

Ali Taylan Cemgil

List of Publications by Year in descending order

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128
papers

1,477
citations

516215

16
h-index

395343

33
g-index

132
all docs

132
docs citations

132
times ranked

1230
citing authors

#	ARTICLE	IF	CITATIONS
1	Bayesian Inference for Nonnegative Matrix Factorisation Models. Computational Intelligence and Neuroscience, 2009, 2009, 1-17.	1.1	217
2	Link prediction in heterogeneous data via generalized coupled tensor factorization. Data Mining and Knowledge Discovery, 2015, 29, 203-236.	2.4	105
3	On tempo tracking: Tempogram Representation and Kalman filtering. Journal of New Music Research, 2000, 29, 259-273.	0.6	85
4	A generative model for music transcription. IEEE Transactions on Audio Speech and Language Processing, 2006, 14, 679-694.	3.8	81
5	Bayesian extensions to non-negative matrix factorisation for audio signal modelling. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	72
6	Model-Based Localization and Tracking Using Bluetooth Low-Energy Beacons. Sensors, 2017, 17, 2484.	2.1	68
7	Variational and stochastic inference for Bayesian source separation. , 2007, 17, 891-913.		53
8	Algorithms for probabilistic latent tensor factorization. Signal Processing, 2012, 92, 1853-1863.	2.1	50
9	Gamma Markov Random Fields for Audio Source Modeling. IEEE Transactions on Audio Speech and Language Processing, 2010, 18, 589-601.	3.8	46
10	Rhythm Quantization for Transcription. Computer Music Journal, 2000, 24, 60-76.	0.3	45
11	Graphical Models for Time-Series. IEEE Signal Processing Magazine, 2010, , .	4.6	39
12	Alpha-Stable Matrix Factorization. IEEE Signal Processing Letters, 2015, 22, 2289-2293.	2.1	27
13	Bayesian Model Comparison With the g-Prior. IEEE Transactions on Signal Processing, 2014, 62, 225-238.	3.2	26
14	Approximate Bayesian methods for kernel-based object tracking. Computer Vision and Image Understanding, 2009, 113, 743-749.	3.0	25
15	Conjugate Gamma Markov Random Fields for Modelling Nonstationary Sources. , 2007, , 697-705.		24
16	Mixtures of Gamma Priors for Non-negative Matrix Factorization Based Speech Separation. Lecture Notes in Computer Science, 2009, , 646-653.	1.0	19
17	Prior Structures for Time-Frequency Energy Distributions. , 2007, , .		18
18	DTW Based Clustering to Improve Hand Gesture Recognition. Lecture Notes in Computer Science, 2011, , 72-81.	1.0	18

#	ARTICLE	IF	CITATIONS
19	Single-Channel Speech-Music Separation for Robust ASR With Mixture Models. IEEE Transactions on Audio Speech and Language Processing, 2013, 21, 725-736.	3.8	18
20	Variational Nonnegative Matrix Factorisation. , 2009, , .		17
21	Unsupervised single-channel source separation using bayesian NMF. , 2009, , .		17
22	Adaptive Sequential Monte Carlo Filter for Indoor Positioning and Tracking With Bluetooth Low Energy Beacons. IEEE Access, 2021, 9, 37022-37038.	2.6	17
23	Generative model based polyphonic music transcription. , 0, , .		16
24	Audio Source Separation Using Variational Autoencoders and Weak Class Supervision. IEEE Signal Processing Letters, 2019, 26, 1349-1353.	2.1	16
25	A Bayesian Deconvolution Approach for Receiver Function Analysis. IEEE Transactions on Geoscience and Remote Sensing, 2010, 48, 4151-4163.	2.7	15
26	Bayesian Interpolation and Parameter Estimation in a Dynamic Sinusoidal Model. IEEE Transactions on Audio Speech and Language Processing, 2011, 19, 1986-1998.	3.8	14
27	Score guided audio restoration via generalised coupled tensor factorisation. , 2012, , .		13
28	Annealed SMC Samplers for Nonparametric Bayesian Mixture Models. IEEE Signal Processing Letters, 2011, 18, 3-6.	2.1	12
29	Sequential Inference of Rhythmic Structure in Musical Audio. , 2007, , .		11
30	Automated quantification of cellular traffic in living cells. Journal of Neuroscience Methods, 2009, 178, 378-384.	1.3	11
31	Non-negative tensor factorization models for Bayesian audio processing. , 2015, 47, 178-191.		11
32	An indoor localization dataset and data collection framework with high precision position annotation. Pervasive and Mobile Computing, 2022, 81, 101554.	2.1	11
33	Generative Spectrogram Factorization Models for Polyphonic Piano Transcription. IEEE Transactions on Audio Speech and Language Processing, 2010, 18, 519-527.	3.8	10
34	Probabilistic sequence clustering with spectral learning. , 2014, 29, 1-19.		10
35	An application of deep learning for trade signal prediction in financial markets. , 2015, , .		9
36	A Network Monitoring System for High Speed Network Traffic. , 2016, , .		9

#	ARTICLE	IF	CITATIONS
37	Data Sharing via Differentially Private Coupled Matrix Factorization. ACM Transactions on Knowledge Discovery From Data, 2020, 14, 1-27.	2.5	9
38	Forecasting intermittent and sparse time series: A unified probabilistic framework via deep renewal processes. PLoS ONE, 2021, 16, e0259764.	1.1	9
39	Learning mixed divergences in coupled matrix and tensor factorization models. , 2015, , .		7
40	Inferring Metrical Structure in Music Using Particle Filters. IEEE/ACM Transactions on Audio Speech and Language Processing, 2015, , 1-1.	4.0	7
41	Joint parameter and state estimation of the hemodynamic model by iterative extended Kalman smoother. Biomedical Signal Processing and Control, 2016, 24, 47-62.	3.5	7
42	CLUSTERnGO: a user-defined modelling platform for two-stage clustering of time-series data. Bioinformatics, 2016, 32, 388-397.	1.8	7
43	Approximate Bayesian computation techniques for optical characterization of nanoparticle clusters. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2018, 35, 88.	0.8	7
44	Probabilistic Latent Tensor Factorization. Lecture Notes in Computer Science, 2010, , 346-353.	1.0	7
45	A Hybrid Graphical Model for Robust Feature Extraction from Video. , 0, , .		6
46	Probabilistic latent tensor factorization framework for audio modeling. , 2011, , .		6
47	Efficient Markov chain Monte Carlo inference in composite models with space alternating data augmentation. , 2011, , .		6
48	Political interest and tendency prediction from microblog data. , 2014, , .		6
49	Gaussian process and design of experiments for surrogate modeling of optical properties of fractal aggregates. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 239, 106643.	1.1	6
50	Online multicamera tracking with a switching state-space model. , 2004, , .		5
51	Multi-Object Tracking of Sinusoidal Components in Audio with the Gaussian Mixture Probability Hypothesis Density Filter. , 2007, , .		5
52	Annealed SMC Samplers for Dirichlet Process Mixture Models. , 2010, , .		5
53	Real-Time Recognition of Percussive Sounds by a Model-Based Method. Eurasip Journal on Advances in Signal Processing, 2011, 2011, .	1.0	5
54	Model based multiple audio sequence alignment. , 2011, , .		5

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55	A generalized Bayesian model for tracking long metrical cycles in acoustic music signals. , 2016, , .		5
56	Parallelizing particle filters with butterfly interactions. Scandinavian Journal of Statistics, 2020, 47, 361-396.	0.9	5
57	Bayesian Inference for Nonnegative Matrix Factor Deconvolution Models. , 2010, , .		4
58	Markov Chain Monte Carlo inference for probabilistic latent tensor factorization. , 2012, , .		4
59	Bayesian changepoint and time-varying parameter learning in regime switching volatility models. , 2015, 40, 198-212.		4
60	The comparison of the performances of global nearest neighbor and probability hypothesis density filter for varying clutter rates. , 2016, , .		4
61	Multitarget tracking performance metric: deficiency aware subpattern assignment. IET Radar, Sonar and Navigation, 2018, 12, 373-381.	0.9	4
62	Clustering Event Streams With Low Rank Hawkes Processes. IEEE Signal Processing Letters, 2020, 27, 1575-1579.	2.1	4
63	Catalog-based single-channel speech-music separation. , 0, , .		4
64	Efficient variational inference for the dynamic harmonic model. , 0, , .		3
65	A hybrid method for deconvolution of Bernoulli-Gaussian processes. , 2009, , .		3
66	A novel adaptive filter algorithm for tracking of chaotic time series. , 2011, , .		3
67	Gain estimation approaches in catalog-based single-channel speech-music separation. , 2011, , .		3
68	Generalized coupled symmetric tensor factorization for link prediction. , 2013, , .		3
69	A Probabilistic Model Based Approach For Aligning Multiple Audio Sequences. IEEE/ACM Transactions on Audio Speech and Language Processing, 2015, , 1-1.	4.0	3
70	Detection of (D)DOS attacks based on online change point analysis. , 2016, , .		3
71	Joint state and parameter estimation of the hemodynamic model by particle smoother expectation maximization method. Journal of Neural Engineering, 2016, 13, 046010.	1.8	3
72	Sequential Inference for Factorial Changepoint Models. , 2006, , .		2

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73	Strategies for Sequential Inference in Factorial Switching State Space Models. , 2007, , .		2
74	Inference and estimation in probabilistic time series models. , 0, , 1-31.		2
75	Catalog-based single-channel speech-music separation for automatic speech recognition. , 2012, , .		2
76	An Online Expectation-Maximisation Algorithm for Nonnegative Matrix Factorisation Models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 494-499.	0.4	2
77	SMC samplers for multiresolution audio sequence alignment. , 2013, , .		2
78	Attack detection in VOIP networks using Bayesian multiple change-point models. , 2016, , .		2
79	Efficient Bayesian Model Selection in PARAFAC via Stochastic Thermodynamic Integration. IEEE Signal Processing Letters, 2018, 25, 725-729.	2.1	2
80	Sum Conditioned Poisson Factorization. Lecture Notes in Computer Science, 2018, , 24-35.	1.0	2
81	Discriminative tensor decomposition with large margin. , 2019, 95, 102584.		2
82	Bayesian Allocation Model: Marginal Likelihood-Based Model Selection for Count Tensors. IEEE Journal on Selected Topics in Signal Processing, 2021, 15, 560-573.	7.3	2
83	Bayesian methods for multimedia signal processing. , 2007, , .		1
84	Bayesian hierarchical models and inference for musical audio processing. , 2008, , .		1
85	Probabilistic Models for Real-time Acoustic Event Detection with Application to Pitch Tracking. Journal of New Music Research, 2011, 40, 175-185.	0.6	1
86	SVD-based polyphonic music transcription. , 2012, , .		1
87	Probabilistic interpolative decomposition. , 2012, , .		1
88	Optimal contraction order of multiple tensors. , 2013, , .		1
89	Randomized Matrix Decompositions and Exemplar Selection in Large Dictionaries for Polyphonic Piano Transcription. Journal of New Music Research, 2014, 43, 255-265.	0.6	1
90	A practical introduction to butterfly and adaptive resampling in Sequential Monte Carlo. IFAC-PapersOnLine, 2015, 48, 787-792.	0.5	1

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91	DRENAJ: Distributed social media data collection system. , 2015, , .		1
92	Parallelized Stochastic Gradient Markov Chain Monte Carlo algorithms for non-negative matrix factorization. , 2017, , .		1
93	Malicious users discrimination in organized attacks using structured sparsity. , 2017, , .		1
94	A real-time SIP network simulation and monitoring system. SoftwareX, 2018, 8, 21-25.	1.2	1
95	Estimating Network Flow Length Distributions via Bayesian Nonnegative Tensor Factorization. Wireless Communications and Mobile Computing, 2019, 2019, 1-17.	0.8	1
96	A framework for parallel second order incremental optimization algorithms for solving partially separable problems. Computational Optimization and Applications, 2019, 72, 675-705.	0.9	1
97	Auxiliary Particle Filtering based Multiple Changepoint Detection in Volatility Models. , 2013, , .		1
98	Extraction of Temporal Patterns in Multi-rate and Multi-modal Datasets. Lecture Notes in Computer Science, 2015, , 135-142.	1.0	1
99	Generative Model for Human Motion Recognition. Proc Int Symp Image Signal Process Anal, 2007, , .	0.0	0
100	Gamma Markov Random fields for audio source modelling. , 2009, , .		0
101	Model based audio sequence alignment. , 2011, , .		0
102	Coupled tensor factorization models for polyphonic music transcription. , 2012, , .		0
103	Infinite mixture of piecewise linear sequences. , 2012, , .		0
104	Parallel generalized tensor multiplication. , 2012, , .		0
105	Multiple change point analysis in random graph series. , 2012, , .		0
106	Importance sampling for model-based reinforcement learning. , 2012, , .		0
107	Combined perception and control for timing in robotic music performances. Eurasip Journal on Audio, Speech, and Music Processing, 2012, 2012, .	1.3	0
108	A factorization based recommender system for online services. , 2013, , .		0

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109	ID for data with multiple clusters. , 2013, , .		0
110	Sequential Monte Carlo samplers for model-based reinforcement learning. , 2013, , .		0
111	Spectral learning of mixtures of Hidden Markov Models. , 2013, , .		0
112	Model based audio sequence alignment based on deterministic similarity methods. , 2013, , .		0
113	Low rank matrix completion via random sampling. , 2013, , .		0
114	Tempo tracking by using a parallel particle filter on the GPU. , 2014, , .		0
115	Comparison of sampling strategies for flow length estimation. , 2014, , .		0
116	Query ranking strategies in probabilistic expert systems. , 2014, , .		0
117	Analysis of effect of single-channel speech-music separation using NMF to automatic speech recognition. , 2014, , .		0
118	Sequential Monte Carlo samplers for marginal likelihood computation in multiplicative exponential noise models. , 2014, , .		0
119	Section-level modeling of musical audio for linking performances to scores in Turkish makam music. , 2015, , .		0
120	Dialogue enhancement using kernel additive modelling. , 2015, , .		0
121	A probabilistic SIP network simulation system. , 2016, , .		0
122	Model based multiple musical sequence alignment using tempo extraction as preprocessing. , 2016, , .		0
123	Text classification with coupled matrix factorization. , 2016, , .		0
124	Distributed particle filtering under real-time constraints. , 2017, , .		0
125	Multiresolution alignment for multiple unsynchronized audio sequences using Sequential Monte Carlo samplers. SoftwareX, 2018, 8, 33-38.	1.2	0
126	Effect of speech priors in single-channel speech-music separation for ASR. , 0, , .		0

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127	Stochastic thermodynamic integration: Efficient Bayesian model selection via stochastic gradient MCMC. , 2016, , .		0
128	Change-point detection via switching Kalman filters. , 2017, , .		0