. , 2005, 5913, 409.		2

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109	The effect of data collection geometry on radiological source localisation. , 2009, , .		2
110	A Pedestrian Multiple Hypothesis Tracker Fusing Head and Body Detections. , 2013, , .		2
111	Addendum for â€œThe TBM global distance measure for the association of uncertain combat ID declarationsâ€. Information Fusion, 2014, 18, 197-198.	11.7	2
112	Efficient update of persistent particles in the SMC-PHD filter. , 2015, , .		2
113	Combining KLD-sampling with Gmapping proposal for grid-based Monte Carlo localization of a moving robot. , 2017, , .		2
114	Comparison of measures of nonlinearity for bearing-only and GMTI filtering. , 2017, , .		2
115	MapperBot/iSCAN: open-source integrated robotic platform and algorithm for 2D mapping. International Journal of Intelligent Robotics and Applications, 2020, 4, 44-56.	1.6	2
116	Trajectory Optimisation for Cooperative Target Tracking with Passive Mobile Sensors. Signals, 2021, 2, 174-188.	1.2	2
117	Comparison of Two Approaches for Detection and Estimation of Radioactive Sources. ISRN Applied Mathematics, 2011, 2011, 1-30.	0.5	2
118	Covariance Cost Functions for Scheduling Multistatic Sonobuoy Fields. , 2018, , .		2
119	Bernoulli trackâ€beforeâ€detect smoothing for maritime radar. IET Radar, Sonar and Navigation, 0, , .	0.9	2
120	Tracking airborne targets occasionally hidden in the blind Doppler. , 2001, , .		1
121	Smoothing for maneuvering target tracking. , 2006, , .		1
122	Integrated detection and tracking of multiple objects with a network of acoustic sensors. , 2007, , .		1
123	Bayesian analysis of finite Gaussian mixtures. , 2010, , .		1
124	Bernoulli filter for detection and tracking of an extended object in clutter. , 2013, , .		1
125	Multi-Object Particle Filters. , 2013, , 53-84.		1
126	Sensor Control for Random Set BasedParticle Filters. , 2013, , 85-119.		1

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127	Multi-Target Tracking. , 2013, , 121-143.		1
128	The Effect of Sensor Modality on Posterior Cramer-Rao Bounds for Simultaneous Localisation and Mapping**This research is supported by DST Group under Collaborative Research Agreements MYIP #5922, MYIP #5923, and by the Defence Science Institute as an initiative of the State Government of Victoria.. IFAC-PapersOnLine, 2016, 49, 242-247.	0.5	1
129	Autonomous UAV Search for an RF Source in Urban Environments. , 2020, , .		1
130	Solving the Datum Search as a Partially Observed Stochastic Game. IEEE Access, 2022, 10, 30762-30769.	2.6	1
131	Least Committed basic belief density induced by a multivariate Gaussian pdf. , 2006, , .		0
132	Autonomous information driven search for a diffusive source in an unknown structured environment. , 2014, , .		0
133	A parametric Bayesian RMC gamma-ray image reconstruction. , 2015, , .		0
134	Feature based moving robot localization using Doppler radar: Achievable accuracy. , 2017, , .		0
135	Learning the Parameters of Spatially-Referring Natural Language Likelihoods in Binary Models. , 2018, , .		0
136	Possibilistic vs Evidential Valuation Algebra Networks. , 2019, , .		0
137	Decentralised Scalable Search for a Hazardous Source in Turbulent Conditions. , 0, , .		0
138	Predicting Extinction of Biological Systems with Competition. , 2015, , 455-466.		0
139	Maritime target tracking from an airborne multi-channel radar. , 2022, , .		0