MÃ³nica F Bugallo

List of Publications by Year
in descending order

134	1,585	471061	414034
papers	citations	17	32
		h-index	g-index

135	135	135	1191
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Adaptive Importance Sampling: The past, the present, and the future. IEEE Signal Processing Magazine, 2017, 34, 60-79.	4.6	160
2	Target Tracking by Particle Filtering in Binary Sensor Networks. IEEE Transactions on Signal Processing, 2008, 56, 2229-2238.	3.2	153
3	A New Class of Particle Filters for Random Dynamic Systems with Unknown Statistics. Eurasip Journal on Advances in Signal Processing, 2004, 2004, 1.	1.0	75
4	A survey of Monte Carlo methods for parameter estimation. Eurasip Journal on Advances in Signal Processing, 2020, 2020, .	1.0	66
5	Multiple Particle Filtering. , 2007, , .		65
6	Improving population Monte Carlo: Alternative weighting and resampling schemes. Signal Processing, 2017, 131, 77-91.	2.1	62
7	Generalized Multiple Importance Sampling. Statistical Science, 2019, 34, .	1.6	59
8	Efficient Multiple Importance Sampling Estimators. IEEE Signal Processing Letters, 2015, 22, 1757-1761.	2.1	54
9	Performance comparison of EKF and particle filtering methods for maneuvering targets. , 2007, 17, 774-786.		51
10	Adaptive importance sampling in signal processing. , 2015, 47, 36-49.		51
11	Comment on â€œStiffness in stochastic chemically reacting systems: The implicit tau-leaping methodâ€•[J. Chem. Phys. 119, 12784 (2003)]. Journal of Chemical Physics, 2004, 121, 3347-3348.	1.2	43
12	Sensor self-localization with beacon position uncertainty. Signal Processing, 2009, 89, 1144-1154.	2.1	42
13	RSSI-Based Multi-Target Tracking by Cooperative Agents Using Fusion of Cross-Target Information. IEEE Transactions on Signal Processing, 2015, 63, 5033-5044.	3.2	41
14	Target Tracking by Multiple Particle Filtering. , 2007, , .		38
15	Improving Accuracy by Iterated Multiple Particle Filtering. IEEE Signal Processing Letters, 2012, 19, 531-534.	2.1	37
16	Heretical Multiple Importance Sampling. IEEE Signal Processing Letters, 2016, 23, 1474-1478.	2.1	30
17	Sequential Monte Carlo methods under model uncertainty. , 2016, , .		27
18	Elucidating the Auxiliary Particle Filter via Multiple Importance Sampling [Lecture Notes]. IEEE Signal Processing Magazine, 2019, 36, 145-152.	4.6	26

#	ARTICLE	IF	CITATIONS
19	NGSS-based teacher professional development to implement engineering practices in STEM instruction. International Journal of STEM Education, 2021, 8, .	2.7	25
20	Indoor Tracking With RFID Systems. IEEE Journal on Selected Topics in Signal Processing, 2014, 8, 96-105.	7.3	24
21	Joint Model Selection and Parameter Estimation by Population Monte Carlo Simulation. IEEE Journal on Selected Topics in Signal Processing, 2010, 4, 526-539.	7.3	23
22	Efficient linear fusion of partial estimators. , 2018, 78, 265-283.		22
23	Particle filtering for high-dimensional systems. , 2013, , .		21
24	Performance Comparison of Gaussian-Based Filters Using Information Measures. IEEE Signal Processing Letters, 2007, 14, 1020-1023.	2.1	20
25	Target tracking with asynchronous measurements by a network of distributed mobile agents. , 2012, , .		20
26	Non-centralized target tracking with mobile agents. , 2011, , .		17
27	ECG denoising using a dynamical model and a marginalized particle filter. , 2011, , .		17
28	Transcriptional profiling of putative human epithelial stem cells. BMC Genomics, 2008, 9, 359.	1.2	15
29	Tracking with particle filtering in tertiary wireless sensor networks. , 0, , .		14
30	In Search for Improved Auxiliary Particle Filters. , 2018, , .		13
31	Robust Covariance Adaptation in Adaptive Importance Sampling. IEEE Signal Processing Letters, 2018, 25, 1049-1053.	2.1	13
32	Population Monte Carlo schemes with reduced path degeneracy. , 2017, , .		11
33	Sequential Monte Carlo methods for complexity-constrained MAP equalization of dispersive MIMO channels. Signal Processing, 2008, 88, 1017-1034.	2.1	10
34	Target tracking by symbiotic particle filtering. , 2010, , .		10
35	Multiple particle filtering with improved efficiency and performance. , 2015, , .		10
36	Engineering Outreach: Yesterday, Today, and Tomorrow [SP Education]. IEEE Signal Processing Magazine, 2017, 34, 69-100.	4.6	10

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37	A general method for the computation of probabilities in systems of first order chemical reactions. Journal of Chemical Physics, 2005, 122, 104101.	1.2	9
38	Marginalized population Monte Carlo. , 2009, , .		9
39	Particle filtering in high-dimensional systems with Gaussian approximations. , 2014, , .		8
40	Particle Filtering-Based Target Tracking in Binary Sensor Networks Using Adaptive Thresholds. , 2007, , .		7
41	Target tracking by fusion of random measures. Signal, Image and Video Processing, 2007, 1, 149-161.	1.7	7
42	Highlights From the Signal Processing Theory and Methods Technical Committee [In the Spotlight]. IEEE Signal Processing Magazine, 2020, 37, 102-104.	4.6	7
43	Semiblind linear multiuser interference cancellation: a maximum likelihood approach. Signal Processing, 2001, 81, 2041-2057.	2.1	6
44	A sequential Monte Carlo technique for blind synchronization and detection in frequency-flat Rayleigh fading wireless channels. Signal Processing, 2004, 84, 2081-2096.	2.1	6
45	Complex systems and particle filtering. , 2008, , .		6
46	A Variational Adaptive Population Importance Sampler. , 2019, , .		6
47	Gaussian particle filtering in high-dimensional systems. , 2014, , .		5
48	Efficient linear combination of partial Monte Carlo estimators. , 2015, , .		5
49	Stochastic Gradient Population Monte Carlo. IEEE Signal Processing Letters, 2020, 27, 46-50.	2.1	5
50	Bearings-Only Tracking with Biased Measurements. , 2007, , .		4
51	MARIACHI: A multidisciplinary effort to bring science and engineering to the classroom. , 2008, , .		4
52	Hands-on engineering and science: Discovering cosmic rays using radar-based techniques and mobile technology. , 2009, , .		4
53	A pre-college recruitment strategy for electrical and computer engineering study. , 2014, , .		4
54	Estimation of gene expression by a bank of particle filters. , 2015, , .		4

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55	Sequential Monte Carlo sampling for systems with fractional Gaussian processes. , 2015, , .		4
56	Erratum to A New Class of Particle Filters for Random Dynamic Systems with Unknown Statistics. Eurasip Journal on Advances in Signal Processing, 2006, 2006, 1.	1.0	3
57	Simplified Marginalized Particle Filtering for Tracking Multimodal Posteriors. , 2007, , .		3
58	Improved target tracking with particle filtering. , 2009, , .		3
59	Adaptive systems of particle filters. , 2010, , .		3
60	Estimation of multimodal posterior distributions of chirp parameters with population Monte Carlo sampling. , 2012, , .		3
61	Bias correction for distributed Bayesian estimators. , 2015, , .		3
62	A particle-based approach for topology estimation of gene networks. , 2017, , .		3
63	Improved Adaptive Importance Sampling Based on Variational Inference. , 2018, , .		3
64	Recursive Shrinkage Covariance Learning in Adaptive Importance Sampling. , 2019, , .		3
65	Efficient Adaptive Multiple Importance Sampling. , 2019, , .		3
66	NGSS Engineering Practices in Physics Instruction: Building a Night Light. Physics Teacher, 2021, 59, 206-209.	0.2	3
67	Policy Gradient Importance Sampling for Bayesian Inference. IEEE Transactions on Signal Processing, 2021, 69, 4245-4256.	3.2	3
68	On the estimation of random unobserved signals by maximization of target likelihoods and its application to blind timing and phase recovery. , 2005, 15, 171-190.		2
69	Fusion of Information for Sensor Self-Localization by a Monte Carlo Method. , 2006, , .		2
70	Cost-Reference Particle Filtering for Dynamic Systems with Nonlinear and Conditionally Linear States. , 2006, , .		2
71	Tracking with Biased Measurements of Signal Strength Sensors. , 2007, , .		2
72	Measuring the robustness of sequential methods. , 2009, , .		2

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73	Educating engineers of the future. , 2012, , .		2
74	Analysis of the cross-target measurement fusion likelihood for RSSI-based sensors. , 2014, , .		2
75	Multi-target tracking via multiple cost-reference particle filtering. , 2015, , .		2
76	Multiple importance sampling with overlapping sets of proposals. , 2016, , .		2
77	Multiple particle filtering for inference in the presence of state correlation of unknown mixing parameters. , 2017, , .		2
78	Innovation Starts With Education: ICASSP 2019 Education Panel [SP Forum]. IEEE Signal Processing Magazine, 2019, 36, 135-147.	4.6	2
79	Adaptive importance sampling supported by a variational auto-encoder. , 2019, , .		2
80	Engineering Exposure for Pre-College Women: A University-Based Workshop Model. , 2019, , .		2
81	The Power of Peer Mentoring of Undergraduate Women in Engineering: Fostering Persistence through Academic and Social Integration. , 0, , .		2
82	Decision-feedback interference suppression in CDMA systems: a ML-based semiblind approach. Signal Processing, 2003, 83, 2179-2193.	2.1	1
83	Sequential Estimation by Combined cost-Reference Particle and Kalman Filtering. , 2007, , .		1
84	Cost-Based Monte Carlo Sampling Approaches for Sensor Self-Localization Under Beacon Position Uncertainty. , 2007, , .		1
85	Stochastic simulation of coupled chemical reactions using recursive methods. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	1
86	Target Tracking By A New Class Of Cost-Reference Particle Filters. Aerospace Conference Proceedings IEEE, 2008, , .	0.0	1
87	Assessing robustness of particle filtering by the Kolmogorov-Smirnov statistics. , 2009, , .		1
88	Stochastic modeling of second order reactions using a moment propagation method. , 2009, , .		1
89	Evaluation of a method's robustness. , 2010, , .		1
90	Iterated multiple particle filtering. , 2011, , .		1

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91	A stochastic compartmental approach to modeling and simulation of cancer spheroid formation and evolution. , 2011, , .		1
92	Particle filtering for multivariate state-space models. , 2012, , .		1
93	Tracking with RFID asynchronous measurements by particle filtering. , 2013, , .		1
94	Filtering of nonlinear time-series coupled by fractional Gaussian processes. , 2015, , .		1
95	On optimal mobile RSSI-sensor positioning for multi target tracking. , 2015, , .		1
96	Sequential Monte Carlo sampling for correlated latent long-memory time-series. , 2016, , .		1
97	Practical Matlab experience in lecture-based signals and systems courses. , 2017, , .		1
98	Sequential Monte Carlo for inference of latent ARMA time-series with innovations correlated in time. Eurasip Journal on Advances in Signal Processing, 2017, 2017, .	1.0	1
99	Distributed Multiple Gaussian Filtering for Multiple Target Localization in Wireless Sensor Networks. , 2018, , .		1
100	A Probabilistic Approach for Adaptive State-Space Partitioning. , 2018, , .		1
101	Tracking of Objects in a Passive Backscattering Tag-to-Tag Network. , 2018, , .		1
102	A Particle Gibbs Sampling Approach to Topology Inference in Gene Regulatory Networks. , 2020, , .		1
103	Robust Frequency and Phase Estimation for Three-Phase Power Systems Using a Bank of Kalman Filters. IEEE Signal Processing Letters, 2021, 28, 1235-1239.	2.1	1
104	Particle Filtering Under General Regime Switching. , 2021, , .		1
105	Innovation Starts With Education [From the Guest Editors]. IEEE Signal Processing Magazine, 2021, 38, 11-13.	4.6	1
106	Professional Development for High School Guidance Counselors to Facilitate Pre-college STEM Preparation (RTP). , 0, , .		1
107	Switching state-space models for modeling penguin population dynamics. Environmental and Ecological Statistics, 2022, 29, 607-624.	1.9	1
108	Decision-Feedback semiblind channel equalization in Space-Time Coded systems. , 2002, , .		0

#	ARTICLE	IF	CITATIONS
109	Bearings-Only Tracking Based on Multiple Sensor Measurements and Generalized Particle Filtering. , 2006, , .		0
110	A New Approach to Cost-Reference Particle Filtering. Conference Record of the Asilomar Conference on Signals, Systems and Computers, 2007, , .	0.0	0
111	Learning by Simplified Cost-Reference Particle Filtering using Biased Data. IEEE International Workshop on Machine Learning for Signal Processing, 2007, , .	0.0	0
112	A stochastic approach to solving inverse problems of biochemical networks. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	0
113	On new stochastic approaches for solving forward and backward problems of biochemical networks. , 2008, , .		0
114	RLS-assisted cost reference particle filtering. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	0
115	SDR-based radar system for meteor detection. , 2009, , .		0
116	A stochastic approach to studying biochemical reactions without Monte Carlo simulations. , 2009, , .		0
117	Cost-Reference Particle Filters and Fusion of Information. , 2009, , .		0
118	A stochastic model of proliferation of cancer stem cells and its estimation by particle filtering. , 2010, , .		0
119	Prediction of influenza rates by particle filtering. , 2013, , .		0
120	On sample generation and weight calculation in multiple importance sampling. , 2015, , .		0
121	Real-time self-tracking in the Internet of Things. , 2015, , .		0
122	A new strategy for effective learning in population Monte Carlo sampling. , 2016, , .		0
123	Learning Structured Neural Dynamics From Single Trial Population Recording. , 2018, , .		0
124	A Novel Particle Filter for High-Dimensional Systems Using Penalized Perturbations. , 2019, , .		0
125	Enhanced Mixture Population Monte Carlo Via Stochastic Optimization and Markov Chain Monte Carlo Sampling. , 2020, , .		0
126	EUSIPCO 2019: A Chronicle of the 27th European Signal Processing Conference in A Coruna, Spain: Looking Into the Future of Signal Processing [Conference Highlights]. IEEE Signal Processing Magazine, 2020, 37, 163-168.	4.6	0

#	Article	IF	Citations
127	Adaptive Importance Sampling Via Auto-Regressive Generative Models and Gaussian Processes. , 2021, 2021, 5584-5588.		0
128	Statistical Signal Processing for Cancer Stem Cell Formation. , 2014, , 465-475.		0
129	A Mixed Methods Analysis of Goals and the Impact of Peer Mentoring for Participants in the WISE Honors Program. , 0, , .		0
130	University-Designed Middle School Science Experiences Aligned with NGSS. , 0, , .		0
131	Board 120: University-based Engineering Training of High School Science Teachers to Implement the Next Generation Science Standards (Work in progress). , 0, , .		0
132	Peer Mentoring of Undergraduate Women in Engineering as a Mechanism for Leadership Development. , 0, , .		0
133	Pre-college Electrical Engineering Outreach: The Design of a Home Security System (Evaluation). , 0, , .		0
134	Women in Science and Engineering: A Framework for an Honors Undergraduate Curriculum. , 0, , .		0