

Ba-Ngu Vo

List of Publications by Year in descending order

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129
papers

11,560
citations

57758

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docs citations

162
times ranked

2943
citing authors

#	ARTICLE	IF	CITATIONS
1	A Bayesian Filter for Multi-View 3D Multi-Object Tracking With Occlusion Handling. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2022, 44, 2246-2263.	13.9	31
2	Audio-Visual Based Online Multi-Source Separation. IEEE/ACM Transactions on Audio Speech and Language Processing, 2022, 30, 1219-1234.	5.8	2
3	Tracking Cells and Their Lineages Via Labeled Random Finite Sets. IEEE Transactions on Signal Processing, 2021, 69, 5611-5626.	5.3	22
4	Distributed Multi-Object Tracking Under Limited Field of View Sensors. IEEE Transactions on Signal Processing, 2021, 69, 5329-5344.	5.3	21
5	Multi-Objective Multi-Agent Planning for Jointly Discovering and Tracking Mobile Objects. Proceedings of the AAAI Conference on Artificial Intelligence, 2020, 34, 7227-7235.	4.9	10
6	A Solution for Large-Scale Multi-Object Tracking. IEEE Transactions on Signal Processing, 2020, 68, 2754-2769.	5.3	85
7	A Multi-Scan Labeled Random Finite Set Model for Multi-Object State Estimation. IEEE Transactions on Signal Processing, 2019, 67, 4948-4963.	5.3	77
8	Multi-Sensor Multi-Object Tracking With the Generalized Labeled Multi-Bernoulli Filter. IEEE Transactions on Signal Processing, 2019, 67, 5952-5967.	5.3	91
9	Online UAV Path Planning for Joint Detection and Tracking of Multiple Radio-Tagged Objects. IEEE Transactions on Signal Processing, 2019, 67, 5365-5379.	5.3	51
10	A labeled random finite set online multi-object tracker for video data. Pattern Recognition, 2019, 90, 377-389.	8.1	44
11	Multiple Object Tracking in Unknown Backgrounds With Labeled Random Finite Sets. IEEE Transactions on Signal Processing, 2018, 66, 3040-3055.	5.3	58
12	Robust Fusion for Multisensor Multiobject Tracking. IEEE Signal Processing Letters, 2018, 25, 640-644.	3.6	95
13	A Generalized Labeled Multi-Bernoulli Filter With Object Spawning. IEEE Transactions on Signal Processing, 2018, 66, 6177-6189.	5.3	44
14	Multi-Scan Generalized Labeled Multi-Bernoulli Filter. , 2018, , .		12
15	Performance Evaluation for Large-Scale Multi-Target Tracking Algorithms. , 2018, , .		9
16	Model-based learning for point pattern data. Pattern Recognition, 2018, 84, 136-151.	8.1	22
17	An Efficient Implementation of the Generalized Labeled Multi-Bernoulli Filter. IEEE Transactions on Signal Processing, 2017, 65, 1975-1987.	5.3	276
18	Stem cell migration and mechanotransduction on linear stiffness gradient hydrogels. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 5647-5652.	7.1	370

#	ARTICLE	IF	CITATIONS
19	An implementation of the multi-sensor generalized labeled multi-Bernoulli filter via Gibbs sampling. , 2017, , .		13
20	Void Probabilities and Cauchyâ€“Schwarz Divergence for Generalized Labeled Multi-Bernoulli Models. IEEE Transactions on Signal Processing, 2017, 65, 5047-5061.	5.3	73
21	Forward-Backward Smoothing for Hidden Markov Models of Point Pattern Data. , 2017, , .		0
22	A generalized labeled multi-Bernoulli tracker for time lapse cell migration. , 2017, , .		10
23	A labeled random finite set spawning model. , 2017, , .		1
24	OSPA ⁽²⁾ : Using the OSPA metric to evaluate multi-target tracking performance. , 2017, , .		33
25	Model-based classification and novelty detection for point pattern data. , 2016, , .		6
26	Multi-object particle filter revisited. , 2016, , .		3
27	Generalized Labeled Multi-Bernoulli Space-Object Tracking with Joint Prediction and Update. , 2016, , .		5
28	Clustering for point pattern data. , 2016, , .		3
29	Multiple Extended Target Tracking With Labeled Random Finite Sets. IEEE Transactions on Signal Processing, 2016, 64, 1638-1653.	5.3	166
30	Derivation of the PHD filter based on direct Kullback-Leibler divergence minimisation. , 2015, , .		1
31	Bayesian Multi-Target Tracking With Merged Measurements Using Labelled Random Finite Sets. IEEE Transactions on Signal Processing, 2015, 63, 1433-1447.	5.3	98
32	Random finite set multi-target trackers: stochastic geometry for space situational awareness. Proceedings of SPIE, 2015, , .	0.8	0
33	Multi-Target Tracking With Time-Varying Clutter Rate and Detection Profile: Application to Time-Lapse Cell Microscopy Sequences. IEEE Transactions on Medical Imaging, 2015, 34, 1336-1348.	8.9	56
34	Derivation of the PHD and CPHD Filters Based on Direct Kullbackâ€“Leibler Divergence Minimization. IEEE Transactions on Signal Processing, 2015, 63, 5812-5820.	5.3	30
35	Generalized Labeled Multi-Bernoulli Approximation of Multi-Object Densities. IEEE Transactions on Signal Processing, 2015, 63, 5487-5497.	5.3	136
36	The Cauchyâ€“Schwarz Divergence for Poisson Point Processes. IEEE Transactions on Information Theory, 2015, 61, 4475-4485.	2.4	90

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37	Labeled Random Finite Sets and the Bayes Multi-Target Tracking Filter. IEEE Transactions on Signal Processing, 2014, 62, 6554-6567.	5.3	542
38	Advances in Probabilistic Modeling: Applications of Stochastic Geometry [From the Guest Editors]. IEEE Robotics and Automation Magazine, 2014, 21, 21-24.	2.0	2
39	Towards large scale multi-target tracking. Proceedings of SPIE, 2014, , .	0.8	2
40	A Particle Marginal Metropolis-Hastings Multi-Target Tracker. IEEE Transactions on Signal Processing, 2014, 62, 3953-3964.	5.3	36
41	The Labeled Multi-Bernoulli Filter. IEEE Transactions on Signal Processing, 2014, 62, 3246-3260.	5.3	524
42	SLAM Gets a PHD: New Concepts in Map Estimation. IEEE Robotics and Automation Magazine, 2014, 21, 26-37.	2.0	59
43	The Cauchy-Schwarz divergence for poisson point processes. , 2014, , .		12
44	Circumventing the Feature Association Problem in SLAM. IEEE Intelligent Transportation Systems Magazine, 2013, 5, 40-58.	3.8	6
45	A Tutorial on Bernoulli Filters: Theory, Implementation and Applications. IEEE Transactions on Signal Processing, 2013, 61, 3406-3430.	5.3	248
46	Collaborative Multi-vehicle SLAM with moving object tracking. , 2013, , .		23
47	A Partially Uniform Target Birth Model for Gaussian Mixture PHD/CPHD Filtering. IEEE Transactions on Aerospace and Electronic Systems, 2013, 49, 2835-2844.	4.7	42
48	Multitarget Filtering With Unknown Clutter Density Using a Bootstrap GMCPHD Filter. IEEE Signal Processing Letters, 2013, 20, 323-326.	3.6	26
49	Data fusion in 3D vision using a RGB-D data via switching observation model and its application to people tracking. , 2013, , .		6
50	Labeled Random Finite Sets and Multi-Object Conjugate Priors. IEEE Transactions on Signal Processing, 2013, 61, 3460-3475.	5.3	661
51	Robust Multi-Bernoulli Filtering. IEEE Journal on Selected Topics in Signal Processing, 2013, 7, 399-409.	10.8	108
52	Multi-target Track-Before-Detect using labeled random finite set. , 2013, , .		13
53	Introduction to the issue on multitarget tracking. IEEE Journal on Selected Topics in Signal Processing, 2013, 7, 373-375.	10.8	24
54	Visual Tracking in Background Subtracted Image Sequences via Multi-Bernoulli Filtering. IEEE Transactions on Signal Processing, 2013, 61, 392-397.	5.3	117

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55	A Multiple Model Probability Hypothesis Density Tracker for Time-Lapse Cell Microscopy Sequences. Lecture Notes in Computer Science, 2013, 23, 110-122.	1.3	9
56	Closed-Form Solutions to Forward-Backward Smoothing. IEEE Transactions on Signal Processing, 2012, 60, 2-17.	5.3	64
57	Reply to "Comments on 'Joint Detection and Estimation of Multiple Objects from Image Observations'". IEEE Transactions on Signal Processing, 2012, 60, 1540-1541.	5.3	1
58	Extending Bayesian RFS SLAM to multi-vehicle SLAM. , 2012, , .		8
59	Visual tracking of numerous targets via multi-Bernoulli filtering of image data. Pattern Recognition, 2012, 45, 3625-3635.	8.1	135
60	Forward-Backward Probability Hypothesis Density Smoothing. IEEE Transactions on Aerospace and Electronic Systems, 2012, 48, 707-728.	4.7	39
61	Adaptive Target Birth Intensity for PHD and CPHD Filters. IEEE Transactions on Aerospace and Electronic Systems, 2012, 48, 1656-1668.	4.7	234
62	A Metric for Performance Evaluation of Multi-Target Tracking Algorithms. IEEE Transactions on Signal Processing, 2011, 59, 3452-3457.	5.3	225
63	Why Random Finite Sets?. Springer Tracts in Advanced Robotics, 2011, , 11-25.	0.4	2
64	An RFS Theoretic for Bayesian Feature-Based Robotic Mapping. Springer Tracts in Advanced Robotics, 2011, , 45-76.	0.4	0
65	An RFS -Brute Force- Formulation for Bayesian SLAM. Springer Tracts in Advanced Robotics, 2011, , 79-96.	0.4	0
66	Extensions with RFSs in SLAM. Springer Tracts in Advanced Robotics, 2011, , 127-136.	0.4	0
67	Random Finite Sets for Robot Mapping and SLAM. Springer Tracts in Advanced Robotics, 2011, , .	0.4	46
68	Bayesian integration of audio and visual information for multi-target tracking using a CB-member filter. , 2011, , .		21
69	A Random-Finite-Set Approach to Bayesian SLAM. IEEE Transactions on Robotics, 2011, 27, 268-282.	10.3	230
70	A Note on the Reward Function for PHD Filters with Sensor Control. IEEE Transactions on Aerospace and Electronic Systems, 2011, 47, 1521-1529.	4.7	109
71	CPHD Filtering With Unknown Clutter Rate and Detection Profile. IEEE Transactions on Signal Processing, 2011, 59, 3497-3513.	5.3	171
72	Bernoulli Forward-Backward Smoothing for Joint Target Detection and Tracking. IEEE Transactions on Signal Processing, 2011, 59, 4473-4477.	5.3	77

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73	A random finite set conjugate prior and application to multi-target tracking. , 2011, , .		32
74	Mobile Robotics in a Random Finite Set Framework. Lecture Notes in Computer Science, 2011, , 519-528.	1.3	1
75	The forward-backward Probability Hypothesis Density smoother. , 2010, , .		10
76	Sensor control for multi-object state-space estimation using random finite sets. Automatica, 2010, 46, 1812-1818.	5.0	109
77	Performance evaluation of multi-target tracking using the OSPA metric. , 2010, , .		31
78	Rao-Blackwellised PHD SLAM. , 2010, , .		21
79	Error Bounds for Joint Detection and Estimation of a Single Object With Random Finite Set Observation. IEEE Transactions on Signal Processing, 2010, 58, 1493-1506.	5.3	22
80	Improved SMC implementation of the PHD filter. , 2010, , .		86
81	Multi-object filtering from image sequence without detection. , 2010, , .		19
82	Nonlinear Bayesian Filtering Using the Unscented Linear Fractional Transformation Model. IEEE Transactions on Signal Processing, 2010, 58, 477-489.	5.3	24
83	Bayesian Multi-Object Filtering With Amplitude Feature Likelihood for Unknown Object SNR. IEEE Transactions on Signal Processing, 2010, 58, 26-37.	5.3	68
84	Joint Detection and Estimation of Multiple Objects From Image Observations. IEEE Transactions on Signal Processing, 2010, 58, 5129-5141.	5.3	278
85	The Optimal Observability of Partially Observable Markov Decision Processes: Discrete State Space. IEEE Transactions on Automatic Control, 2010, 55, 2793-2798.	5.7	4
86	The Cardinality Balanced Multi-Target Multi-Bernoulli Filter and Its Implementations. IEEE Transactions on Signal Processing, 2009, 57, 409-423.	5.3	635
87	A Gaussian Mixture PHD Filter for Jump Markov System Models. IEEE Transactions on Aerospace and Electronic Systems, 2009, 45, 919-936.	4.7	155
88	Filters for Spatial Point Processes. SIAM Journal on Control and Optimization, 2009, 48, 2275-2295.	2.1	45
89	Data Association and Track Management for the Gaussian Mixture Probability Hypothesis Density Filter. IEEE Transactions on Aerospace and Electronic Systems, 2009, 45, 1003-1016.	4.7	200
90	Bayesian Filtering With Random Finite Set Observations. IEEE Transactions on Signal Processing, 2008, 56, 1313-1326.	5.3	144

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91	A Consistent Metric for Performance Evaluation of Multi-Object Filters. IEEE Transactions on Signal Processing, 2008, 56, 3447-3457.	5.3	930
92	A random set formulation for Bayesian SLAM. , 2008, , .		29
93	Gaussian mixture implementations of probability hypothesis density filters for non-linear dynamical models. , 2008, , .		10
94	Gaussian Particle Implementations of Probability Hypothesis Density Filters. , 2007, , .		33
95	Convergence Analysis of the Gaussian Mixture PHD Filter. IEEE Transactions on Signal Processing, 2007, 55, 1204-1212.	5.3	96
96	Low-Dimensional SDP Formulation for Large Antenna Array Synthesis. IEEE Transactions on Antennas and Propagation, 2007, 55, 1716-1725.	5.1	23
97	A Bayesian Approach to Target Tracking with Finite-Set-Valued Observations. , 2007, , .		2
98	Novel data association schemes for the probability hypothesis density filter. IEEE Transactions on Aerospace and Electronic Systems, 2007, 43, 556-570.	4.7	129
99	Convolution Kernels based Sequential Monte Carlo Approximation of the Probability Hypothesis Density (PHD) Filter. , 2007, , .		6
100	Analytic Implementations of the Cardinalized Probability Hypothesis Density Filter. IEEE Transactions on Signal Processing, 2007, 55, 3553-3567.	5.3	615
101	Efficient Large-Scale Filter/Filterbank Design via LMI Characterization of Trigonometric Curves. IEEE Transactions on Signal Processing, 2007, 55, 4393-4404.	5.3	13
102	Symmetric Orthogonal Complex-Valued Filter Bank Design by Semidefinite Programming. IEEE Transactions on Signal Processing, 2007, 55, 4405-4414.	5.3	8
103	Simulation-based optimal sensor scheduling with application to observer trajectory planning. Automatica, 2007, 43, 817-830.	5.0	40
104	Performance of PHD Based Multi-Target Filters. , 2006, , .		9
105	The GM-PHD Filter Multiple Target Tracker. , 2006, , .		82
106	Blind ML detection of orthogonal space-time block codes: efficient high-performance implementations. IEEE Transactions on Signal Processing, 2006, 54, 738-751.	5.3	88
107	Tracking an unknown time-varying number of speakers using TDOA measurements: a random finite set approach. IEEE Transactions on Signal Processing, 2006, 54, 3291-3304.	5.3	160
108	A Gaussian Mixture PHD Filter for Nonlinear Jump Markov Models. , 2006, , .		24

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109	GM-PHD filter multitarget tracking in sonar images. , 2006, , .		26
110	Convergence of the SMC Implementation of the PHD Filte. Methodology and Computing in Applied Probability, 2006, 8, 265-291.	1.2	45
111	The Cardinalized Probability Hypothesis Density Filter for Linear Gaussian Multi-Target Models. , 2006, , .		29
112	Sequential monte carlo methods for multi-target filtering with random finite sets. IEEE Transactions on Aerospace and Electronic Systems, 2005, 41, 1224-1245.	4.7	953
113	<title>Probability hypothesis density filter versus multiple hypothesis tracking</title>. , 2004, 5429, 284.		39
114	Sequential monte carlo implementation of the phd filter for multi-target tracking. , 2003, , .		129
115	Filter Design With Time Domain Mask Constraints: Theory and Applications. Applied Optimization, 2001, , .	0.4	13
116	Continuous-time envelope constrained filter design with input uncertainty. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2000, 47, 1445-1454.	0.1	6
117	Iterative algorithms for envelope constrained recursive filter design via Laguerre functions. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1999, 46, 1342-1348.	0.1	5
118	Envelope constrained filter with linear interpolator. IEEE Transactions on Signal Processing, 1997, 45, 1405-1414.	5.3	21
119	Bayesian approaches to track existence - IPDA and random sets. , 0, , .		24
120	Stochastic approximation for optimal observer trajectory planning. , 0, , .		6
121	Random finite sets and sequential Monte Carlo methods in multi-target tracking. , 0, , .		13
122	Adaptive envelope-constrained filtering. , 0, , .		0
123	Tracking multiple speakers using random sets. , 0, , .		8
124	Sequential Monte Carlo Methods for Static Parameter Estimation in Random Set Models. , 0, , .		3
125	Particle Filtering for Multi-Target Tracking Using Jump Markov Systems. , 0, , .		0
126	Analog envelop constrained filter with input uncertainty. , 0, , .		0

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127	Simulation-Based Optimal Sensor Scheduling with Application to Observer Trajectory Planning. , 0, , .		7
128	Localizing an Unknown Time-varying Number of Speakers: A Bayesian Random Finite Set Approach. , 0, , .		4
129	Jointly Optimal Precoding/Postcoding for Colored MIMO Systems. , 0, , .		11