FrÃ©dÃ©ric E Theunissen

List of Publications by Year
in descending order

52 papers	6,697 citations	126708 33 h-index	174990 52 g-index
56 all docs	56 docs citations	56 times ranked	4745 citing authors

#	Article	IF	Citations
1	High-capacity auditory memory for vocal communication in a social songbird. Science Advances, 2020, 6, .	4.7	12
2	Evolution of communication signals and information during species radiation. Nature Communications, 2020, 11, 4970.	5.8	30
3	The Neuroethology of Vocal Communication in Songbirds: Production and Perception of a Call Repertoire. Springer Handbook of Auditory Research, 2020, , 175-209.	0.3	11
4	Invariant neural responses for sensory categories revealed by the time-varying information for communication calls. PLoS Computational Biology, 2019, 15, e1006698.	1.5	9
5	Rapid Adaptation to the Timbre of Natural Sounds. Scientific Reports, 2018, 8, 13826.	1.6	11
6	Zebra finches identify individuals using vocal signatures unique to each call type. Nature Communications, 2018, 9, 4026.	5.8	71
7	Single Neurons in the Avian Auditory Cortex Encode Individual Identity and Propagation Distance in Naturally Degraded Communication Calls. Journal of Neuroscience, 2017, 37, 3491-3510.	1.7	24
8	The Hierarchical Cortical Organization of Human Speech Processing. Journal of Neuroscience, 2017, 37, 6539-6557.	1.7	208
9	Encoding and Decoding Models in Cognitive Electrophysiology. Frontiers in Systems Neuroscience, 2017, 11, 61.	1.2	116
10	A Low-Rank Method for Characterizing High-Level Neural Computations. Frontiers in Computational Neuroscience, 2017, 11, 68.	1.2	6
11	Rapid tuning shifts in human auditory cortex enhance speech intelligibility. Nature Communications, 2016, 7, 13654.	5.8	71
12	Natural speech reveals the semantic maps that tile human cerebral cortex. Nature, 2016, 532, 453-458.	13.7	1,038
13	The vocal repertoire of the domesticated zebra finch: a data-driven approach to decipher the information-bearing acoustic features of communication signals. Animal Cognition, 2016, 19, 285-315.	0.9	81
14	Meaning in the avian auditory cortex: neural representation of communication calls. European Journal of Neuroscience, 2015, 41, 546-567.	1.2	39
15	A single microphone noise reduction algorithm based on the detection and reconstruction of spectro-temporal features. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20150309.	1.0	11
16	Physiological resonance between mates through calls as possible evidence of empathic processes in songbirds. Hormones and Behavior, 2015, 75, 130-141.	1.0	30
17	Acoustic Communication and Sound Degradation: How Do the Individual Signatures of Male and Female Zebra Finch Calls Transmit over Distance?. PLoS ONE, 2014, 9, e102842.	1.1	38
18	Learning to cope with degraded sounds: Female zebra finches can improve their expertise at discriminating between male voices at long distance. Journal of Experimental Biology, 2014, 217, 3169-77.	0.8	12

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19	Neural processing of natural sounds. Nature Reviews Neuroscience, 2014, 15, 355-366.	4.9	192
20	Mothersâ€™ tone of voice depends on the nature of infantsâ€™ transgressions.. Emotion, 2014, 14, 651-665.	1.5	35
21	Acoustic structure of the five perceptual dimensions of timbre in orchestral instrument tones. Journal of the Acoustical Society of America, 2013, 133, 389-404.	0.5	73
22	Population Code, Noise Correlations, and Memory. Neuron, 2013, 78, 209-210.	3.8	4
23	Selective and Efficient Neural Coding of Communication Signals Depends on Early Acoustic and Social Environment. PLoS ONE, 2013, 8, e61417.	1.1	23
24	Noise-invariant Neurons in the Avian Auditory Cortex: Hearing the Song in Noise. PLoS Computational Biology, 2013, 9, e1002942.	1.5	62
25	Nonverbal sound processing in semantic dementia: A functional MRI study. NeuroImage, 2012, 61, 170-180.	2.1	29
26	Anthropic Correction of Information Estimates and Its Application to Neural Coding. IEEE Transactions on Information Theory, 2010, 56, 890-900.	1.5	6
27	Functional Groups in the Avian Auditory System. Journal of Neuroscience, 2009, 29, 2780-2793.	1.7	88
28	The Modulation Transfer Function for Speech Intelligibility. PLoS Computational Biology, 2009, 5, e1000302.	1.5	355
29	Anthropic correction of information estimates. , 2009, , .		0
30	What's That Sound? Auditory Area CLM Encodes Stimulus Surprise, Not Intensity or Intensity Changes. Journal of Neurophysiology, 2008, 99, 2809-2820.	0.9	62
31	Acoustic Features of Rhesus Vocalizations and Their Representation in the Ventrolateral Prefrontal Cortex. Journal of Neurophysiology, 2007, 97, 1470-1484.	0.9	89
32	Experience-dependence of neural responses to social versus isolate conspecific songs in the forebrain of female Zebra Finches. Journal Fur Ornithologie, 2007, 148, 231-239.	1.2	16
33	Sound representation methods for spectro-temporal receptive field estimation. Journal of Computational Neuroscience, 2006, 21, 5-20.	0.6	86
34	Auditory processing of vocal sounds in birds. Current Opinion in Neurobiology, 2006, 16, 400-407.	2.0	93
35	Stimulus-Dependent Auditory Tuning Results in Synchronous Population Coding of Vocalizations in the Songbird Midbrain. Journal of Neuroscience, 2006, 26, 2499-2512.	1.7	131
36	Tuning for spectro-temporal modulations as a mechanism for auditory discrimination of natural sounds. Nature Neuroscience, 2005, 8, 1371-1379.	7.1	257

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37	Modulation Power and Phase Spectrum of Natural Sounds Enhance Neural Encoding Performed by Single Auditory Neurons. Journal of Neuroscience, 2004, 24, 9201-9211.	1.7	116
38	Song Selectivity in the Song System and in the Auditory Forebrain. Annals of the New York Academy of Sciences, 2004, 1016, 222-245.	1.8	115
39	Quantifying variability in neural responses and its application for the validation of model predictions. Network: Computation in Neural Systems, 2004, 15, 91-109.	2.2	80
40	Quantifying variability in neural responses and its application for the validation of model predictions. Network: Computation in Neural Systems, 2004, 15, 91-109.	2.2	43
41	Modulation spectra of natural sounds and ethological theories of auditory processing. Journal of the Acoustical Society of America, 2003, 114, 3394-3411.	0.5	396
42	From synchrony to sparseness. Trends in Neurosciences, 2003, 26, 61-64.	4.2	34
43	Propagation of Correlated Activity through Multiple Stages of a Neural Circuit. Journal of Neuroscience, 2003, 23, 5750-5761.	1.7	77
44	Selectivity for Conspecific Song in the Zebra Finch Auditory Forebrain. Journal of Neurophysiology, 2003, 89, 472-487.	0.9	159
45	Feature Analysis of Natural Sounds in the Songbird Auditory Forebrain. Journal of Neurophysiology, 2001, 86, 1445-1458.	0.9	211
46	Estimating spatio-temporal receptive fields of auditory and visual neurons from their responses to natural stimuli. Network: Computation in Neural Systems, 2001, 12, 289-316.	2.2	169
47	Spectral-Temporal Receptive Fields of Nonlinear Auditory Neurons Obtained Using Natural Sounds. Journal of Neuroscience, 2000, 20, 2315-2331.	1.7	488
48	Information theory and neural coding. Nature Neuroscience, 1999, 2, 947-957.	7.1	914
49	Temporal and Spectral Sensitivity of Complex Auditory Neurons in the Nucleus HVc of Male Zebra Finches. Journal of Neuroscience, 1998, 18, 3786-3802.	1.7	183
50	Representation of sensory information in the cricket cercal sensory system. II. Information theoretic calculation of system accuracy and optimal tuning-curve widths of four primary interneurons. Journal of Neurophysiology, 1991, 66, 1690-1703.	0.9	134
51	Representation of sensory information in the cricket cercal sensory system. I. Response properties of the primary interneurons. Journal of Neurophysiology, 1991, 66, 1680-1689.	0.9	149
52	Quantifying variability in neural responses and its application for the validation of model predictions. , 0, .		7