# Jonathan Z Simon

List of Publications by Year
in descending order

| 110 papers | 8,463 citations | 61984<br>43 h-index | 58581<br>82 g-index |
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| 139 all docs | 139 docs citations | 139 times ranked | 4230 citing authors |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 1 | Mechanisms Underlying Selective Neuronal Tracking of Attended Speech at a "Cocktail Party". Neuron, 2013, 77, 980-991. | 8.1 | 732 |
| 2 | Emergence of neural encoding of auditory objects while listening to competing speakers. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 11854-11859. | 7.1 | 695 |
| 3 | Neural coding of continuous speech in auditory cortex during monaural and dichotic listening. Journal of Neurophysiology, 2012, 107, 78-89. | 1.8 | 414 |
| 4 | Spectro-Temporal Response Field Characterization With Dynamic Ripples in Ferret Primary Auditory Cortex. Journal of Neurophysiology, 2001, 85, 1220-1234. | 1.8 | 364 |
| 5 | Cortical entrainment to continuous speech: functional roles and interpretations. Frontiers in Human Neuroscience, 2014, 8, 311. | 2.0 | 350 |
| 6 | Higher-derivative Lagrangians, nonlocality, problems, and solutions. Physical Review D, 1990, 41, 3720-3733. | 4.7 | 318 |
| 7 | Black-hole thermodynamics in Lovelock gravity. Physical Review D, 1988, 38, 2434-2444. | 4.7 | 315 |
| 8 | Adaptive Temporal Encoding Leads to a Background-Insensitive Cortical Representation of Speech. Journal of Neuroscience, 2013, 33, 5728-5735. | 3.6 | 315 |
| 9 | Diffusion kurtosis as an in vivo imaging marker for reactive astrogliosis in traumatic brain injury. NeuroImage, 2012, 59, 467-477. | 4.2 | 265 |
| 10 | Robust cortical entrainment to the speech envelope relies on the spectro-temporal fine structure. NeuroImage, 2014, 88, 41-46. | 4.2 | 234 |
| 11 | Robust spectrotemporal reverse correlation for the auditory system: optimizing stimulus design. Journal of Computational Neuroscience, 2000, 9, 85-111. | 1.0 | 212 |
| 12 | Rapid Transformation from Auditory to Linguistic Representations of Continuous Speech. Current Biology, 2018, 28, 3976-3983.e5. | 3.9 | 211 |
| 13 | Denoising based on spatial filtering. Journal of Neuroscience Methods, 2008, 171, 331-339. | 2.5 | 196 |
| 14 | Denoising based on time-shift PCA. Journal of Neuroscience Methods, 2007, 165, 297-305. | 2.5 | 192 |
| 15 | Evidence of degraded representation of speech in noise, in the aging midbrain and cortex. Journal of Neurophysiology, 2016, 116, 2346-2355. | 1.8 | 185 |
| 16 | Speech Intelligibility Predicted from Neural Entrainment of the Speech Envelope. JARO - Journal of the Association for Research in Otolaryngology, 2018, 19, 181-191. | 1.8 | 182 |
| 17 | Interaction between Attention and Bottom-Up Saliency Mediates the Representation of Foreground and Background in an Auditory Scene. PLoS Biology, 2009, 7, e1000129. | 5.6 | 153 |
| 18 | Dynamics of Precise Spike Timing in Primary Auditory Cortex. Journal of Neuroscience, 2004, 24, 1159-1172. | 3.6 | 142 |

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|---|---------|-----|-----------|
| 19 | Einstein equation with quantum corrections reduced to second order. Physical Review D, 1993, 47, 1339-1355. | 4.7 | 133 |
| 20 | Neural source dynamics of brain responses to continuous stimuli: Speech processing from acoustics to comprehension. NeuroImage, 2018, 172, 162-174. | 4.2 | 115 |
| 21 | Stability of flat space, semiclassical gravity, and higher derivatives. Physical Review D, 1991, 43, 3308-3316. | 4.7 | 107 |
| 22 | Real-Time Tracking of Selective Auditory Attention From M/EEG: A Bayesian Filtering Approach. Frontiers in Neuroscience, 2018, 12, 262. | 2.8 | 94 |
| 23 | Overlapping communities reveal rich structure in large-scale brain networks during rest and task conditions. NeuroImage, 2016, 135, 92-106. | 4.2 | 88 |
| 24 | Effect of informational content of noise on speech representation in the aging midbrain and cortex. Journal of Neurophysiology, 2016, 116, 2356-2367. | 1.8 | 87 |
| 25 | Cortical Representations of Speech in a Multitalker Auditory Scene. Journal of Neuroscience, 2017, 37, 9189-9196. | 3.6 | 87 |
| 26 | Neural Response Correlates of Detection of Monaurally and Binaurally Created Pitches in Humans. Cerebral Cortex, 2006, 16, 835-848. | 2.9 | 84 |
| 27 | Speech-in-noise representation in the aging midbrain and cortex: Effects of hearing loss. PLoS ONE, 2019, 14, e0213899. | 2.5 | 84 |
| 28 | Continuous speech processing. Current Opinion in Physiology, 2020, 18, 25-31. | 1.8 | 80 |
| 29 | Neural speech restoration at the cocktail party: Auditory cortex recovers masked speech of both attended and ignored speakers. PLoS Biology, 2020, 18, e3000883. | 5.6 | 76 |
| 30 | Sensitivity to temporal modulation rate and spectral bandwidth in the human auditory system: MEG evidence. Journal of Neurophysiology, 2012, 107, 2033-2041. | 1.8 | 75 |
| 31 | Processing Asymmetry of Transitions between Order and Disorder in Human Auditory Cortex. Journal of Neuroscience, 2007, 27, 5207-5214. | 3.6 | 71 |
| 32 | Sensor noise suppression. Journal of Neuroscience Methods, 2008, 168, 195-202. | 2.5 | 68 |
| 33 | Neural Markers of Speech Comprehension: Measuring EEG Tracking of Linguistic Speech Representations, Controlling the Speech Acoustics. Journal of Neuroscience, 2021, 41, 10316-10329. | 3.6 | 68 |
| 34 | Robust decoding of selective auditory attention from MEG in a competing-speaker environment via state-space modeling. NeuroImage, 2016, 124, 906-917. | 4.2 | 67 |
| 35 | General relativity in a (2+1)-dimensional space-time: An electrically charged solution. General Relativity and Gravitation, 1986, 18, 1019-1035. | 2.0 | 64 |
| 36 | Neural dynamics of attending and ignoring in human auditory cortex. Neuropsychologia, 2010, 48, 3262-3271. | 1.6 | 64 |

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|---|---------|-----|-----------|
| 37 | No Starobinsky inflation from self-consistent semiclassical gravity. Physical Review D, 1992, 45, 1953-1960. | 4.7 | 63 |
| 38 | Competing Streams at the Cocktail Party: Exploring the Mechanisms of Attention and Temporal Integration. Journal of Neuroscience, 2010, 30, 12084-12093. | 3.6 | 59 |
| 39 | Human Auditory Cortical Processing of Changes in Interaural Correlation. Journal of Neuroscience, 2005, 25, 8518-8527. | 3.6 | 57 |
| 40 | Detection of Interaural Time Differences in the Alligator. Journal of Neuroscience, 2009, 29, 7978-7990. | 3.6 | 56 |
| 41 | Auditory M50 and M100 responses to broadband noise: functional implications. NeuroReport, 2004, 15, 2455-2458. | 1.2 | 53 |
| 42 | Stimulus-invariant processing and spectrotemporal reverse correlation in primary auditory cortex. Journal of Computational Neuroscience, 2006, 20, 111-136. | 1.0 | 53 |
| 43 | Power and phase properties of oscillatory neural responses in the presence of background activity. Journal of Computational Neuroscience, 2013, 34, 337-343. | 1.0 | 53 |
| 44 | Multi-time resolution analysis of speech: evidence from psychophysics. Frontiers in Neuroscience, 2015, 9, 214. | 2.8 | 51 |
| 45 | A Sensorimotor Approach to Sound Localization. Neural Computation, 2008, 20, 603-635. | 2.2 | 50 |
| 46 | Concurrent Encoding of Frequency and Amplitude Modulation in Human Auditory Cortex: MEG Evidence. Journal of Neurophysiology, 2006, 96, 2712-2723. | 1.8 | 46 |
| 47 | Neural Representations of Complex Temporal Modulations in the Human Auditory Cortex. Journal of Neurophysiology, 2009, 102, 2731-2743. | 1.8 | 46 |
| 48 | Over-Representation of Speech in Older Adults Originates from Early Response in Higher Order Auditory Cortex. Acta Acustica United With Acustica, 2018, 104, 774-777. | 0.8 | 45 |
| 49 | Modeling coincidence detection in nucleus laminaris. Biological Cybernetics, 2003, 89, 388-396. | 1.3 | 44 |
| 50 | Auditory temporal edge detection in human auditory cortex. Brain Research, 2008, 1213, 78-90. | 2.2 | 39 |
| 51 | High gamma cortical processing of continuous speech in younger and older listeners. NeuroImage, 2020, 222, 117291. | 4.2 | 39 |
| 52 | Parallel processing in speech perception with local and global representations of linguistic context. ELife, 2022, 11, . | 6.0 | 39 |
| 53 | Failure of unitarity for interacting fields on spacetimes with closed timelike curves. Physical Review D, 1992, 46, 4456-4469. | 4.7 | 37 |
| 54 | Dynamic Estimation of the Auditory Temporal Response Function From MEG in Competing-Speaker Environments. IEEE Transactions on Biomedical Engineering, 2017, 64, 1896-1905. | 4.2 | 37 |

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|---|---------|----|-----------| 
| 55 | Temporal Symmetry in Primary Auditory Cortex: Implications for Cortical Connectivity. Neural Computation, 2007, 19, 583-638. | 2.2 | 34 |
| 56 | Hamiltonian thermodynamics of a Lovelock black hole. Physical Review D, 1997, 55, 3525-3535. | 4.7 | 31 |
| 57 | The encoding of auditory objects in auditory cortex: Insights from magnetoencephalography. International Journal of Psychophysiology, 2015, 95, 184-190. | 1.0 | 30 |
| 58 | Delta Vs Gamma Auditory Steady State Synchrony in Schizophrenia. Schizophrenia Bulletin, 2018, 44, 378-387. | 4.3 | 28 |
| 59 | Fully complex magnetoencephalography. Journal of Neuroscience Methods, 2005, 149, 64-73. | 2.5 | 25 |
| 60 | Physiological evidence for auditory modulation filterbanks: Cortical responses to concurrent modulations. Journal of the Acoustical Society of America, 2013, 133, EL7-EL12. | 1.1 | 24 |
| 61 | A dendritic model of coincidence detection in the avian brainstem. Neurocomputing, 1999, 26-27, 263-269. | 5.9 | 22 |
| 62 | Delayed detection of tonal targets in background noise in dyslexia. Brain and Language, 2007, 102, 80-90. | 1.6 | 22 |
| 63 | Stimulus Context Affects Auditory Cortical Responses to Changes in Interaural Correlation. Journal of Neurophysiology, 2007, 98, 224-231. | 1.8 | 19 |
| 64 | Concurrent Encoding of Frequency and Amplitude Modulation in Human Auditory Cortex: Encoding Transition. Journal of Neurophysiology, 2007, 98, 3473-3485. | 1.8 | 19 |
| 65 | Exaggerated cortical representation of speech in older listeners: mutual information analysis. Journal of Neurophysiology, 2020, 124, 1152-1164. | 1.8 | 18 |
| 66 | Black hole evaporation and higher-derivative gravity. General Relativity and Gravitation, 1989, 21, 761-766. | 2.0 | 17 |
| 67 | Restoration and Efficiency of the Neural Processing of Continuous Speech Are Promoted by Prior Knowledge. Frontiers in Systems Neuroscience, 2018, 12, 56. | 2.5 | 17 |
| 68 | Investigating the Neural Correlates of a Streaming Percept in an Informational-Masking Paradigm. PLoS ONE, 2014, 9, e114427. | 2.5 | 16 |
| 69 | Robust Cortical Encoding of Slow Temporal Modulations of Speech. Advances in Experimental Medicine and Biology, 2013, 787, 373-381. | 1.6 | 15 |
| 70 | Cortical Processing of Arithmetic and Simple Sentences in an Auditory Attention Task. Journal of Neuroscience, 2021, 41, 8023-8039. | 3.6 | 15 |
| 71 | Neuro-current response functions: A unified approach to MEG source analysis under the continuous stimuli paradigm. NeuroImage, 2020, 211, 116528. | 4.2 | 14 |
| 72 | Unitarity of interacting fields in curved spacetime. Physical Review D, 1992, 46, 4442-4455. | 4.7 | 13 |

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|---|---------|-----|-----------|
| 73 | Dynamic cortical representations of perceptual filling-in for missing acoustic rhythm. Scientific Reports, 2017, 7, 17536. | 3.3 | 12 |
| 74 | Mutual information analysis of neural representations of speech in noise in the aging midbrain. Journal of Neurophysiology, 2019, 122, 2372-2387. | 1.8 | 12 |
| 75 | MEG Adaptive Noise Suppression using Fast LMS. , 0, , . | | 9 |
| 76 | Algorithms for Estimating Time-Locked Neural Response Components in Cortical Processing of Continuous Speech. IEEE Transactions on Biomedical Engineering, 2023, 70, 88-96. | 4.2 | 9 |
| 77 | Time travel on a string. Nature, 1992, 357, 19-21. | 27.8 | 8 |
| 78 | The Elicitation of Audiovisual Steady-State Responses: Multi-Sensory Signal Congruity and Phase Effects. Brain Topography, 2011, 24, 134-148. | 1.8 | 8 |
| 79 | Encoding of natural sounds by variance of the cortical local field potential. Journal of Neurophysiology, 2016, 115, 2389-2398. | 1.8 | 8 |
| 80 | Poststroke acute dysexecutive syndrome, a disorder resulting from minor stroke due to disruption of network dynamics. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 33578-33585. | 7.1 | 8 |
| 81 | Dynamic estimation of auditory temporal response functions via state-space models with Gaussian mixture process noise. PLoS Computational Biology, 2020, 16, e1008172. | 3.2 | 7 |
| 82 | Low-power EEG monitor based on compressed sensing with compressed domain noise rejection. , 2016, , . | | 6 |
| 83 | Granger Causal Inference from Indirect Low-Dimensional Measurements with Application to MEG Functional Connectivity Analysis. , 2020, , . | | 5 |
| 84 | Real-Time Decoding of Auditory Attention from EEG via Bayesian Filtering. , 2018, 2018, 25-28. | | 4 |
| 85 | Real-Time Tracking of Magnetoencephalographic Neuromarkers during a Dynamic Attention-Switching Task. , 2019, 2019, 4148-4151. | | 4 |
| 86 | The physics of time travel. Physics World, 1994, 7, 27-34. | 0.0 | 3 |
| 87 | Significance tests for MEG response detection. , 0, , . | | 3 |
| 88 | Ear and Brain Mechanisms for Parsing the Auditory Scene. Springer Handbook of Auditory Research, 2017, , 1-6. | 0.7 | 3 |
| 89 | Human Auditory Neuroscience and the Cocktail Party Problem. Springer Handbook of Auditory Research, 2017, , 169-197. | 0.7 | 3 |
| 90 | Local versus long-range connectivity patterns of auditory disturbance in schizophrenia. Schizophrenia Research, 2021, 228, 262-270. | 2.0 | 3 |

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|---|---------|-----|-----------|
| 91 | Bilaterally Reduced Rolandic Beta Band Activity in Minor Stroke Patients. Frontiers in Neurology, 2022, 13, 819603. | 2.4 | 3 |
| 92 | Estimation of State-Space Models with Gaussian Mixture Process Noise. , 2019, , . | | 2 |
| 93 | The enigma of cortical responses: Slow yet precise. , 2005, , 484-493. | | 2 |
| 94 | MEG Responses to Speech and Stimuli With Speechlike Modulations. , 0, , . | | 1 |
| 95 | Cortical Localization of the Auditory Temporal Response Function from MEG via Non-convex Optimization. , 2018, , . | | 1 |
| 96 | Human Auditory Cortical Processing of Transitions Between 'Order' and 'Disorder'. , 2007, , 323-331. | | 1 |
| 97 | Auditory Streaming at the Cocktail Party: Simultaneous Neural and Behavioral Studies of Auditory Attention. , 2010, , 545-553. | | 1 |
| 98 | Complex Valued Equivalent-Current Dipole Fits for MEG Responses. , 0, , . | | 0 |
| 99 | MEG Signal Denoising Based on Time-Shift PCA. , 2007, , . | | 0 |
| 100 | Magnetoencephalography and Auditory Neural Representations. IFMBE Proceedings, 2010, , 45-48. | 0.3 | 0 |
| 101 | Title is missing!. , 2020, 18, e3000883. | | 0 |
| 102 | Title is missing!. , 2020, 18, e3000883. | | 0 |
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