

# Mounya Elhilali

## List of Publications by Year in descending order

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Version: 2024-02-01

113  
papers

4,756  
citations

201674

27  
h-index

110387

64  
g-index

128  
all docs

128  
docs citations

128  
times ranked

2774  
citing authors

#	ARTICLE	IF	CITATIONS
1	Cross-Referencing Self-Training Network for Sound Event Detection in Audio Mixtures. IEEE Transactions on Multimedia, 2023, 25, 4573-4585.	7.2	5
2	Temporal Contrastive-Loss for Audio Event Detection. , 2022, , .		2
3	Digitally recorded and remotely classified lung auscultation compared with conventional stethoscope classifications among children aged 1â€“59 months enrolled in the Pneumonia Etiology Research for Child Health (PERCH) caseâ€“control study. BMJ Open Respiratory Research, 2022, 9, e001144.	3.0	3
4	Electronic Stethoscope Filtering Mimics the Perceived Sound Characteristics of Acoustic Stethoscope. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 1542-1549.	6.3	14
5	Natural Statistics as Inference Principles of Auditory Tuning in Biological and Artificial Midbrain Networks. ENeuro, 2021, 8, ENEURO.0525-20.2021.	1.9	3
6	Neural Encoding of Auditory Statistics. Journal of Neuroscience, 2021, 41, 6726-6739.	3.6	4
7	Design and Comparative Performance of a Robust Lung Auscultation System for Noisy Clinical Settings. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 2583-2594.	6.3	25
8	Computational framework for investigating predictive processing in auditory perception. Journal of Neuroscience Methods, 2021, 360, 109177.	2.5	5
9	Resetting of Auditory and Visual Segregation Occurs After Transient Stimuli of the Same Modality. Frontiers in Psychology, 2021, 12, 720131.	2.1	3
10	Auditory salience using natural scenes: An online study. Journal of the Acoustical Society of America, 2021, 150, 2952-2966.	1.1	7
11	Effect of background clutter on neural discrimination in the bat auditory midbrain. Journal of Neurophysiology, 2021, 126, 1772-1782.	1.8	5
12	Neural correlates of perceptual switching while listening to bistable auditory streaming stimuli. NeuroImage, 2020, 204, 116220.	4.2	11
13	Neural Response Selectivity to Natural Sounds in the Bat Midbrain. Neuroscience, 2020, 434, 200-211.	2.3	13
14	Validation of Auscultation Technologies using Objective and Clinical Comparisons. , 2020, 2020, 992-997.		7
15	An objective measure of signal quality for pediatric lung auscultations. , 2020, 2020, 772-775.		4
16	Digital auscultation in PERCH: Associations with chest radiography and pneumonia mortality in children. Pediatric Pulmonology, 2020, 55, 3197-3208.	2.0	13
17	Amphibian Sounds Generating Network Based on Adversarial Learning. IEEE Signal Processing Letters, 2020, 27, 640-644.	3.6	3
18	Bio-Mimetic Attentional Feedback in Music Source Separation. , 2020, , .		0

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19	Audio Object Classification Using Distributed Beliefs and Attention. IEEE/ACM Transactions on Audio Speech and Language Processing, 2020, 28, 729-739.	5.8	4
20	Ensemble modeling of auditory streaming reveals potential sources of bistability across the perceptual hierarchy. PLoS Computational Biology, 2020, 16, e1007746.	3.2	8
21	Pitch, Timbre and Intensity Interdependently Modulate Neural Responses to Salient Sounds. Neuroscience, 2020, 440, 1-14.	2.3	9
22	Push-pull competition between bottom-up and top-down auditory attention to natural soundscapes. ELife, 2020, 9, .	6.0	30
23	Synthesizing Engaging Music Using Dynamic Models of Statistical Surprisal. , 2020, , .		0
24	Temporal Coherence Principle in Scene Analysis. , 2020, , 777-790.		2
25	Editorial: Bio-inspired Audio Processing, Models and Systems. Frontiers in Neuroscience, 2019, 13, 978.	2.8	0
26	A Gestalt inference model for auditory scene segregation. PLoS Computational Biology, 2019, 15, e1006711.	3.2	17
27	Joint Acoustic and Class Inference for Weakly Supervised Sound Event Detection. , 2019, , .		8
28	Modulation Representations for Speech and Music. Springer Handbook of Auditory Research, 2019, , 335-359.	0.7	16
29	The Stethoscope Gets Smart: Engineers from Johns Hopkins are giving the humble stethoscope an AI upgrade. IEEE Spectrum, 2019, 56, 36-41.	0.7	12
30	A Model for Statistical Regularity Extraction from Dynamic Sounds. Acta Acustica United With Acustica, 2019, 105, 1-4.	0.8	6
31	Computerized Lung Sound Screening for Pediatric Auscultation in Noisy Field Environments. IEEE Transactions on Biomedical Engineering, 2018, 65, 1564-1574.	4.2	56
32	Sensory Mapping Adaptation Under Multiple Task Scenarios. , 2018, , .		0
33	Detecting change in stochastic sound sequences. PLoS Computational Biology, 2018, 14, e1006162.	3.2	25
34	Connecting Deep Neural Networks to Physical, Perceptual, and Electrophysiological Auditory Signals. Frontiers in Neuroscience, 2018, 12, 532.	2.8	11
35	Recent advances in exploring the neural underpinnings of auditory scene perception. Annals of the New York Academy of Sciences, 2017, 1396, 39-55.	3.8	27
36	Feedback-Driven Sensory Mapping Adaptation for Robust Speech Activity Detection. IEEE/ACM Transactions on Audio Speech and Language Processing, 2017, 25, 481-492.	5.8	5

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37	Modeling the Cocktail Party Problem. Springer Handbook of Auditory Research, 2017, , 111-135.	0.7	5
38	Auditory salience using natural soundscapes. Journal of the Acoustical Society of America, 2017, 141, 2163-2176.	1.1	56
39	The Auditory System at the Cocktail Party. Springer Handbook of Auditory Research, 2017, , .	0.7	70
40	Modelling auditory attention. Philosophical Transactions of the Royal Society B: Biological Sciences, 2017, 372, 20160101.	4.0	80
41	Listening panel agreement and characteristics of lung sounds digitally recorded from children aged 1â€“59 months enrolled in the Pneumonia Etiology Research for Child Health (PERCH) caseâ€“control study. BMJ Open Respiratory Research, 2017, 4, e000193.	3.0	23
42	Rich Representation Spaces: Benefits in Digital Auscultation Signal Analysis. , 2016, , .		0
43	Abnormal sound event detection using temporal trajectories mixtures. , 2016, , .		16
44	Attentional and Contextual Priors in Sound Perception. PLoS ONE, 2016, 11, e0149635.	2.5	4
45	Exploring the role of temporal dynamics in acoustic scene classification. , 2015, , .		1
46	Detection of speech tokens in noise using adaptive spectrotemporal receptive fields. , 2015, , .		3
47	Modeling attention-driven plasticity in auditory cortical receptive fields. Frontiers in Computational Neuroscience, 2015, 9, 106.	2.1	7
48	Biomimetic spectro-temporal features for music instrument recognition in isolated notes and solo phrases. Eurasip Journal on Audio, Speech, and Music Processing, 2015, 2015, .	2.1	9
49	Perceptual susceptibility to acoustic manipulations in speaker discrimination. Journal of the Acoustical Society of America, 2015, 137, 911-922.	1.1	8
50	Modeling goal-directed attention in tone sequences using a weighted Kalman filter. , 2015, , .		0
51	A Framework for Speech Activity Detection Using Adaptive Auditory Receptive Fields. IEEE/ACM Transactions on Audio Speech and Language Processing, 2015, 23, 2422-2433.	5.8	5
52	Adaptive Noise Suppression of Pediatric Lung Auscultations With Real Applications to Noisy Clinical Settings in Developing Countries. IEEE Transactions on Biomedical Engineering, 2015, 62, 2279-2288.	4.2	48
53	Investigating the Neural Correlates of a Streaming Percept in an Informational-Masking Paradigm. PLoS ONE, 2014, 9, e114427.	2.5	16
54	Investigating bottom-up auditory attention. Frontiers in Human Neuroscience, 2014, 8, 327.	2.0	72

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55	Task-dependent neural representations of salient events in dynamic auditory scenes. <i>Frontiers in Neuroscience</i> , 2014, 8, 203.	2.8	17
56	Segregating Complex Sound Sources through Temporal Coherence. <i>PLoS Computational Biology</i> , 2014, 10, e1003985.	3.2	65
57	Developing a Reference of Normal Lung Sounds in Healthy Peruvian Children. <i>Lung</i> , 2014, 192, 765-773.	3.3	17
58	Recognizing the message and the messenger: biomimetic spectral analysis for robust speech and speaker recognition. <i>International Journal of Speech Technology</i> , 2013, 16, 313-322.	2.2	1
59	Task-driven attentional mechanisms for auditory scene recognition. , 2013, , .		6
60	A Multistream Feature Framework Based on Bandpass Modulation Filtering for Robust Speech Recognition. <i>IEEE Transactions on Audio Speech and Language Processing</i> , 2013, 21, 416-426.	3.2	32
61	A model of auditory deviance detection. , 2013, , .		4
62	Temporal Coherence and the Streaming of Complex Sounds. <i>Advances in Experimental Medicine and Biology</i> , 2013, 787, 535-543.	1.6	30
63	Sustained Firing of Model Central Auditory Neurons Yields a Discriminative Spectro-temporal Representation for Natural Sounds. <i>PLoS Computational Biology</i> , 2013, 9, e1002982.	3.2	13
64	Predictive analysis of two tone stream segregation via extended Kalman filter. , 2013, , .		3
65	Characterization of noise contaminations in lung sound recordings. , 2013, 2013, 2551-4.		17
66	Bayesian inference in auditory scenes. , 2013, 2013, 2792-5.		3
67	Abnormality detection in noisy biosignals. , 2013, 2013, 3949-52.		5
68	Welcome to WASPAA 2013. , 2013, , .		0
69	Music in Our Ears: The Biological Bases of Musical Timbre Perception. <i>PLoS Computational Biology</i> , 2012, 8, e1002759.	3.2	86
70	A multiresolution analysis for detection of abnormal lung sounds. , 2012, 2012, 3139-42.		19
71	A temporal saliency map for modeling auditory attention. , 2012, , .		22
72	A model of attention-driven scene analysis. , 2012, , .		3

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73	Computerised lung sound analysis to improve the specificity of paediatric pneumonia diagnosis in resource-poor settings: protocol and methods for an observational study. <i>BMJ Open</i> , 2012, 2, e000506.	1.9	35
74	Multilevel speech intelligibility for robust speaker recognition. , 2012, , .		0
75	The UMD-JHU 2011 speaker recognition system. , 2012, , .		3
76	Biomimetic multi-resolution analysis for robust speaker recognition. <i>Eurasip Journal on Audio, Speech, and Music Processing</i> , 2012, 2012, .	2.1	5
77	Multistream robust speaker recognition based on speech intelligibility. , 2011, , .		0
78	Exploiting temporal coherence in speech for data-driven feature extraction. , 2011, , .		2
79	Impaired perception of temporal fine structure and musical timbre in cochlear implant users. <i>Hearing Research</i> , 2011, 280, 192-200.	2.0	45
80	Temporal coherence and attention in auditory scene analysis. <i>Trends in Neurosciences</i> , 2011, 34, 114-123.	8.6	360
81	A joint acoustic and phonological approach to speech intelligibility assessment. , 2010, , .		5
82	Competing Streams at the Cocktail Party: Exploring the Mechanisms of Attention and Temporal Integration. <i>Journal of Neuroscience</i> , 2010, 30, 12084-12093.	3.6	59
83	Sparse coding for speech recognition. , 2010, , .		53
84	Sequential and Simultaneous Auditory Grouping Measured with Synchrony Detection. , 2010, , 489-496.		3
85	Correlates of Auditory Attention and Task Performance in Primary Auditory and Prefrontal Cortex. , 2010, , 555-570.		1
86	Rate Versus Temporal Code? A Spatio-Temporal Coherence Model of the Cortical Basis of Streaming. , 2010, , 497-506.		0
87	Auditory Streaming at the Cocktail Party: Simultaneous Neural and Behavioral Studies of Auditory Attention. , 2010, , 545-553.		1
88	Interaction between Attention and Bottom-Up Saliency Mediates the Representation of Foreground and Background in an Auditory Scene. <i>PLoS Biology</i> , 2009, 7, e1000129.	5.6	153
89	Temporal Coherence in the Perceptual Organization and Cortical Representation of Auditory Scenes. <i>Neuron</i> , 2009, 61, 317-329.	8.1	215
90	Task Difficulty and Performance Induce Diverse Adaptive Patterns in Gain and Shape of Primary Auditory Cortical Receptive Fields. <i>Neuron</i> , 2009, 61, 467-480.	8.1	195

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91	Information-bearing components of speech intelligibility under babble-noise and bandlimiting distortions. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	4
92	A cocktail party with a cortical twist: How cortical mechanisms contribute to sound segregation. Journal of the Acoustical Society of America, 2008, 124, 3751-3771.	1.1	89
93	Evaluation of A "Direct-Comparison" Approach to Automatic Switching In Omnidirectional/Directional Hearing Aids. Journal of the American Academy of Audiology, 2008, 19, 708-720.	0.7	4
94	An Objective Measure for Selecting Microphone Modes in OMNI/DIR Hearing Aid Circuits. Ear and Hearing, 2008, 29, 199-213.	2.1	7
95	Auditory Cortical Receptive Fields: Stable Entities with Plastic Abilities. Journal of Neuroscience, 2007, 27, 10372-10382.	3.6	70
96	Adaptive Changes in Cortical Receptive Fields Induced by Attention to Complex Sounds. Journal of Neurophysiology, 2007, 98, 2337-2346.	1.8	147
97	Does attention play a role in dynamic receptive field adaptation to changing acoustic salience in A1?. Hearing Research, 2007, 229, 186-203.	2.0	168
98	Auditory attention "focusing the searchlight on sound. Current Opinion in Neurobiology, 2007, 17, 437-455.	4.2	418
99	The Correlative Brain: A Stream Segregation Model. , 2007, , 247-256.		1
100	Primary Auditory Cortical Responses while Attending to Different Streams. , 2007, , 257-265.		6
101	Differential Dynamic Plasticity of A1 Receptive Fields during Multiple Spectral Tasks. Journal of Neuroscience, 2005, 25, 7623-7635.	3.6	214
102	Active listening: Task-dependent plasticity of spectrotemporal receptive fields in primary auditory cortex. Hearing Research, 2005, 206, 159-176.	2.0	184
103	One Click, Two Clicks: The Past Shapes the Future in Auditory Cortex. Neuron, 2005, 47, 325-327.	8.1	13
104	The enigma of cortical responses: Slow yet precise. , 2005, , 484-493.		2
105	Dynamics of Precise Spike Timing in Primary Auditory Cortex. Journal of Neuroscience, 2004, 24, 1159-1172.	3.6	142
106	A spectro-temporal modulation index (STMI) for assessment of speech intelligibility. Speech Communication, 2003, 41, 331-348.	2.8	194
107	Rapid task-related plasticity of spectrotemporal receptive fields in primary auditory cortex. Nature Neuroscience, 2003, 6, 1216-1223.	14.8	762
108	Research, robots, and reality: A statement on current trends in biorobotics. Behavioral and Brain Sciences, 2001, 24, 1072-1073.	0.7	30

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109	A Biologically-Inspired Approach to the Cocktail Party Problem. , 0, , .		5
110	Multistream bandpass modulation features for robust speech recognition. , 0, , .		5
111	Goal-oriented auditory scene recognition. , 0, , .		4
112	Robust phoneme recognition based on biomimetic speech contours. , 0, , .		4
113	A Study of a Cross-Language Perception Based on Cortical Analysis Using Biomimetic STRFs. , 0, , .		0