Hugo Van hamme

List of Publications by Year
in descending order

174	2,663	430754	289141
papers	citations	18 h-index	40 g-index

175	175	175	1675
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Cross-lingual Detection of Dysphonic Speech for Dutch and Hungarian Datasets. , 2022, , .		0
2	Low resource end-to-end spoken language understanding with capsule networks. Computer Speech and Language, 2021, 66, 101142.	2.9	11
3	Modeling the relationship between acoustic stimulus and EEG with a dilated convolutional neural network. , 2021, , .		18
4	Predicting speech intelligibility from EEG in a non-linear classification paradigm [*]. Journal of Neural Engineering, 2021, 18, 066008.	1.8	6
5	Automated speech analysis to improve TMS-based language mapping: Algorithm and proof of concept. Brain Stimulation, 2020, 13, 267-269.	0.7	3
6	An LSTM Based Architecture to Relate Speech Stimulus to Eeg. , 2020, , .		24
7	Multitask Learning with Capsule Networks for Speech-to-Intent Applications. , 2020, , .		8
8	Linear versus deep learning methods for noisy speech separation for EEG-informed attention decoding. Journal of Neural Engineering, 2020, 17, 046039.	1.8	23
9	Hyperspectral image classification using Non-negative Tensor Factorization and 3D Convolutional Neural Networks. Signal Processing: Image Communication, 2019, 76, 178-185.	1.8	16
10	Robust Hierarchical Learning for Non-Negative Matrix Factorization With Outliers. IEEE Access, 2019, 7, 10546-10558.	2.6	0
11	Information-Weighted Neural Cache Language Models for ASR. , 2018, , .		1
12	Multi-Scenario Deep Learning for Multi-Speaker Source Separation. , 2018, , .		1
13	Acoustic Event Classification using Low-Resolution Multi-label Non-negative Matrix Deconvolution. AES: Journal of the Audio Engineering Society, 2018, 66, 369-384.	0.8	5
14	The CAMETRON Lecture Recording System: High Quality Video Recording and Editing withÂMinimal Human Supervision. Lecture Notes in Computer Science, 2018, , 518-530.	1.0	9
15	Weakly Supervised Learning of Hidden Markov Models for Spoken Language Acquisition. IEEE/ACM Transactions on Audio Speech and Language Processing, 2017, 25, 285-295.	4.0	4
16	Automatic relevance determination for nonnegative dictionary learning in the Gamma-Poisson model. Signal Processing, 2017, 132, 121-133.	2.1	11
17	Joint Denoising and Dereverberation Using Exemplar-Based Sparse Representations and Decaying Norm Constraint. IEEE/ACM Transactions on Audio Speech and Language Processing, 2017, 25, 2024-2035.	4.0	6
18	Automatic Smoker Detection from Telephone Speech Signals. Lecture Notes in Computer Science, 2017, , 200-210.	1.0	4

#	Article	IF	Citations
19	Noise robust footstep location estimation using a wireless acoustic sensor network. Journal of Ambient Intelligence and Smart Environments, 2016, 8, 665-679.	0.8	1
20	Incrementally learn the relevance of words in a dictionary for spoken language acquisition. , 2016, , .		1
21	Unsupervised Learning of Continuous Density HMM for Variable-Length Spoken Unit Discovery. IEICE Transactions on Information and Systems, 2016, E99.D, 296-299.	0.4	1
22	Under-determined reverberant audio source separation using Bayesian Non-negative Matrix Factorization. Speech Communication, 2016, 81, 129-137.	1.6	8
23	Language model adaptation for ASR of spoken translations using phrase-based translation models and named entity models. , 2016, , .		2
24	Data selection for noise robust exemplar matching. , 2016, , .		0
25	Active speaker detection with audio-visual co-training. , 2016, , .		15
26	Supervised speech dereverberation in noisy environments using exemplar-based sparse representations. , 2016, , .		7
27	Noise robust exemplar matching with alphaâ€"beta divergence. Speech Communication, 2016, 76, 127-142.	1.6	3
28	Unseen Noise Estimation Using Separable Deep Auto Encoder for Speech Enhancement. IEEE/ACM Transactions on Audio Speech and Language Processing, 2016, 24, 93-104.	4.0	52
29	Improving cross-domain n-gram language modelling with skipgrams. , 2016, , .		4
30	Decision support systems for home monitoring applications: Classification of activities of daily living and epileptic seizures. , 2016, , 271-291.		0
31	Exemplar-based speech enhancement for deep neural network based automatic speech recognition. , 2015, , .		16
32	Adaptive noise dictionary design for noise robust exemplar matching of speech. , 2015, , .		1
33	Monitoring activities of daily living using Wireless Acoustic Sensor Networks in clean and noisy conditions. , 2015, 2015, 4966-9.		5
34	Who's Speaking?. , 2015, , .		23
35	Hybrid input spaces for exemplar-based noise robust speech recognition using coupled dictionaries. , 2015, , .		0
36	Height estimation from speech signals using i-vectors and least-squares support vector regression. , 2015, , .		7

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37	Improving n-gram probability estimates by compound-head clustering. , 2015, , .		1
38	Two‐stage blind audio source counting and separation of stereo instantaneous mixtures using Bayesian tensor factorisation. IET Signal Processing, 2015, 9, 587-595.	0.9	4
39	Energy efficient monitoring of activities of daily living using wireless acoustic sensor networks in clean and noisy conditions. , 2015, , .		2
40	Noise robust exemplar matching with coupled dictionaries for single-channel speech enhancement. , 2015, , .		1
41	A stable approach for model order selection in nonnegative matrix factorization. Pattern Recognition Letters, 2015, 54, 97-102.	2.6	13
42	Blind audio source counting and separation of anechoic mixtures using the multichannel complex NMF framework. Signal Processing, 2015, 115, 27-37.	2.1	21
43	Coupled Dictionaries for Exemplar-Based Speech Enhancement and Automatic Speech Recognition. IEEE/ACM Transactions on Audio Speech and Language Processing, 2015, 23, 1788-1799.	4.0	29
44	Speaker weight estimation from speech signals using a fusion of the i-vector and NFA frameworks. , 2015, , .		1
45	Multitask speaker profiling for estimating age, height, weight and smoking habits from spontaneous telephone speech signals. , 2014, , .		20
46	Active-set newton algorithm for non-negative sparse coding of audio. , 2014, , .		13
47	WEakly supervised hmm learning for spokenword acquisition in human computer interaction with little manual effort. , 2014, , .		1
48	Noise-robust speech recognition with exemplar-based sparse representations using Alpha-Beta divergence. , 2014, , .		9
49	Dysarthric vocal interfaces with minimal training data. , 2014, , .		3
50	Learning Like a Toddler. , 2014, , .		1
51	Noise Robust Exemplar Matching Using Sparse Representations of Speech. IEEE/ACM Transactions on Audio Speech and Language Processing, 2014, 22, 1306-1319.	4.0	15
52	Non-Negative Factor Analysis of Gaussian Mixture Model Weight Adaptation for Language and Dialect Recognition. IEEE/ACM Transactions on Audio Speech and Language Processing, 2014, 22, 1117-1129.	4.0	26
53	The self-taught vocal interface. Eurasip Journal on Audio, Speech, and Music Processing, 2014, 2014, .	1.3	10
54	Coupled dictionary training for exemplar-based speech enhancement. , 2014, , .		14

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55	Coping with language data sparsity: Semantic head mapping of compound words. , 2014, , .		3
56	Fast vocabulary acquisition in an NMF-based self-learning vocal user interface. Computer Speech and Language, 2014, 28, 997-1017.	2.9	5
57	Speaker age estimation using i-vectors. Engineering Applications of Artificial Intelligence, 2014, 34, 99-108.	4.3	114
58	Acquisition of ordinal words using weakly supervised NMF. , 2014, , .		9
59	Exemplar-based noise robust automatic speech recognition using modulation spectrogram features. , 2014, , .		7
60	Label Noise Robustness and Learning Speed in a Self-Learning Vocal User Interface. , 2014, , 249-259.		1
61	An exemplar-based NMF approach to audio event detection. , 2013, , .		62
62	Rapid speaker adaptation in latent speaker space with non-negative matrix factorization. Speech Communication, 2013, 55, 893-908.	1.6	4
63	Bayesian non-parametric matrix factorization for discovering words in spoken utterances. , 2013, , .		2
64	Joint training of non-negative Tucker decomposition and discrete density hidden Markov models. Computer Speech and Language, 2013, 27, 969-988.	2.9	11
65	Embedding time warping in exemplar-based sparse representations of speech. , 2013, , .		4
66	Accent recognition using i-vector, Gaussian Mean Supervector and Gaussian posterior probability supervector for spontaneous telephone speech. , 2013, , .		49
67	NMF-based keyword learning from scarce data. , 2013, , .		1
68	A diagonalized newton algorithm for non-negative sparse coding. , 2013, , .		2
69	Missing Data Solutions for Robust Speech Recognition. Theory and Applications of Natural Language Processing, 2013, , 289-304.	0.3	4
70	Fast word acquisition in an NMF-based learning framework. , 2012, , .		4
71	Latent variable speaker adaptation of Gaussian mixture weights and means. , 2012, , .		5
72	Time-domain generalized cross correlation phase transform sound source localization for small microphone arrays. , 2012, , .		21

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73	Weakly supervised keyword learning using sparse representations of speech. , 2012, , .		4
74	Tri-factorization learning of sub-word units with application to vocabulary acquisition. , 2012, , .		0
75	Large Scale Graph Regularized Non-Negative Matrix Factorization With ${cal ell}_1$ Normalization Based on Kullback€"Leibler Divergence. IEEE Transactions on Signal Processing, 2012, 60, 3876-3880.	3.2	9
76	Noise-robust digit recognition with exemplar-based sparse representations of variable length. , 2012, , .		8
77	Speaker adaptation using Maximum Likelihood General Regression. , 2012, , .		1
78	Speaker age estimation using Hidden Markov Model weight supervectors. , 2012, , .		14
79	Multi-candidate missing data imputation for robust speech recognition. Eurasip Journal on Audio, Speech, and Music Processing, 2012, 2012, .	1.3	3
80	Human language technology and communicative disabilities: requirements and possibilities for the future. Language Resources and Evaluation, 2012, 46, 143-151.	1.8	5
81	Supervised input space scaling for non-negative matrix factorization. Signal Processing, 2012, 92, 1864-1874.	2.1	5
82	An On-Line NMF Model for Temporal Pattern Learning: Theory with Application to Automatic Speech Recognition. Lecture Notes in Computer Science, 2012, , 306-313.	1.0	4
83	An hierarchical exemplar-based sparse model of speech, with an application to ASR. , 2011, , .		4
84	Image pattern discovery by using the spatial closeness of visual code words. , 2011, , .		8
85	Advances in Missing Feature Techniques for Robust Large-Vocabulary Continuous Speech Recognition. IEEE Transactions on Audio Speech and Language Processing, 2011, 19, 123-137.	3.8	26
86	Sparse conjugate directions pursuit with application to fixed-size kernel models. Machine Learning, 2011, 85, 109-148.	3.4	16
87	Modelling vocabulary acquisition, adaptation and generalization in infants using adaptive Bayesian PLSA. Neurocomputing, 2011, 74, 1874-1882.	3.5	12
88	Phonetic analysis of a computational model for vocabulary acquisition from auditory inputs. , 2011, , .		1
89	Progress in example based automatic speech recognition. , 2011, , .		5
90	Speaker age estimation and gender detection based on supervised Non-Negative Matrix Factorization. , 2011, , .		26

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91	Unsupervised vocabulary discovery using non-negative matrix factorization with graph regularization. , 2011, , .		4
92	Rapid Speaker Adaptation using Maximum Likelihood Neural Regression. , 2011, , .		1
93	Rapid speaker adaptation with speaker adaptive training and non-negative matrix factorization. , 2011, , .		5
94	Automatic Speech Recognition Using Missing Data Techniques: Handling of Real-World Data. , 2011, , 157-185.		5
95	Gaussian Selection Using Self-Organizing Map for Automatic Speech Recognition. Lecture Notes in Computer Science, 2011, , 218-227.	1.0	2
96	Compressive Sensing for Missing Data Imputation in Noise Robust Speech Recognition. IEEE Journal on Selected Topics in Signal Processing, 2010, 4, 272-287.	7.3	90
97	Histogram equalization and noise masking for robust speech recognition. , 2010, , .		1
98	Learning from images and speech with Non-negative Matrix Factorization enhanced by input space scaling. , 2010, , .		5
99	A Computational Model of Language Acquisition: the Emergence of Words. Fundamenta Informaticae, 2009, 90, 229-249.	0.3	26
100	Developing a reading tutor: Design and evaluation of dedicated speech recognition and synthesis modules. Speech Communication, 2009, 51, 985-994.	1.6	38
101	Unsupervised learning of timeâ€“frequency patches as a noise-robust representation of speech. Speech Communication, 2009, 51, 1124-1138.	1.6	15
102	Automatic voice onset time estimation from reassignment spectra. Speech Communication, 2009, 51, 1194-1205.	1.6	30
103	On a Computational Model for Language Acquisition: Modeling Cross-Speaker Generalisation. Lecture Notes in Computer Science, 2009, , 315-322.	1.0	3
104	Robust speech recognition using missing data techniques in the prospect domain and fuzzy masks. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	10
105	Discovering Phone Patterns in Spoken Utterances by Non-Negative Matrix Factorization. IEEE Signal Processing Letters, 2008, 15, 131-134.	2.1	33
106	Unsupervised learning of auditory filter banks using non-negative matrix factorisation. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	8
107	Estimation of the voicing cut-off frequency contour of natural speech based on harmonic and aperiodic energies. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	7
108	Fast speaker adaptation using non-negative matrix factorization. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	8

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109	Discovery of Words: towards a Computational Model of Language Acquisition. , 2008, , .		5
110	DCT-Based Amplitude and Frequency Modulated Harmonic-Plus-Noise Modelling for Text-to-Speech Synthesis. , 2007, , .		0
111	Estimation of the Voicing Cut-Off Frequency Contour Based on a Cumulative Harmonicity Score. IEEE Signal Processing Letters, 2007, 14, 820-823.	2.1	9
112	A Review of Signal Subspace Speech Enhancement and Its Application to Noise Robust Speech Recognition. Eurasip Journal on Advances in Signal Processing, 2006, 2007, 1.	1.0	91
113	Model-based feature enhancement with uncertainty decoding for noise robust ASR. Speech Communication, 2006, 48, 1502-1514.	1.6	38
114	Maximum Likelihood Based Temporal Frame Selection. , 2006, , .		3
115	Correction of likelihoods for degrees of freedom in robust speech recognition using missing feature theory. , 2003, , .		0
116	Investigation of speech recognition over IP channels. , 2002, , .		7
117	Investigation of speech recognition over IP channels. , 2002, , .		1
118	General framework for asymptotic properties of generalized weighted nonlinear least squares estimators with deterministic and stochastic weighting. , 1997, , .		0
119	General framework for asymptotic properties of generalized weighted nonlinear least-squares estimators with deterministic and stochastic weighting. IEEE Transactions on Automatic Control, 1996, 41, 1501-1507.	3.6	25
120	Identification of linear dynamic systems using piecewise constant excitations: Use, misuse and alternatives. Automatica, 1994, 30, 1153-1169.	3.0	88
121	Flexible vector network analyzer calibration with accuracy bounds using an 8-term or a 16-term error correction model. IEEE Transactions on Microwave Theory and Techniques, 1994, 42, 976-987.	2.9	48
122	Parametric identification of transfer functions in the frequency domain-a survey. IEEE Transactions on Automatic Control, 1994, 39, 2245-2260.	3.6	435
123	The interpolated fast Fourier transform: a comparative study. IEEE Transactions on Instrumentation and Measurement, 1992, 41, 226-232.	2.4	257
124	High-resolution frequency-domain reflectometry by estimation of modulated superimposed complex sinusoids. IEEE Transactions on Instrumentation and Measurement, 1992, 41, 762-767.	2.4	13
125	Maximum likelihood estimation of superimposed complex sinusoids in white Gaussian noise by reduced effort coarse search (RECS). IEEE Transactions on Signal Processing, 1991, 39, 536-538.	3.2	11
126	A stochastical limit to the resolution of least squares estimation of the frequencies of a double complex sinusoid. IEEE Transactions on Signal Processing, 1991, 39, 2652-2658.	3.2	5

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127	High resolution frequency-domain reflectometry. IEEE Transactions on Instrumentation and Measurement, 1990, 39, 369-375.	2.4	40
128	Karhunen-Loeve analysis of dynamic sequences of thermographic images for early breast cancer detection. , 0, , .		1
129	High resolution frequency-domain reflectometry by estimation of modulated superimposed complex sinusoids. , 0, , .		1
130	Parametric identification of transfer functions in the frequency domain: a survey. , 0, , .		10
131	An adaptive-beam pruning technique for continuous speech recognition. , 0, , .		11
132	Model-based feature enhancement for noisy speech recognition. , 0, , .		7
133	Evaluation of various confidence-based strategies for isolated word rejection. , 0, , .		4
134	Joint removal of additive and convolutional noise with model-based feature enhancement. , 0, , .		10
135	Robust speech recognition using cepstral domain missing data techniques and noisy masks. , 0, , .		27
136	Effect of Phase-Sensitive Environment Model and Higher Order VTS on Noisy Speech Feature Enhancement. , 0, , .		11
137	Handling Time-Derivative Features in a Missing Data Framework for Robust Automatic Speech Recognition. , 0, , .		3
138	Application of Minimum Statistics and Minima Controlled Recursive Averaging Methods to Estimate a Cepstral Noise Model for Robust ASR. , 0, , .		5
139	Joint Sound Source Separation and Speaker Recognition. , 0, , .		3
140	Capsule Networks for Low Resource Spoken Language Understanding. , 0, , .		21
141	State Gradients for RNN Memory Analysis. , 0, , .		2
142	PROSPECT features and their application to missing data techniques for robust speech recognition. , 0, , .		19
143	PROSPECT features and their application to missing data techniques for vocal tract length normalization. , 0, , .		1
144	Robust phone lattice decoding. , 0, , .		10

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145	Fixed-size kernel logistic regression for phoneme classification. , 0, , .		3
146	Vector-quantization based mask estimation for missing data automatic speech recognition. , 0, , .		6
147	Automatic assessment of children's reading level. , 0, , .		11
148	Automatically learning the units of speech by non-negative matrix factorisation. , 0, , .		8
149	HAC-models: a novel approach to continuous speech recognition. , 0, , .		46
150	A computational model of language acquisition: focus on word discovery. , 0, , .		7
151	Comparison of variable selection methods and classifiers for native accent identification. , 0, , .		0
152	Lip synchronization: from phone lattice to PCA eigen-projections using neural networks. , 0, , .		4
153	Discriminative model combination and language model selection in a reading tutor for children. , 0, , .		0
154	Improving the multigram algorithm by using lattices as input. , 0, , .		2
155	Adaptive non-negative matrix factorization in a computational model of language acquisition. , 0, , .		13
156	Evaluation of phone lattice based speech decoding. , 0, , .		3
157	Application of noise robust MDT speech recognition on the SPEECON and speechdat-car databases. , 0, , .		7
158	Applying non-negative matrix factorization on time-frequency reassignment spectra for missing data mask estimation. , 0, , .		2
159	Feature versus model based noise robustness. , 0, , .		4
160	Robust tracking for automatic reading tutors. , 0, , .		1
161	A self-learning assistive vocal interface based on vocabulary learning and grammar induction. , 0, , .		10
162	Advances in noise robust digit recognition using hybrid exemplar-based techniques. , 0, , .		13

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163	Age estimation from telephone speech using i-vectors. , 0, , .		34
164	Model order estimation using Bayesian NMF for discovering phone patterns in spoken utterances. , 0, , .		1
165	Automatic assessment of children's reading with the FLaVoR decoding using a phone confusion model. , 0, , .		8
166	Blind speech source localization, counting and separation for 2-channel convolutive mixtures in a reverberant environment. , 0, , .		0
167	An evaluation of unsupervised acoustic model training for a dysarthric speech interface. , 0, , .		6
168	Modelling primitive streaming of simple tone sequences through factorisation of modulation pattern tensors. , 0, , .		0
169	Mutually exclusive grounding for weakly supervised non-negative matrix factorisation. , 0, , .		1
170	Efficient language model adaptation for automatic speech recognition of spoken translations. , 0, , .		3
171	A multi-channel speech enhancement framework for robust NMF-based speech recognition for speech-impaired users. , 0, , .		0
172	Investigating modulation spectrogram features for deep neural network-based automatic speech recognition. , 0, , .		5
173	Improving Source Separation via Multi-Speaker Representations. , 0, , .		4
174	Memory Time Span in LSTMs for Multi-Speaker Source Separation. , 0, , .		3