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	Switching state-space models for modeling penguin population dynamics. Environmental and Ecological Statistics, 2022, 29, 607-624.	1.9	1
2	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
3	Particle Filtering Under General Regime Switching. , 2021, , .		1
4	NGSS Engineering Practices in Physics Instruction: Building a Night Light. Physics Teacher, 2021, 59, 206-209.	0.2	3
5	NGSS-based teacher professional development to implement engineering practices in STEM instruction. International Journal of STEM Education, 2021, 8, .	2.7	25
6	Innovation Starts With Education [From the Guest Editors]. IEEE Signal Processing Magazine, 2021, 38, 11-13.	4.6	1
7	Adaptive Importance Sampling Via Auto-Regressive Generative Models and Gaussian Processes. , 2021, 2021, 5584-5588.		0
8	Policy Gradient Importance Sampling for Bayesian Inference. IEEE Transactions on Signal Processing, 2021, 69, 4245-4256.	3.2	3
9	Stochastic Gradient Population Monte Carlo. IEEE Signal Processing Letters, 2020, 27, 46-50.	2.1	5
10	A survey of Monte Carlo methods for parameter estimation. Eurasip Journal on Advances in Signal Processing, 2020, 2020, .	1.0	66
11	A Particle Gibbs Sampling Approach to Topology Inference in Gene Regulatory Networks. , 2020, , .		1
12	Enhanced Mixture Population Monte Carlo Via Stochastic Optimization and Markov Chain Monte Carlo Sampling. , 2020, , .		0
13	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
14	Highlights From the Signal Processing Theory and Methods Technical Committee [In the Spotlight]. IEEE Signal Processing Magazine, 2020, 37, 102-104.	4.6	7
15	A Variational Adaptive Population Importance Sampler. , 2019, , .		6
16	Innovation Starts With Education: ICASSP 2019 Education Panel [SP Forum]. IEEE Signal Processing Magazine, 2019, 36, 135-147.	4.6	2
17	Generalized Multiple Importance Sampling. Statistical Science, 2019, 34, .	1.6	59
18	A Novel Particle Filter for High-Dimensional Systems Using Penalized Perturbations. , 2019, , .		0

#	ARTICLE	IF	CITATIONS
19	Recursive Shrinkage Covariance Learning in Adaptive Importance Sampling. , 2019, , .		3
20	Efficient Adaptive Multiple Importance Sampling. , 2019, , .		3
21	Adaptive importance sampling supported by a variational auto-encoder. , 2019, , .		2
22	Elucidating the Auxiliary Particle Filter via Multiple Importance Sampling [Lecture Notes]. IEEE Signal Processing Magazine, 2019, 36, 145-152.	4.6	26
23	Engineering Exposure for Pre-College Women: A University-Based Workshop Model. , 2019, , .		2
24	Distributed Multiple Gaussian Filtering for Multiple Target Localization in Wireless Sensor Networks. , 2018, , .		1
25	A Probabilistic Approach for Adaptive State-Space Partitioning. , 2018, , .		1
26	Learning Structured Neural Dynamics From Single Trial Population Recording. , 2018, , .		0
27	In Search for Improved Auxiliary Particle Filters. , 2018, , .		13
28	Improved Adaptive Importance Sampling Based on Variational Inference. , 2018, , .		3
29	Tracking of Objects in a Passive Backscattering Tag-to-Tag Network. , 2018, , .		1
30	Robust Covariance Adaptation in Adaptive Importance Sampling. IEEE Signal Processing Letters, 2018, 25, 1049-1053.	2.1	13
31	Efficient linear fusion of partial estimators. , 2018, 78, 265-283.		22
32	Engineering Outreach: Yesterday, Today, and Tomorrow [SP Education]. IEEE Signal Processing Magazine, 2017, 34, 69-100.	4.6	10
33	Practical Matlab experience in lecture-based signals and systems courses. , 2017, , .		1
34	Adaptive Importance Sampling: The past, the present, and the future. IEEE Signal Processing Magazine, 2017, 34, 60-79.	4.6	160
35	Improving population Monte Carlo: Alternative weighting and resampling schemes. Signal Processing, 2017, 131, 77-91.	2.1	62
36	A particle-based approach for topology estimation of gene networks. , 2017, , .		3

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37	Multiple particle filtering for inference in the presence of state correlation of unknown mixing parameters. , 2017, , .		2
38	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
39	Population Monte Carlo schemes with reduced path degeneracy. , 2017, , .		11
40	Multiple importance sampling with overlapping sets of proposals. , 2016, , .		2
41	A new strategy for effective learning in population Monte Carlo sampling. , 2016, , .		0
42	Heretical Multiple Importance Sampling. IEEE Signal Processing Letters, 2016, 23, 1474-1478.	2.1	30
43	Sequential Monte Carlo methods under model uncertainty. , 2016, , .		27
44	Sequential Monte Carlo sampling for correlated latent long-memory time-series. , 2016, , .		1
45	Estimation of gene expression by a bank of particle filters. , 2015, , .		4
46	Multi-target tracking via multiple cost-reference particle filtering. , 2015, , .		2
47	Multiple particle filtering with improved efficiency and performance. , 2015, , .		10
48	Bias correction for distributed Bayesian estimators. , 2015, , .		3
49	Efficient linear combination of partial Monte Carlo estimators. , 2015, , .		5
50	Filtering of nonlinear time-series coupled by fractional Gaussian processes. , 2015, , .		1
51	On sample generation and weight calculation in multiple importance sampling. , 2015, , .		0
52	On optimal mobile RSSI-sensor positioning for multi target tracking. , 2015, , .		1
53	Sequential Monte Carlo sampling for systems with fractional Gaussian processes. , 2015, , .		4
54	Efficient Multiple Importance Sampling Estimators. IEEE Signal Processing Letters, 2015, 22, 1757-1761.	2.1	54

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55	Real-time self-tracking in the Internet of Things. , 2015, , .		0
56	Adaptive importance sampling in signal processing. , 2015, 47, 36-49.		51
57	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
58	A pre-college recruitment strategy for electrical and computer engineering study. , 2014, , .		4
59	Particle filtering in high-dimensional systems with Gaussian approximations. , 2014, , .		8
60	Analysis of the cross-target measurement fusion likelihood for RSSI-based sensors. , 2014, , .		2
61	Gaussian particle filtering in high-dimensional systems. , 2014, , .		5
62	Indoor Tracking With RFID Systems. IEEE Journal on Selected Topics in Signal Processing, 2014, 8, 96-105.	7.3	24
63	Statistical Signal Processing for Cancer Stem Cell Formation. , 2014, , 465-475.		0
64	Prediction of influenza rates by particle filtering. , 2013, , .		0
65	Particle filtering for high-dimensional systems. , 2013, , .		21
66	Tracking with RFID asynchronous measurements by particle filtering. , 2013, , .		1
67	Estimation of multimodal posterior distributions of chirp parameters with population Monte Carlo sampling. , 2012, , .		3
68	Target tracking with asynchronous measurements by a network of distributed mobile agents. , 2012, , .		20
69	Educating engineers of the future. , 2012, , .		2
70	Particle filtering for multivariate state-space models. , 2012, , .		1
71	Improving Accuracy by Iterated Multiple Particle Filtering. IEEE Signal Processing Letters, 2012, 19, 531-534.	2.1	37
72	Iterated multiple particle filtering. , 2011, , .		1

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73	A stochastic compartmental approach to modeling and simulation of cancer spheroid formation and evolution. , 2011, , .		1
74	Non-centralized target tracking with mobile agents. , 2011, , .		17
75	ECG denoising using a dynamical model and a marginalized particle filter. , 2011, , .		17
76	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
77	Evaluation of a method's robustness. , 2010, , .		1
78	Adaptive systems of particle filters. , 2010, , .		3
79	A stochastic model of proliferation of cancer stem cells and its estimation by particle filtering. , 2010, , .		0
80	Target tracking by symbiotic particle filtering. , 2010, , .		10
81	Measuring the robustness of sequential methods. , 2009, , .		2
82	Assessing robustness of particle filtering by the Kolmogorov-Smirnov statistics. , 2009, , .		1
83	Marginalized population Monte Carlo. , 2009, , .		9
84	Hands-on engineering and science: Discovering cosmic rays using radar-based techniques and mobile technology. , 2009, , .		4
85	Improved target tracking with particle filtering. , 2009, , .		3
86	Stochastic modeling of second order reactions using a moment propagation method. , 2009, , .		1
87	Sensor self-localization with beacon position uncertainty. Signal Processing, 2009, 89, 1144-1154.	2.1	42
88	SDR-based radar system for meteor detection. , 2009, , .		0
89	A stochastic approach to studying biochemical reactions without Monte Carlo simulations. , 2009, , .		0
90	Cost-Reference Particle Filters and Fusion of Information. , 2009, , .		0

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91	Sequential Monte Carlo methods for complexity-constrained MAP equalization of dispersive MIMO channels. Signal Processing, 2008, 88, 1017-1034.	2.1	10
92	Transcriptional profiling of putative human epithelial stem cells. BMC Genomics, 2008, 9, 359.	1.2	15
93	Target Tracking by Particle Filtering in Binary Sensor Networks. IEEE Transactions on Signal Processing, 2008, 56, 2229-2238.	3.2	153
94	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
95	On new stochastic approaches for solving forward and backward problems of biochemical networks. , 2008, , .		0
96	Complex systems and particle filtering. , 2008, , .		6
97	RLS-assisted cost reference particle filtering. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	0
98	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
99	MARIACHI: A multidisciplinary effort to bring science and engineering to the classroom. , 2008, , .		4
100	Target Tracking By A New Class Of Cost-Reference Particle Filters. Aerospace Conference Proceedings IEEE, 2008, , .	0.0	1
101	Tracking with Biased Measurements of Signal Strength Sensors. , 2007, , .		2
102	Sequential Estimation by Combined cost-Reference Particle and Kalman Filtering. , 2007, , .		1
103	Cost-Based Monte Carlo Sampling Approaches for Sensor Self-Localization Under Beacon Position Uncertainty. , 2007, , .		1
104	Simplified Marginalized Particle Filtering for Tracking Multimodal Posteriors. , 2007, , .		3
105	Target Tracking by Multiple Particle Filtering. , 2007, , .		38
106	Particle Filtering-Based Target Tracking in Binary Sensor Networks Using Adaptive Thresholds. , 2007, , .		7
107	A New Approach to Cost-Reference Particle Filtering. Conference Record of the Asilomar Conference on Signals, Systems and Computers, 2007, , .	0.0	0
108	Learning by Simplified Cost-Reference Particle Filtering using Biased Data. IEEE International Workshop on Machine Learning for Signal Processing, 2007, , .	0.0	0

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109	Bearings-Only Tracking with Biased Measurements. , 2007, , .		4
110	Performance Comparison of Gaussian-Based Filters Using Information Measures. IEEE Signal Processing Letters, 2007, 14, 1020-1023.	2.1	20
111	Multiple Particle Filtering. , 2007, , .		65
112	Performance comparison of EKF and particle filtering methods for maneuvering targets. , 2007, 17, 774-786.		51
113	Target tracking by fusion of random measures. Signal, Image and Video Processing, 2007, 1, 149-161.	1.7	7
114	Fusion of Information for Sensor Self-Localization by a Monte Carlo Method. , 2006, , .		2
115	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
116	Bearings-Only Tracking Based on Multiple Sensor Measurements and Generalized Particle Filtering. , 2006, , .		0
117	Cost-Reference Particle Filtering for Dynamic Systems with Nonlinear and Conditionally Linear States. , 2006, , .		2
118	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
119	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
120	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
121	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
122	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
123	Decision-feedback interference suppression in CDMA systems: a ML-based semiblind approach. Signal Processing, 2003, 83, 2179-2193.	2.1	1
124	Decision-Feedback semiblind channel equalization in Space-Time Coded systems. , 2002, , .		0
125	Semiblind linear multiuser interference cancellation: a maximum likelihood approach. Signal Processing, 2001, 81, 2041-2057.	2.1	6
126	Tracking with particle filtering in tertiary wireless sensor networks. , 0, , .		14

#	ARTICLE	IF	CITATIONS
127	Professional Development for High School Guidance Counselors to Facilitate Pre-college STEM Preparation (RTP). , 0, , .		1
128	A Mixed Methods Analysis of Goals and the Impact of Peer Mentoring for Participants in the WISE Honors Program. , 0, , .		0
129	University-Designed Middle School Science Experiences Aligned with NGSS. , 0, , .		0
130	Board 120: University-based Engineering Training of High School Science Teachers to Implement the Next Generation Science Standards (Work in progress). , 0, , .		0
131	Peer Mentoring of Undergraduate Women in Engineering as a Mechanism for Leadership Development. , 0, , .		0
132	Pre-college Electrical Engineering Outreach: The Design of a Home Security System (Evaluation). , 0, , .		0
133	The Power of Peer Mentoring of Undergraduate Women in Engineering: Fostering Persistence through Academic and Social Integration. , 0, , .		2
134	Women in Science and Engineering: A Framework for an Honors Undergraduate Curriculum. , 0, , .		0