

CURRICULUM VITAE

Jonathan Z. Simon

Personal Information

Mailing Address

Electrical & Computer Engineering Dept.
University of Maryland
College Park MD 20742 U.S.A.

Email jzsimon@umd.edu

Web <http://www.isr.umd.edu/Labs/CSSL/simonlab/>

Phone 1-301-405-3645

Fax 1-301-314-9281

Research Interests

Auditory Neural Computations; Magnetoencephalography and Cortical Physiology; Signal Processing in Biological Systems; Computational and Theoretical Neuroscience

Appointments

University of Maryland, College Park (UMCP)

Department of Electrical and Computer Engineering (ECE) (tenure home)

Department of Biology

Institute for Systems Research (ISR)

2014–present	Professor	ECE, Biology, ISR
2013–2014	Associate Professor	ECE, Biology, ISR
2008–2013	Associate Professor	ECE, Biology
2002–2008	Assistant Professor	ECE, Biology
2001–2002	Assistant Professor	ECE

Other Program, Institute and Center Affiliations

University of Maryland Magnetoencephalography Center

Co-Director

Neuroscience and Cognitive Sciences Program (NACS)

Member

Integrated Life Sciences Honors College program (ILS)

Fellow

Fischell Department of Bioengineering (BioE)

Affiliate

Center for Comparative and Evolutionary Biology of Hearing (C-CEBH)

Member

Research Laboratories

Primary Computational Sensorimotor Systems Laboratory, A.V. Williams Building, Rooms 2267/2269/2270 (co-director)

Secondary Simon Laboratory, Biology-Psychology Building, Room 3229

KIT-Maryland Magnetoencephalography Lab, Maryland Neuroimaging Center

Education

1990 *Ph.D.*, Physics, University of California, Santa Barbara (UCSB)

Advisor J. B. Hartle

Major Field Theoretical General Relativity

Dissertation “Higher Derivative Expansions and Non-locality”

1987 *M.A.*, Physics, UCSB

1985 *A.B.*, Physics, Summa Cum Laude, Princeton University, Princeton, NJ

Previous Employment

- 1996–2001 *Post-doctoral Research Associate* with Shihab Shamma in Auditory Neural Systems, Institute for Systems Research, University of Maryland, College Park.
- 1992–1996 *Post-doctoral Research Associate* in Theoretical General Relativity, Physics Department, University of Maryland, College Park.
- 1990–1992 *Post-doctoral Research Associate* in Theoretical General Relativity, Physics Department, University of Wisconsin, Milwaukee.

Other Professional Training/Workshops

- 2011 Mathematical Association of America, *Mathematical Biology*, Sweet Briar College, VA.
- 1999 Marine Biological Laboratory, *Analysis of Neural Data*, Woods Hole, MA.
- 1998, 1999 Institute of Neuromorphic Engineering, *Telluride Workshop*, Telluride, CO.
- 1997 Marine Biological Laboratory, *Methods in Computational Neuroscience*, Woods Hole, MA.
- 1992 NATO Advanced Study Institute, *Gravitation and Quantizations*, Les Houches, France
- 1989 Hebrew University Jerusalem Winter School, *Wormholes & Baby Universes*, Jerusalem, Israel

Professional Societies

- Society for Neuroscience (SfN)
- Association for Research in Otolaryngology (ARO)
- Institute of Electrical and Electronics Engineers (IEEE)
- American Physiological Society (APS)

Research, Scholarly, and Creative Activities

Note: Research conducted in multidisciplinary environments produces publications whose author-lists may not well summarize the role of the individual contributors. Different disciplines use conflicting author order conventions, e.g., head of lab listed last (common for biologists) or predominantly alphabetical (common for physicists). For this reason, I employ these annotations to indicate my role in co-authored publications:

- | | |
|---------------------|---|
| LEAD AUTHOR | Responsible for conducting and writing up the majority of the research (e.g., often the <i>first</i> author). |
| ANCHOR AUTHOR | Supervised the work of the student or postdoc who was the lead author (e.g., often the <i>last</i> author). |
| CORE CO-AUTHOR | Not lead or anchor author, but still crucial to the foundations of the research; co-lead or co-anchor author. |
| SECONDARY CO-AUTHOR | Contributions, though significant, were secondary to those of other co-authors. |

Mentored students and postdocs in co-authored publications are indicated with SMALL CAPS.

Articles in Refereed Journals

76. Hare, S., B. M. Adhikari, X. Du, L. Garcia, H. Bruce, P. Kochunov, J. Z. Simon, L. E. Hong (2021) *Local versus Long-Range Connectivity Patterns of Auditory Disturbance in Schizophrenia*, *Schizophr. Res.* 228, 262–270 SECONDARY CO-AUTHOR
75. Marsh, E. B., BRODBECK, R. H. Llinas, D. Mallick, J. P. KULASINGHAM, J. Z. Simon, R. R. Llinas (2020) *Post-Stroke Acute Dysexecutive Syndrome, a Disorder Resulting from Minor Stroke due to Disruption of Network Dynamics*, *Proc. Nat. Acad. Sci.* 117 (52) 33578-33585. CORE CO-AUTHOR
74. BRODBECK, C., A. JIAO, L. E. Hong and J. Z. Simon (2020) *Neural Speech Restoration at the Cocktail Party: Auditory Cortex Recovers Masked Speech of Both Attended and Ignored Speakers*, *PLoS Biol.* 18(10):e3000883. ANCHOR AUTHOR
73. ZAN, P., A. PRESACCO, S. Anderson and J. Z. Simon (2020) *Mutual Information Analysis of Neural Representations of Speech in Noise in the Aging Midbrain*, *J. Neurophysiol.* 124, 1152–1164. ANCHOR AUTHOR
72. KULASINGHAM, J. P., C. BRODBECK, A. PRESACCO, A., S. E. Kuchinsky, S. Anderson and J. Z. Simon (2020), *High Gamma Cortical Processing of Continuous Speech in Younger and Older Listeners*, *NeuroImage* 222, 117291. ANCHOR AUTHOR
71. Miran S., A. PRESACCO, J. Z. Simon, M. C. Fu, S. I. Marcus and B. Babadi (2020) *Dynamic Estimation of Auditory Temporal Response Functions via State-Space Models with Gaussian Mixture Process Noise*, *PLoS Comput. Biol.* 16(8): e1008172. SECONDARY CO-AUTHOR
70. BRODBECK, C. and J. Z. Simon (2020) *Continuous Speech Processing*, *Curr. Op. Physiol.* 18:25–31. ANCHOR AUTHOR
69. DAS, P., C. BRODBECK, J. Z. Simon and B. Babadi (2020) *Neuro-Current Response Functions: A Unified Approach to MEG Source Analysis under the Continuous Stimuli Paradigm*, *NeuroImage* 211, 116528. CORE CO-AUTHOR
68. ZAN, P., A. PRESACCO, S. Anderson and J. Z. Simon (2019) *Mutual Information Analysis of Neural Representations of Speech in Noise in the Aging Midbrain*, *J. Neurophysiol.* 122, 2372–2387. ANCHOR AUTHOR
67. PRESACCO, A., J. Z. Simon and S. Anderson (2019), *Speech-in-Noise Representation in the Aging Midbrain and Cortex: Effects of Hearing Loss*, *PLoS ONE* 14(3): e0213899. CORE CO-AUTHOR
66. BRODBECK, C., L. E. Hong and J. Z. Simon (2018) *Rapid Transformation from Auditory to Linguistic Representations of Continuous Speech*, *Curr. Biol.* 28, 3976–3983. ANCHOR AUTHOR
65. CERVANTES CONSTANTINO, F. and J. Z. Simon (2018) *Restoration and Efficiency of the Neural Processing of Continuous Speech are Promoted by Prior Knowledge*, *Front. Sys. Neurosci.* 12:56. <https://doi.org/10.3389/fnsys.2018.00056> ANCHOR AUTHOR.
64. BRODBECK, C., A. PRESACCO, S. Anderson and J. Z. Simon (2018) *Over-Representation of Speech in Older Adults Originates from Early Response in Higher Order Auditory*

Cortex, Acta Acust. united Ac. 104(5), 774-777. ANCHOR AUTHOR

63. Miran, S., S. Akram, A. Sheikhatar, J. Z. Simon, T. Zhang and B. Babadi (2018) *Real-Time Tracking of Selective Auditory Attention from M/EEG: A Bayesian Filtering Approach*, Front. Neurosci. 12:262. <https://doi.org/10.3389/fnins.2018.00262>. SECONDARY CO-AUTHOR.
62. VANTHORNHOUT, J., L. Decruy, J. Wouters, J. Z. Simon, and T. Francart (2018) *Speech Intelligibility Predicted from Neural Entrainment of the Speech Envelope*, JARO 19(2) 181-19. CORE CO-AUTHOR
61. BRODBECK, C., A. Presacco and J. Z. Simon (2018) *Neural Source Dynamics of Brain Responses to Continuous Stimuli: Speech Processing from Acoustics to Comprehension*, NeuroImage 172, 162–174. ANCHOR AUTHOR
60. PUVVADA, K. C., A. Summerfelt, X. Du, N. Krishna, P. Kochunov, L. M. Rowland, J. Z. Simon* and L. E. Hong* (2018) *Delta Vs Gamma Auditory Steady State Synchrony in Schizophrenia*, Schiz. Bull. 44(2), 378-387. *contributed equally to this work. CORE CO-AUTHOR
59. CERVANTES CONSTANTINO, F. and J. Z. Simon (2017) *Dynamic Cortical Representations of Perceptual Filling-In for Missing Acoustic Rhythm*, Sci. Rep. 7(1), 17536. ANCHOR AUTHOR
58. PUVVADA, K. C. and J. Z. Simon (2017) *Cortical Representations of Speech in a Multi-talker Auditory Scene*, J. Neurosci. 37(38), 9189-9196. ANCHOR AUTHOR
57. Akram, S., J. Z. Simon and B. Babadi (2017), *Dynamic Estimation of the Auditory Temporal Response Function from MEG in Competing-Speaker Environments*, IEEE Trans. Biomed. Eng. 64(8), 1896-1905. CORE CO-AUTHOR
56. PRESACCO, A., J. Z. Simon and S. Anderson (2016b), *Effect of Informational Content of Noise on Speech Representation in the Aging Midbrain and Cortex*, J. Neurophysiol. 116, 2356–2367. CORE CO-AUTHOR
55. PRESACCO, A., J. Z. Simon and S. Anderson (2016a), *Evidence of Degraded Representation of Speech in Noise, in the Aging Midbrain and Cortex*, J. Neurophysiol. 116, 2346–2355. CORE CO-AUTHOR
54. NAJAFI, M., B. W. McMenamin, J. Z. Simon and L. Pessoa (2016), *Overlapping Communities Reveal Rich Structure in Large-Scale Brain Networks During Rest and Task Conditions*, NeuroImage 125, 92-106. SECONDARY CO-AUTHOR
53. DING, N., J. Z. Simon, S. A. Shamma and S. V. David (2016), *Encoding of Natural Sounds by Variance of the Cortical Local Field Potential*, J. Neurophysiol. 115, 2389-2398. CORE CO-AUTHOR
52. Akram, S., A. PRESACCO, J. Z. Simon, S. A. Shamma and B. Babadi (2016), *Robust Decoding of Selective Auditory Attention from MEG in a Competing-Speaker Environment via State-Space Modeling*, NeuroImage 124, 906–917. CORE CO-AUTHOR
51. CHAIT, M., S. Greenberg, T. Arai, J. Z. Simon and D. Poeppel (2015), *Multi-Time Resolution Analysis of Speech: Evidence from Psychophysics*, Front. Neurosci. 9:214. <https://doi.org/10.3389/fnins.2015.00214> SECONDARY CO-AUTHOR

50. Simon, J. Z. (2015) *The Encoding of Auditory Objects in Auditory Cortex: Insights from Magnetoencephalography*, Intl. J. Psychophysiol. 95, 184–190.
49. Akram, S., B. Englitz, M. Elhilali, J. Z. Simon, and S. A. Shamma (2014) *Investigating the Neural Correlates of a Streaming Percept in an Informational-Masking Paradigm*, PLOS ONE 9(12): e114427. <https://doi.org/10.1371/journal.pone.0114427>. CO-AUTHOR
48. DING, N. and J. Z. Simon (2014) *Cortical Entrainment to Continuous Speech: Functional Roles and Interpretations*, Front. Hum. Neurosci. 8:311. <https://doi.org/10.3389/fnhum.2014.00311> ANCHOR AUTHOR
47. DING, N., M. Chatterjee and J. Z. Simon (2014) *Robust Cortical Entrainment to the Speech Envelope Relies on the Spectro-temporal Fine Structure*, NeuroImage 88, 41–46. ANCHOR AUTHOR
46. DING, N. and J. Z. Simon (2013) *Adaptive Temporal Encoding Leads to a Background Insensitive Cortical Representation of Speech*, J. Neurosci. 33(13), 5728-5735. ANCHOR AUTHOR
45. DING, N. and J. Z. Simon (2013) *Power and Phase Properties of Oscillatory Neural Responses in the Presence of Background Activity*, J. Comput. Neuroscience 34(2), 337-43. (erratum corrected p. 367) ANCHOR AUTHOR
44. Zion Golumbic, E. M., N. DING, S. Bickel, P. Lakatos, C. A. Schevon, G. M. McKhann, R. R. Goodman, R. Emerson, A. D. Mehta, J. Z. Simon, D. Poeppel, and C. E. Schroeder (2013) *Mechanisms Underlying Selective Neuronal Tracking of Attended Speech at a “Cocktail Party”*, Neuron 77(5), 980-991. CORE CO-AUTHOR
43. XIANG J., D. Poeppel, and J. Z. Simon (2013) *Physiological evidence for auditory modulation filterbanks: cortical responses to concurrent modulations*, J. Acoust. Soc. Amer. 2 133(1), EL7-EL12. ANCHOR AUTHOR
42. DING, N. and J. Z. Simon (2012) *The Emergence of Neural Encoding of Auditory Objects While Listening to Competing Speakers*, Proc. Nat. Acad. Sci. 109(29), 11854-11859. ANCHOR AUTHOR
41. WANG, Y.*, N. DING*, AHMAR N., XIANG J., Poeppel D., and J. Z. Simon (2012) *Sensitivity to Temporal Modulation Rate and Spectral Bandwidth in the Human Auditory System: MEG Evidence*, J. Neurophysiol., 107, 2033-2041. *contributed equally to this work. ANCHOR AUTHOR
40. DING, N. and J. Z. Simon (2012) *Neural Coding of Continuous Speech in Auditory Cortex during Monaural and Dichotic Listening*, J. Neurophysiol. 107, 78–89. ANCHOR AUTHOR
39. ZHUO, J., S. Xu, J. Proctor, R. J. Mullins, J. Z. Simon, G. Fiskum, and R. P. Gullapalli (2012) *Diffusion Kurtosis as an in vivo imaging marker for reactive astrogliosis in traumatic brain injury*, NeuroImage 59(1) 467-477. CORE CO-AUTHOR
38. JENKINS, J., III, A. E. Rhone, W. J. Idsardi, J. Z. Simon, and D. Poeppel (2011) *The Elicitation of Audiovisual Steady-State Responses: Multi-Sensory Signal Congruity and Phase Effects*, Brain Topogr. 24(2) 134-148. SECONDARY CO-AUTHOR
37. XIANG J., J. Z. Simon and M. Elhilali (2010), *Competing streams at the cocktail party: Exploring the mechanisms of attention and temporal integration*, J. Neurosci. 30(36)

12084-12093. ANCHOR AUTHOR

36. CHAIT, M., A. de Cheveigné, D. Poeppel and J. Z. Simon (2010) *Neural dynamics of attending and ignoring in human auditory cortex*, *Neuropsychologia* 48(11) 3262-3271. ANCHOR AUTHOR
35. DING, N. and J. Z. Simon (2009), *Neural representations of complex temporal modulations in the human auditory cortex*, *J. Neurophysiol.* 102, 2731-2743. ANCHOR AUTHOR
34. Carr, C. E., D. Soares, J. Smolders and J. Z. Simon (2009), *Detection of interaural time differences in the alligator*, *J. Neurosci.* 29, 7948-7956. [Cover Article] SECONDARY CO-AUTHOR
33. ELHILALI, M.*, J. XIANG*, S. A. Shamma and J. Z. Simon (2009), *Interaction between attention and bottom-up saliency mediates the representation of foreground and background in an auditory scene*, *PLOS Biology* 7(6), e1000129. *contributed equally to this work. ANCHOR AUTHOR
32. CHAIT, M., D. Poeppel and J. Z. Simon (2008), *Auditory Temporal Edge Detection in Human Auditory Cortex*, *Brain Research* 12123, 78-90. ANCHOR AUTHOR
31. de Cheveigné, A., and J. Z. Simon (2008b) *Denoising Based on Spatial Filtering*, *J. Neurosci. Methods* 171(2), 331-339. CORE CO-AUTHOR
30. AYTEKIN, M., C. F. Moss and J. Z. Simon (2008) *A Sensorimotor Approach to Sound Localization*, *Neural Computation* 20, 603-635. [Cover Article] ANCHOR AUTHOR
29. de Cheveigné, A., and J. Z. Simon (2008a) *Sensor Noise Suppression*, *J. Neurosci. Methods* 168(1), 195-202. CORE CO-AUTHOR
28. LUO, H., Y. WANG, D. Poeppel and J. Z. Simon (2007) *Concurrent Encoding of Frequency and Amplitude Modulation in Human Auditory Cortex: An Encoding Transition*, *J. Neurophysiol.* 98, 3473-3485. ANCHOR AUTHOR
27. de Cheveigné, A., and J. Z. Simon (2007) *Denoising Based on Time-Shift PCA*, *J. Neurosci. Methods* 165(2), 297-305. CORE CO-AUTHOR
26. CHAIT, M., D. Poeppel and J. Z. Simon (2007) *Stimulus Context Affects Auditory Cortical Responses to Changes in Interaural Correlation*, *J. Neurophysiol.* 98, 224-231. ANCHOR AUTHOR
25. CHAIT, M., G. Eden, D. Poeppel, J. Z. Simon, D. F. Hill and D. L. Flowers (2007) *Delayed Detection of Tonal Targets in Background Noise in Dyslexia*, *Brain and Language* 102, 80-90. SECONDARY CO-AUTHOR
24. CHAIT, M., D. Poeppel, A. de Cheveigné and J. Z. Simon (2007) *Processing Asymmetry of Transitions between Order and Disorder in Human Auditory Cortex*, *J. Neurosci.* 27, 5207-5214. ANCHOR AUTHOR
23. Simon, J. Z., D. A. Depireux, D. J. KLEIN, J. B. Fritz and S. A. Shamma (2007) *Temporal Symmetry in Primary Auditory Cortex: Implications for Cortical Connectivity*, *Neural Computation* 19, 583-638. LEAD AUTHOR
22. LUO, H., Y. WANG, D. Poeppel and J. Z. Simon (2006) *Concurrent Encoding of*

- Frequency and Amplitude Modulation in Human Auditory Cortex: MEG Evidence*, J. Neurophysiol. 96, 2712-2723. ANCHOR AUTHOR
21. KLEIN, D. J., J. Z. Simon, D. A. Depireux, and S. A. Shamma (2006) *Stimulus-Invariant Processing and Spectrotemporal Reverse Correlation in Primary Auditory Cortex*, J. Comput. Neurosci. 20(2), 111-136. CORE CO-AUTHOR
 20. CHAIT, M., D. Poeppel and J. Z. Simon (2006) *Neural Response Correlates of Detection of Monaurally and Binaurally Created Pitches in Humans*, Cerebral Cortex. 16(6), 835-848. [Cover Article] ANCHOR AUTHOR
 19. Simon, J. Z. and Y. WANG (2005) *Fully Complex Magnetoencephalography*, J. Neurosci. Methods. 149(1), 64-73. LEAD AUTHOR
 18. CHAIT, M., D. Poeppel, A. de Cheveigné and J. Z. Simon (2005) *Human Auditory Cortical Processing of Changes in Interaural Correlation*, J. Neurosci. 25(37), 8518-8527. ANCHOR AUTHOR
 17. CHAIT, M., J. Z. Simon and D. Poeppel (2004) *Auditory M50 and M100 Responses to Broadband Noise: Functional Implications*, NeuroReport. 15, 2455-2458. ANCHOR AUTHOR
 16. Elhilali, M., J. B. Fritz, D. J. Klein, J. Z. Simon, and S. A. Shamma (2004) *Dynamics of Precise Spiking in Primary Auditory Cortex*, J. Neurosci. 24, 1159-1172. SECONDARY CO-AUTHOR
 15. GRAU-SERRAT V., C. E. Carr, J. Z. Simon (2003) *Modeling Coincidence Detection in Nucleus Laminaris*, Biol. Cybern. 89, 388-96. ANCHOR AUTHOR
 14. Depireux, D. A., J. Z. Simon, D. J. Klein, and S. A. Shamma (2001) *Spectro-Temporal Response Field Characterization with Dynamic Ripples in Ferret Primary Auditory Cortex*, J. Neurophysiol. 85, 1220-1234. LEAD AUTHOR
 13. Klein, D. J., D. A. Depireux, J. Z. Simon, and S. A. Shamma (2000) *Robust Spectro-Temporal Reverse Correlation for the Auditory System: Optimizing Stimulus Design*, J. Comput. Neurosci. 9, 85-111. CORE CO-AUTHOR
 12. Simon, J. Z., C. E. Carr and S. A. Shamma (1999) *A Dendritic Model of Coincidence Detection in the Avian Brainstem*, Neurocomputing 26-27, 263-269. LEAD AUTHOR
 11. Depireux D. A., J. Z. Simon and S. A. Shamma (1998) *Measuring the Dynamics of Neural Responses in Primary Auditory Cortex*. Comments Theor. Biol. 5:89-118. CORE CO-AUTHOR
 10. Louko J., J. Z. Simon, S. N. Winters-Hilt, *Hamiltonian Thermodynamics of a Lovelock Black Hole* (1997) Phys. Rev. D 55 3525. CORE CO-AUTHOR
 9. Parker L. and J. Z. Simon, *Einstein Equations with Quantum Corrections Reduced to Second Order* (1993) Phys. Rev. D 47, 1339. LEAD AUTHOR
 8. Friedman J. L., N. J. Papastamatiou and J. Z. Simon, *Failure of Unitarity for Interacting Fields on Spacetimes with Closed Timelike Curves* (1992) Phys. Rev. D 46, 4456. CORE CO-AUTHOR
 7. Friedman J. L., N. J. Papastamatiou and J. Z. Simon, *Unitarity of Interacting Fields in*

- Curved Spacetime* (1992) Phys. Rev. D 46, 4442. CORE CO-AUTHOR
6. Simon, J. Z., *No Starobinsky Inflation from Self-Consistent Semiclassical Gravity* (1992) Phys. Rev. D 45, 1953.
 5. Simon, J. Z., *Stability of Flat Space, Semiclassical Gravity, and Higher Derivatives* (1991) Phys. Rev. D 43, 3308.
 4. Simon, J. Z., *Higher Derivative Lagrangians, Nonlocality, Problems, and Solutions* (1990) Phys. Rev. D 41, 3720.
 3. Myers R. C. and J. Z. Simon, *Black Hole Evaporation and Higher-Derivative Gravity* (1989) Gen. Rel. Grav. 21, 761. [Fourth Award, Gravity Research Foundation Essay, 1988] CORE CO-AUTHOR
 2. Myers R. C. and J. Z. Simon, *Black-hole Thermodynamics in Lovelock Gravity* (1988) Phys. Rev. D 35, 2434. CORE CO-AUTHOR
 1. Gott J. R. III, J. Z. Simon, and M. Alpert, *General Relativity in a (2+1)-Dimensional Space-Time: An Electrically Charged Solution* (1986) Gen. Rel. Grav. 18, 1019. LEAD AUTHOR

Preprints in Online Archives (not otherwise published)

4. Gillis, M., J. Vanthornhout, J. Z. Simon, T. Francart and C. Brodbeck (2021) *Neural Markers of Speech Comprehension: Measuring EEG Tracking of Linguistic Speech Representations, Controlling the Speech Acoustics*, bioRxiv 2021.03.24.436758. DOI: <https://doi.org/10.1101/2021.03.24.436758> SECONDARY CO-AUTHOR
3. KULASINGHAM, J. P., N. H. Joshi, M. Rezaeizadeh and J. Z. Simon (2021) *Cortical Processing of Arithmetic and Simple Sentences in an Auditory Attention Task*, bioRxiv 2021.01.31.429030. <https://doi.org/10.1101/2021.01.31.429030> ANCHOR AUTHOR
2. PUVVADA, K. C., M. Villafañe-Delgado, C. Brodbeck and J. Z. Simon (2017) *Neural Coding of Noisy and Reverberant Speech in Human Auditory Cortex*, bioRxiv 229153. <https://doi.org/10.1101/229153> ANCHOR AUTHOR
1. CERVANTES CONSTANTINO, F., M. VILLAFañE-DELGADO, E. CAMENGA, K. DOMBROWSKI, B. WALSH and J. Z. Simon (2017) *Functional Significance of Spectrotemporal Response Functions Obtained using Magnetoencephalography*, bioRxiv 168997. <https://doi.org/10.1101/168997> ANCHOR AUTHOR

Book Reviews, Commentary, and Other Articles

3. Simon, J. Z., *Learning Physics from Science Fiction* (1998) Physics World 11:1, 52.
2. Simon, J. Z., *The Physics of Time Travel* (1994) Physics World 7:12, 27. [Cover Article]
1. Allen B. and J. Z. Simon (1992) *Time Travel on a String*, Nature 357, 19. CORE CO-AUTHOR

Books Edited

1. Middlebrooks, J. C., J. Z. Simon, A. N. Popper and R. R. Fay (Eds.) (2017) *The Auditory System at the Cocktail Party*, Springer Handbook of Auditory Research 60, Fay, R. R., Popper, A. N. (Series Eds.) (Springer: New York), ISBN: 978-3-319-51660-8.

Book Chapters

12. Simon, J. Z. (2017) Human Auditory Neuroscience and the Cocktail Party Problem, In *The Auditory System at the Cocktail Party*, Springer Handbook of Auditory Research 60, Ed.: Middlebrooks, J. C., J. Z. Simon, A. N. Popper and R. R. Fay (Springer: New York) ISBN: 978-3-319-51660-8, 169-197. https://doi.org/10.1007/978-3-319-51662-2_7
11. Middlebrooks, J. C. and J. Z. Simon (2017) Ear and Brain Mechanisms for Parsing the Auditory Scene, In *The Auditory System at the Cocktail Party*, Springer Handbook of Auditory Research 60, Ed.: Middlebrooks, J. C., J. Z. Simon, A. N. Popper and R. R. Fay (Springer: New York) ISBN: 978-3-319-51660-8, 1-6. https://doi.org/10.1007/978-3-319-51662-2_1
10. Elhilali, M., S. Shamma, J. Z. Simon and J. B. Fritz (2013) A Linear Systems View to the Concept of STRFs, in *Handbook of Modern Techniques in Auditory Cortex*, Depireux, D. A. and M. Elhilali, M. (Eds.), (Nova Science Publishers: New York), ISBN: 978-1-6280-8894-6. CORE CO-AUTHOR
9. DING, N. and J. Z. Simon (2013) Robust Cortical Encoding of Slow Temporal Modulations of Speech, in *Basic Aspects of Hearing*, Moore, B.C.J., R. D. Patterson, I. M. Winter, R. P. Carlyon, and H. E. Gockel (Eds.), (Springer Verlag: New York), ISBN: 978-1-4614-1589-3, 373-381. ANCHOR AUTHOR
8. ELHILALI, M., J. XIANG, S. A. Shamma and J. Z. Simon (2010) Auditory Streaming at the Cocktail Party: Simultaneous Neural and Behavioral Studies of Auditory Attention, in *The Neurophysiological Bases of Auditory Perception*, Lopez-Poveda, E. A., Meddis, R., and Palmer A. R. (Eds.), (Springer Verlag: New York), ISBN: 978-1441956859, 545-553. ANCHOR AUTHOR
7. CHAIT, M., D. Poeppel, and J. Z. Simon (2007) Human Auditory Cortical Processing of Transitions Between ‘Order’ and ‘Disorder’, in *Hearing – From Sensory Processing to Perception*, Kollmeier, B., Klump, G., Hohmann, V., Langemann, U., Mauermann, M., Uppenkamp, S., and Verhey, J. (Eds.), (Springer Verlag: New York), ISBN: 978-3-540-73008-8, 323-331. ANCHOR AUTHOR
6. CHAIT, M. and J. Z. Simon (2007) The dynamics of the Construction of Auditory Perceptual Representations: MEG Brain Imaging in Humans, In *Reasoning and Cognition Interdisciplinary Series on Reasoning Studies Vol. 2*, ed. D. Andler, Y. Ogawa, M. Okada, and S. Watanabe. (Keio University Press: Tokyo), ISBN: 4-7664-1332-6, 265-280. ANCHOR AUTHOR
5. Carr, C. E., S. Iyer, D. Soares, S. Kalluri and J. Z. Simon (2006) Are Neurons Adapted for Specific Computations? Examples from Temporal Coding in the Auditory System, In 23

Problems in Systems Neuroscience, ed. L. v. Hemmen and T. Sejnowski. (Oxford University Press: Oxford), ISBN: 0-19514-822-3, 245-265. CORE CO-AUTHOR

4. Elhilali M., Klein D., Fritz J., Simon J. and Shamma S. (2005) The Enigma of Cortical Responses: Slow Yet Precise, in *Auditory signal processing: physiology, psychoacoustics, and models*, D. Pressnitzer, A. de Cheveigné, S. McAdams and L. Collet, (Springer Verlag: New York), ISBN: 0-38721-915-3, 485-494. SECONDARY CO-AUTHOR
3. Simon, J. Z., S. Parameshwaran, T. M. Perney, and C. E. Carr (2001) Temporal Coding in the Auditory Brainstem of the Barn Owl, In *Physiological and Psychophysical Bases of Auditory Function*, Ed.: D. J. Breebaart, A. J. M. Houtsma, A. Kohlrausch, V. F. Prijs, and R. Schoonhoven (Shaker: Maastricht) ISBN: 1-86156-069-9, 336-342. CORE CO-AUTHOR
2. Depireux D. A., P. Ru, S. A. Shamma, and J. Z. Simon (1998) Response-Field Dynamics in the Auditory Pathway, In *Computational Neuroscience: Trends in Research*, Ed: J. M. Bower (Elsevier: Amsterdam) ISBN: 0-44450-307-2, 263-270. CORE CO-AUTHOR
1. Simon, J. Z., D. A. Depireux, and S. A. Shamma (1998) Representation of Complex Dynamic Spectra in Auditory Cortex. In *Psychophysical and Physiological Advances in Hearing*. Ed.: A. R. Palmer, A. Rees, A. Q. Summerfield, and R. Meddis (Whurr: London) ISBN: 1-86156-069-9, 513-520. CORE CO-AUTHOR

Selected refereed conference proceedings

15. Soleimani, B., P. Das, P., J. KULASINGHAM, J. Z. Simon and B. Babadi (2020) *Granger Causal Inference from Indirect Low-Dimensional Measurements with Application to MEG Functional Connectivity Analysis*, 2020 54th Annual Conference on Information Sciences and Systems (CISS), pp 1-5, Princeton, NJ, USA. SECONDARY CO-AUTHOR
14. PRESACCO, A., S. Miran, B. Babadi and J. Z. Simon (2019) *Real-Time Tracking of Magnetoencephalographic Neuromarkers during a Dynamic Attention-Switching Task*, 2019 41st Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), 4148-4151. ANCHOR AUTHOR
13. Miran S., J. Z. Simon, M. C. Fu, S. I. Marcus and B. Babadi (2019) *Estimation of State-Space Models with Gaussian Mixture Process Noise*, IEEE Data Science Workshop (DSW) 2019, 185-189. SECONDARY CO-AUTHOR
12. Das, P., C. BRODBECK, J. Z. Simon and B. Babadi (2018) *Cortical Localization of the Auditory Temporal Response Function from MEG via Non-convex Optimization*, 2018 52nd Asilomar Conference on Signals, Systems, and Computers. 373-377. SECONDARY CO-AUTHOR
11. Miran, S., S. Akram, A. Sheikhatar, J. Z. Simon, T. Zhang and B. Babadi (2018) *Real-Time Decoding of Auditory Attention from EEG via Bayesian Filtering*, Conf Proc IEEE Eng Med Biol Soc. 2018, 25-28. SECONDARY CO-AUTHOR
10. Senevirathna, B., L. Berman, N. Bertoni, F. Pareschi, M. Mangia, R. Rovatti, G. Setti, J. Simon, and P. Abshire (2016) *A Low Cost Mobile EEG for Characterization of Cortical Auditory Responses*, 2016 IEEE International Symposium on Circuits and Systems (ISCAS). CORE CO-AUTHOR

9. Bertoni, N., B. Senevirathna, F. Pareschi, M. Mangia, J. Z. Simon, R. Rovatti, P. Abshire, and G. Setti (2016) *Low-power EEG monitor based on Compressed Sensing and featuring compressed domain noise rejection*, 2016 IEEE International Symposium on Circuits and Systems (ISCAS). CORE CO-AUTHOR
8. Akram, S., J. Z. Simon, S. A. Shamma, and B. Babadi (2014) *A State-Space Model for Decoding Auditory Attentional Modulation from MEG in a Competing-Speaker Environment*, NIPS 2014 Advances in Neural Information Processing Systems 27, 460-468. SECONDARY CO-AUTHOR
7. Simon, J. Z. and N. DING (2010) *Magnetoencephalography and Auditory Neural Representations*, In Proc. Southern Biomedical Engineering Conference 2010, IFMBE Proceedings 32, K.E. Herold, W.E. Bentley, and J. Vossoughi (Eds.), 45–48. ANCHOR AUTHOR
6. de Cheveigné, A., J. Le Roux and J. Z. Simon (2007) *MEG Signal Denoising Based on Time-Shift PCA*, In Proc. ICASSP 2007 International Conference on Acoustics, Speech, and Signal Processing, Vol. I, 317-320. CORE CO-AUTHOR
5. WANG, Y., N. AHMAR, J. XIANG, L. MA, D. Poeppel and J. Z. Simon (2005) *Complex Valued Equivalent-Current Dipole Fits for MEG Responses*, Neural Engineering, 2005. Conference Proceedings. 2nd International IEEE EMBS Conference on, 273-276. ANCHOR AUTHOR
4. XIANG, J., Y. WANG and J. Z. Simon (2005) *MEG Responses to Speech and Stimuli with Speechlike Modulations*, Neural Engineering, 2005. Conference Proceedings. 2nd International IEEE EMBS Conference on, 33-36. ANCHOR AUTHOR
3. AHMAR, N. and J. Z. Simon (2005) *MEG Adaptive Noise Suppression using Fast LMS*, Neural Engineering, 2005. Conference Proceedings. 2nd International IEEE EMBS Conference on, 29-32. ANCHOR AUTHOR
2. AHMAR, N., Y. Wang and J. Z. Simon (2005) *Significance Tests for MEG Response Detection*, Neural Engineering, 2005. Conference Proceedings. 2nd International IEEE EMBS Conference on, 21-24. ANCHOR AUTHOR
1. KANLIS N. A., J. Z. Simon, and S. A. Shamma (2000) *Complete training analysis of feedback architecture networks that perform blind source separation and deconvolution*, In Proc. Independent Component Analysis and Blind Signal Separation Workshop, ICA2000, 139–144. ANCHOR AUTHOR

Invited talks and panels

99. Zhejiang University, College of Biomedical Engineering and Instrument Sciences (2020) *Neural Representations of Speech, and Speech in Noise, in Human Auditory Cortex* [Cancelled due to COVID-19]
98. Perimeter Institute for Theoretical Physics, Waterloo, Ontario, Canada (2020) *Why Would a Theoretical Physicist Study the Auditory Brain?* [Cancelled due to COVID-19]

97. Biomag Satellite Symposium, Algorithms in Biomagnetism, Birmingham UK (2020) *Neuro-Current Response Functions: A Unified Approach to MEG Source Analysis under the Continuous Stimuli Paradigm* [Cancelled due to COVID-19]
96. CogHear Workshop (2020) *What Can We Decode?*
95. Symposium for Cognitive Auditory Neuroscience, Pittsburgh (2020) *Neural Representations of Speech, and Speech in Noise, in Human Auditory Cortex.* [Cancelled due to COVID-19]
94. University of Rochester, Biomedical Engineering (2020) *Neural Representations of Speech, and Speech in Noise, in Human Auditory Cortex.* [Cancelled due to COVID-19]
93. University of Memphis, Institute for Intelligent Systems (2020) *Attention at the Cocktail Party.* [Cancelled due to COVID-19]
92. KU Leuven, ExpORL (2020) *Dynamic Processing of Background Speech at the Cocktail Party: Evidence for Early Active Cortical Stream Segregation.*
91. Listen & Learn Workshop, Sydney, Australia (2019) *High Frequency Cortical Processing of Continuous Speech in Younger and Older Listeners.*
90. Auditory EEG Signal Processing Symposium (AESoP) (2019) *High Frequency Cortical Processing of Continuous Speech in Younger and Older Listeners.*
89. Conference on Implantable Auditory Prostheses (CIAP) (2019) *Towards Objective Measures of Speech Perception.*
88. CHSCOM, Linköping Sweden (2019) *Rapid Time-Locked Lexical Processing of Attended but not of Unattended Continuous Speech.*
87. Cambridge University, Cognition and Brain Sciences Unit (2019) *Transformations from Auditory to Lexical Representations, across Auditory Cortex, are Rapid and Attention Dependent.*
86. Attention to Sound - Royal Society (2018) *Transformation from Auditory to Linguistic Representations, across Auditory Cortex, is Rapid and Attention Dependent.*
85. Meeting of the Society for Psychophysiological Research (2018) *Neural Representations of Cocktail Party Speech Human Auditory Cortex.*
84. Asilomar Conference on Signals, Systems, and Computers (ACSSC) (2018) *Cortical Localization of the Auditory Temporal Response Function from MEG via Non-convex Optimization.*
83. International Workshop on Advances in Audiology (2018) *Adaptation to Noise and Cortical Representation of Speech.*
82. Auditory EEG Signal Processing Symposium (AESoP) (2018) *Recent Advances in Cortical Representations of Speech using MEG.*
81. International Congress of Clinical Neurophysiology (2018) *Neural Representations of Speech in Human Auditory Cortex.*
80. UMCP ISR Colloquium (2017) *Neural Representations of Speech in Human Auditory Cortex: Systems-Based Approaches.*
79. UMCP Applied Dynamics Seminar (2017) *Neural Representations of Speech in Human Auditory Cortex.*
78. Acoustical Society of America (2017) *Neural Representations of Restored Acoustic Rhythm in Noise.*
77. Physics of Hearing: From Neurobiology to Information Theory and Back (2017) *Neural Representations of Speech in Human Auditory Cortex.*

76. Physics of Hearing: From Neurobiology to Information Theory and Back (2017) *How the Brain Solves the Cocktail Party Problem: Evidence from Human Auditory Neuroscience.*
75. University of California Santa Barbara, Kavli Institute for Theoretical Physics (KITP) (2017) *Why Would a Theoretical Physicist Study the Auditory Brain?*
74. Montgomery Blair High School, Biology Club (2016) *Investigating Function in Human Auditory Cortex with Magnetoencephalography.*
73. Zhejiang University, College of Biomedical Engineering and Instrument Sciences (2016) *Neural Representations of Speech at the “Cocktail Party” in Human Auditory Cortex.*
72. NYU Shanghai and East China Normal University, NYU-ECNU Institute of Brain and Cognitive Science (2016) *Neural Representations of Speech at the “Cocktail Party” in Human Auditory Cortex.*
71. Beijing University, McGovern Institute (2016) *Neural Representations of Speech at the “Cocktail Party” in Human Auditory Cortex.*
70. Acoustical Society of America (2016) *Neural Representations of Speech, and Speech in Noise, in Human Auditory Cortex.*
69. SPIRE, Groningen, Netherlands (2016) *Neural Representations of Speech, and Speech in Noise, in Human Auditory Cortex.*
68. Paris Workshop on Decoding of Sound and Brain (2015) *Neural Representations of the Cocktail Party in Human Auditory Cortex.*
67. UMB-UMCP Seed Grant Program (2015) *Temporal Auditory Coding in Schizophrenia and Treatment-Resistant Auditory Hallucination.*
66. University College London, Ear Institute (2015) *Neural Encoding of Speech in Auditory Cortex.*
65. KU Leuven, ExpORL, Belgium (2015) *Neural Encoding of Speech in Auditory Cortex.*
64. CHSCOM, Linköping Sweden (2015) *Neural Representations of the Cocktail Party in Human Auditory Cortex.*
63. Simons Foundation Biotech Symposium, MEG/EEG: Analysis, Application and Interpretation (2014) *Signal Analysis Primer and Applications.*
62. Gordon Research Conference on the Auditory System (2014) *Neural Representations of the Cocktail Party in Human Auditory Cortex.*
61. Universitas 21 Graduate Research Conference (2014) *Effects of aging on temporal synchronization of speech in noise investigated in the cortex by using MEG and in the midbrain by using EEG techniques.*
60. Johns Hopkins School of Medicine (2014) *Cortical Encoding of Auditory Objects at the Cocktail Party.*
59. Max Planck Institute — Leipzig (2014) *Neural Representations of the Cocktail Party in Human Auditory Cortex.*
58. Acoustical Society of America (2014) *Neural Representations of the Cocktail Party in Human Auditory Cortex.*
57. Sound+ (2014) *Conversation: Sounding the Humanities, Sounding the Sciences.*
56. UMCP Physics Department Colloquium (2014) *Magnetoencephalography: Introduction and Examples.*
55. UMCP Biology Department Colloquium (2013) *Cortical Encoding of Auditory Objects at the Cocktail Party.*
54. AFOSR Workshop on Magneto-Optic Polymers (2013) *Introduction to Magnetoencephalography.*

53. UMCP Joint Electrical & Computer Engineering Department/Institute for Systems Research Colloquium (2013) *Cortical Encoding of Auditory Objects at the Cocktail Party*.
52. Walter Reed National Military Medical Center, Audiology and Speech Center (2013) *Cortical Encoding of Auditory Objects at the Cocktail Party*.
51. Computational Audition, Boston (2013) *Cortical Encoding of Auditory Objects at the Cocktail Party*.
50. Presidential Symposium, Association for Research in Otolaryngology Winter Meeting (2013) *Cortical Encoding of Auditory Objects at the Cocktail Party*.
49. National Academies Keck Futures Initiative: The Informed Brain in a Digital World (2012) *The Neural Encoding of Auditory Objects while Listening to Competing Speakers*.
48. University of California at Irvine, Department of Cognitive Sciences Colloquium (2012) *Cortical Encoding of Auditory Objects in the Cocktail Party Problem*.
47. University College London, Ear Institute (2012) *Cortical Encoding of Auditory Objects in the Cocktail Party Problem*.
46. Advancements and Perspectives in Auditory Neurophysiology (APAN), San Diego (2010) *Auditory Neuroscience with Magnetoencephalography: New Quantitative Approaches*.
45. Neuronal Oscillations, Nesting, Speech Perception, Learning Workshop, New York University (2010) *Challenges in analysis of slow rhythms in MEG data*.
44. QANSAS 2009, International School on Quantum and Nano Computing Systems and Applications, Dayalbagh Educational Institute, Agra India (2009) *Magnetoencephalography: A new window into the brain* (invited but unable to present).
43. Using EEG/ERP/MEG to Understand Neural Mechanisms and Treatment Effects in Mental Illness in Children and Adolescents, NIMH Workshop (2009) *What matters, when looking for EEG/MEG biomarkers*.
42. Auditory Cortex Meeting, Magdeburg Germany (2009) *Modulation Encoding in Auditory Cortex*.
41. New York University, Psychology Department (2009) *New Methods for Denoising MEG data*.
40. Indiana University, Department of Physics (2008) *Neural Computations at the Femtotesla Scale: Visualizing Computations Inside the Human Brain*.
39. Indiana University, Department of Psychology and Brain Imaging (2008) *Foreground and background at the cocktail party: A neural and behavioral study of top-down and bottom-up auditory attention*.
38. UMCP Joint Biology/Neuroscience & Cognitive Science Seminar (2007) *Foreground and Background at the Cocktail Party: The Role of Auditory Attention in Neural Processing and Behavior*.
37. New York University, Center for Neural Systems (2007) *Neural Coding of Multiple Stimulus Features in Auditory Cortex*.
36. UMCP Electrical & Computer Engineering Colloquium (2007) *Neural Computation at the Femtotesla Scale: Visualizing Computations Inside the Human Brain*.
35. New Ideas in Hearing Workshop (2006) *Neural Coding of Multiple Stimulus Features in Auditory Cortex*, Paris. May 12-13.
34. International Symposium on Brain Communications Technology (2006), Kansai Advanced Research Institute, Japan (declined due to recent birth).

33. SAIC (McLean, VA), Center for Advanced Materials and Nanotechnology (2005) *Measuring Brain Dynamics using SQUIDS: Investigating Auditory Processing with Magnetoencephalography.*
32. Boston University, Physics Colloquium (2005), *Measuring Brain Dynamics using SQUIDS: Investigating Auditory Processing with Magnetoencephalography.*
31. Workshop on Speech Separation and Comprehension in Complex Acoustic Environments (2004), Chait, M., S. Greenberg, T. Arai, J. Z. Simon and D. Poeppel, *Two Time Scales in Speech Processing.* (Invitation to student Maria Chait.)
30. Workshop on Speech Separation and Comprehension in Complex Acoustic Environments (2004), Chait, M., J. Z. Simon and D. Poeppel, *Auditory Cortical Responses at 100 ms Post Onset are Modulated by Figure/Ground Status of the Stimulus.* (Invitation to student Maria Chait.)
29. NIDCD (NIH), Colloquium (2004) *Phase-locking in Human Auditory Cortex to Spectrotemporal Modulations.*
28. KIT 3rd International Symposium on Brain and Language (2003), Chait, M., S. Greenberg, T. Arai, J. Z. Simon and D. Poeppel, *Brain Mechanisms for Speech Segmentation.* (Invitation to student Maria Chait.)
27. Chinese-American Frontiers of Science Symposium (jointly sponsored by the National Academy of Science and the Chinese Academy of Science) (2003), Shanghai China.
26. Mathematical Biosciences Institute (2003): *Modeling Coincidence Detection in Nucleus Laminaris.*
25. Acoustical Society of America (2002) (declined due to pending births).
24. IEEE EMBS (Engineering in Medicine and Biology Society) Baltimore (2002): *Signal Processing of Auditory Responses from Magnetoencephalography (MEG).*
23. Telluride Neuromorphic Engineering Workshop (2001) *Neural Constraints in Auditory Cortex.*
22. Selectivity of Neurons in Sensory and Motor Cortices, Paris (2000) *Spectro-Temporal Processing in Primary Auditory Cortex: Simplicity & Linearity.*
21. Nature of Speech Perception, Utrecht (2000) *Intelligibility and Representation of Timbre in Primary Auditory Cortex.*
20. Cornell University, Physics Department (2000) *Computational Neurobiology: Neural Computations in the Auditory System.*
19. University of Illinois, Chicago, Bioengineering Department (2000).
18. Acoustical Society of America (2000) *Cellular Models of Coincidence Detection.*
17. Acoustical Society of America (2000) *Characterization of Time-Varying Responses to Dynamic Broadband Spectra in Primary Auditory Cortex.*
16. New York University, Center for Neural Science (1999).
15. Institute for Mathematics and its Applications, Minneapolis (1999) *Spectro-Temporal Processing of Dynamic Broadband Sounds in Auditory Cortex.*
14. Mercyhurst College, Physics Department (1996).
13. Isaac Newton Institute, Cambridge University (1994) *Loss of Unitarity in the Presence of Closed Timelike Curves*
12. University of Florida, Physics Department (1994).
11. University of North Carolina, Chapel Hill, Physics Department (1993).
10. Princeton University, Physics Department (1993).
9. Syracuse University, Physics Department (1993).

8. Fermilab, Astrophysics (1992).
7. University of Chicago, Enrico Fermi Institute (1992).
6. University of Maryland, Physics Department (1991).
5. Washington University, Physics Department (1991).
4. Tufts University, Physics Department (1990).
3. University of Massachusetts, Physics Department (1990).
2. Brown University, Physics Department (1990).
1. Cambridge University, Department of Applied Mathematics and Theoretical Physics (1989).

[The categories **Unrefereed and other refereed conference presentations** and **ISI Citations by Year and Article** are deferred until the last section.]

Films, Tapes, Photographs, etc.

Instructional videos for new Teaching Assistants (UCSB)

Approaches to Problem Solving: The Good & Bad (1988).

Getting Past Those First Quarter Blues: Interacting with Your Students (1987).

Contracts and Grants

Note: The following abbreviations are using for funding sources:

NIH National Institutes of Health

NIDCD National Institute on Deafness and Other Communication Disorders

NIBIB National Institute of Biomedical Imaging and Bioengineering

NIA National Institute on Aging

NINDS National Institute on Neurological Disorders and Stroke

NSF National Science Foundations

CRCNS Collaborative Research in Computational Neuroscience (NIH/NSF)

USDA U.S. Department of Agriculture

Current Funding

1. Mindfulness Matters: The Impact of Mindfulness Based Stress Reduction on Post-Stroke Cognition
NIH/NIA R21 AG 068802
09/01/2020 – 08/31/2022, \$460,407 total, 5% effort
Role: co-I (PI: Elisabeth Marsh)
2. Neural Representations of Continuous Speech and Linguistic Context in Native and Non-native Listeners
Brain and Behavior Initiative Seed Grant
06/01/19 – 05/30/21, \$50,000 total
Role: Joint-PI (with: Ellen Lau)
3. Neuroplasticity in Auditory Aging

NIH/NIA P01 AG 055365
09/15/2017 – 05/30/2022, \$8,337,000 Program total
Role: co-I (PI: Sandra Gordon-Salant)

Project: Speech Perception with High Cognitive Demand
Sub-ProjectID 8288
\$1,114,031 project total, 17% effort
Role: Project PI

Core: Signal Processing and Data Analysis Core
Sub-ProjectID 8284
\$599,900 core total, 4% effort
Role: Core PI

4. Neuroplasticity in Auditory Aging
UMCP Tier 4-Operating Support
11/15/2017 – 05/30/2022, \$270,664 total
Role: co-I (PI: Sandra Gordon-Salant)
5. NCS-FO: Extracting Functional Cortical Network Dynamics at High Spatiotemporal Resolution
NSF 1734892
08/01/2017 – 07/31/2021, \$909,153 total, 4% effort
Role: PI
6. Auditory Scene Analysis and Temporal Cortical Computations
NIH/NIDCD R01 DC 014085
03/01/2015 – 02/28/2021, \$1,545,262 total, 33% effort
Role: PI

Completed Funding

1. An Optimization-based Approach to Breaking the Neural Code
DARPA N660011824024
03/26/2018 – 09/25/2019, \$1,016,720 total, 17% effort
Role: co-I (PI: Steven Marcus)
2. Dance and EEG: Neural Correlates of Expressive Movement
Brain and Behavior Initiative Seed Grant
04/01/17 – 03/30/18, \$65,312 total
Role: Joint-PI (with: Pamela Abshire, Karen Bradley, Adriane Fang, Brad Hatfield)
3. Neuroplasticity in Auditory Aging
UMCP Tier 2-Development Incentive
05/28/15 – 05/27/16, \$75,000 total
Role: co-I (PI: Sandra Gordon-Salant, UMCP)

4. Cocktail Party Problem: Perspective on Neurobiology of Auditory Scene Analysis
NIH/NIA R01 AG 036424
06/01/10 – 05/31/16, \$2,164,758 total, 4% effort
Role: co-I (PI: Mounya Elhilali, Johns Hopkins University)
5. Wireless Whole-Brain Monitoring
A. James Clark School of Engineering Seed Grant (Component Project)
02/16/15 – 02/15/16, \$37,464 (Component Project Only)
Role: Joint-Project Leader (with: Pamela Abshire, UMCP)
[Component Project of Seed Grant: Engineering Systems for Brain Health Management to Reza Ghodssi (PI)]
6. Temporal Auditory Coding in Schizophrenia and Treatment-Resistant Auditory Hallucination
UMCP-UMB Research and Innovation Seed Grant
07/14/14 – 07/13/15, \$75,000 total
Role: Joint-PI (with: Elliot Hong, U. Maryland School of Medicine)
7. Effects of Aging on Speech-in-noise Processing in the Auditory Cortex and Midbrain
UMCP ADVANCE Program Interdisciplinary and Engaged Research Seed Grant
04/01/14 – 03/31/15, \$20,000 total
Role: Joint-PI (with: Samira Anderson, UMCP)
8. The Neural Basis of Perceptually-Relevant Auditory Modulations in Humans
NIH/NIDCD R01 DC 008342
3/1/08 – 2/28/15, \$1,211,718 total, 33% effort
Role: PI
9. Cortical Mechanisms in Speech Perception
NIH/NIDCD R01 DC 005660
8/1/08 – 7/31/14. \$3,196,316 total, 8% effort
Role: co-I (PI: David Poeppel, New York University)
10. Cellular Basis of Sound Localization
NIH/NIDCD R01 DC 000436
12/1/07 – 11/30/12, \$1,856,250 total, 8% effort
co-I (PI: Catherine Carr, UMCP)
11. Quantitative Electroencephalography (EEG) to Assess Pain in Cattle
USDA 20096512005791
9/1/09 - 9/1/11, \$362,000 total, 15% effort
co-I (PI: Ray Stricklin, UMCP)
12. Neural Correlates of Streaming of Complex Sounds
NIH/NIDCD R01 DC 007657
5/1/06 – 4/30/11, \$1,570,000 total, 8% effort
co-I (PI: Shihab Shamma, UMCP)
13. CNRS (Centre National de la Recherche Scientifique)
7/1/07 – 6/30/10, 21,000€ total (~\$29,560)
Joint-PI with: Alain de Cheveigné, Centre National de la Recherche Scientifique, Paris

14. Brain Computer Interface: Inference of Spatial Field
NIH/NINDS F31 NS 055589
5/15/06 – 9/14/09, \$73,866
Fellowship Advisor
15. Cortical Mechanisms in Speech Perception
NIH/NIDCD R56 DC 005660
8/1/07 – 7/31/08, \$499,500 total, 8% effort
co-I (PI: David Poeppel, UMCP)
16. CRCNS: Auditory Scene Analysis and the Cocktail Party Problem
NIH/NIA R01 AG 027573
9/1/05 – 7/31/08, \$734,275 total, 8% effort
co-I (PI: Shihab Shamma, UMCP)
17. CRCNS: Innovative Technologies Inspired by Biosonar
NIH/NIBIB R01 EB 004750
8/1/04 – 5/31/08, \$1,316,859 total, 8% effort
co-I (PI: Cindy Moss, UMCP)
18. Frequency Responses to Broadband Auditory Stimuli in Magnetoencephalography
Graduate Research Board, UMCP
7/1/04–6/30/05, \$4,800 total
PI
19. Coincidence Detection Models in Auditory Research
NIH/NIDCD R03 DC 004382
1/1/01–12/31/03, \$222,000 total, 30% effort
PI

Fellowships, Prizes, and Awards

- 1998–99 NRSA Training Grant, National Institutes of Health, National Institute on Deafness and Other Communicative Disorders, University of Maryland Comparative Hearing and Evolution Training Program.
- 1992 NATO, Advanced Study travel award to Les Houches, France.
- 1991 National Science Foundation, Travel award to Kyoto, Japan.
- 1989 Graduate School, U.C.S.B., Award for study at Cambridge University, UK.
- 1988 Gravity Research Foundation, Fourth award essay.
- 1985–89 Regents Fellowship, U.C.S.B.
- 1985 Phi Beta Kappa.
- 1985 Kusaka Memorial Prize (best undergraduate physics thesis), Princeton University.

Editorships, Editorial Boards, and Reviewing Activities

Editorial Review Board

- 2007–pres. Frontiers in Neuroscience

Reviewing Activities for Journals

Nature
Proceedings of the National Academy of Sciences
Current Biology
PLOS Biology
Journal of Neuroscience
Cerebral Cortex
NeuroImage
Journal of Neurophysiology
eLife
Scientific Reports
PLOS Computational Biology
Journal of the Acoustical Society of America
NeuroImage Clinical
Physical Review E
Neural Computation
European Journal of Neuroscience
Frontiers in Neuroscience
Frontiers in Human Neuroscience
Journal of the Association for Research in Otolaryngology
IEEE Transactions on Biomedical Engineering
IEEE Transactions on Neural Systems and Rehabilitation Engineering
PLOS One
Ear and Hearing
Hearing Research
Journal of Computational Neuroscience
Journal of Theoretical Biology
Psychophysiology
Journal of Cognitive Neuroscience
Physical Review D
Journal of Mathematical Physics
General Relativity and Gravitation
Classical and Quantum Gravity

Reviewing Activities for Agencies and Foundations

2021 Einstein Foundation Berlin
2021 Canada Foundation for Innovation
2020 National Institutes of Health: Language and Communication (LCOM)
2020 National Institutes of Health: Special Emphasis Panel
2020 National Institutes of Health: Language and Communication (LCOM)
2019 National Institutes of Health: Special Emphasis Panel
2019 Canada Research Chairs
2018 German Academic Exchange Service (DAAD)
2018 National Science Foundation: Perception, Action, and Cognition (PAC)

- 2018 National Science Foundation: Integrative Strategies for Understanding Neural and Cognitive Systems (NCS)
- 2018 National Institutes of Health: Special Emphasis Panel
- 2017 National Science Foundation: Cognitive Neuroscience
- 2017 National Institutes of Health: Cognition and Perception (CP)
- 2016 National Institutes of Health: Special Emphasis Panel—Sensory and Cognitive Processes
- 2016 National Science Foundation: RI: Medium Language Technology
- 2015 National Institutes of Health: Sensory Auditory (AUD)
- 2015 National Institutes of Health: Sensory Perception and Cognition (SPC)
- 2015 Food and Drug Administration: Office of Chief Scientist Challenge Grants
- 2014 National Institutes of Health: Sensory Perception and Cognition (SPC)
- 2014 National Science Foundation/National Institutes of Health: Collaborative Research in Computational Neuroscience
- 2014 National Institutes of Health: Special Emphasis Panel—Language and Communication
- 2012 Wellcome Trust (U.K.)
- 2012 Air Force Office of Scientific Research
- 2010 Pennsylvania Department of Health
- 2009 National Institutes of Health: Special Emphasis Panel—Cognition and Central Visual Processing / Special Emphasis Panel—Imaging Cognition
- 2009 Wellcome Trust (U.K.)
- 2009 National Institutes of Health: Loan Repayment Panel
- 2009 National Science Foundation/National Institutes of Health: Collaborative Research in Computational Neuroscience
- 2008 National Science Foundation: Advancing Theory in Biology
- 2007, 2008 National Science Foundation (ad hoc)
- 2006 Air Force Office of Scientific Research

Reviewing Activities for Outside Universities

- 2017 Nevada System of Higher Education
- 2016 KU Leuven (Belgium)
- 2015 Hebrew University (Israel)
- 2008 Tel Aviv University (Israel)

Other

Citations and Citation Indices

(as of March 4, 2021)

ISI Web of Science:

Citations: 4,504 (without self-citations: 4,167)

h-index: 35

i10-index: 62

Author Search Criteria: (simon jz OR (simon j AND (allen b OR poeppel d OR elhilali m))) NOT (cooper ms OR ryan dp OR shawhan p)

Google Scholar:

Citations: 7,417

h-index: 43

i10-index: 71

URL: <http://scholar.google.com/citations?user=pr8YcVIAAAAJ>

Erdős Number

4 (via Friedman, Chandrasekhar, Kac; Shamma, Wilbur, Macintyre; and others)

Teaching/Advising

Courses taught

Most Recent Five Years

Semester	Course		Credits	Enrollment
Spring '21	ENEE 324	Engineering Probability	3	13
Fall '19	HLSC 374 / BSCI 374 / BIOL 667	Mathematical Modeling in Biology [†]	4	8
Fall '18	HLSC 374 / BSCI 374H / BIOL 667	Mathematical Modeling in Biology [†]	4	10
Spring '18	ENEE 322	Signals and System Theory	3	43
Fall '17	HLSC 374 / BSCI 374H / BIOL 667	Mathematical Modeling in Biology [†]	4	12
Spring '17	ENEE 322	Signals and System Theory	3	48
Fall '16	HLSC 374 / BSCI 374H / BIOL 667	Mathematical Modeling in Biology [†]	4	10
Spring '16	ENEE 322	Signals and System Theory	3	48

Complete Listing

ENEE 222	Elements of Discrete Signal Analysis (4 credits), <i>Spring '13, Spring '14</i>
ENEE 322	Signals and Systems (3 credits): <i>Spring '01, Spring '02, Spring '06, Spring '07, Spring '08, Spring '16, Spring '17, Spring '18</i>
ENEE 324	Engineering Probability (3 credits), <i>Spring '10, Spring '11, Spring '21</i>
HLSC 374*	Mathematical Modeling in Biology [†] (4 credits), <i>Fall '12, Fall '13, Fall '14, Fall '15, Fall '16, Fall '17, Fall '18, Fall '19</i>
ENEE 425	Digital Signal Processing (3 credits), <i>Fall '01, Spring '03, Spring '04, Fall '04</i>
BSCI 374*	Mathematical Biology [†] (4 credits), <i>Fall '19</i>
BSCI 374H*	Mathematical Biology [†] (4 credits), <i>Fall '16, Fall '17, Fall '18, Fall '19</i>
BSCI 474	Mathematical Biology [†] (4 credits), <i>Spring '05, Fall '06, Fall '08, Fall '15</i>

- NACS 643 Computational Neuroscience[†] (4 credits), *Spring '09*
 BIOL 667* Mathematical Biology[†] (4 credits), *Fall '16, Fall '17, Fall '18, Fall '19*
 BIOL 708L / NACS 728B Quantitative Analysis of Biological Data[†] (4 credits), *Fall '02, Fall '03, Fall '05, Fall '07, Fall '09, Fall '11*
[†] Includes additional weekly computer-based lab also taught.
 * Cross-listed in some years but same course

Instructional Workshops and Seminars

- 2001–2007 Developed curriculum and taught two-week unit in neural modeling and neural data analysis at *Neural Systems & Behavior* summer course at Marine Biological Laboratory, Woods Hole. Modeling was taught using the NEURON neural simulation environment, both in its base form and with a model of coincidence detection in the chick brainstem written by myself. Analysis was performed with MATLAB, which was also taught.
- 2015–2016 Developed curriculum for 1-2 day integrated lecture and computer lab on the topic “Signal Analysis Primer and Applications” for experimental neuroscientists. The computer lab component consists of original signal processing examples explored with MATLAB. Taught at the *Neural Data Science* summer course at Cold Spring Harbor Laboratory (2015), and Master Class in *Understanding and Applying Digital Signal Processing in Neurophysiology* at University of Lübeck, Germany (2016).

Course or Curriculum Development

HLSC 374, *Mathematical Modeling in Biology* is a brand new, sophomore-level honors biology course, required for students in the Honors College program *Integrated Life Sciences*. The course is aimed at biology students who would typically never take any mathematics course while in college. The philosophy of the course is to teach empowering mathematical techniques through understanding of biological models. Models are chosen from a variety of biological disciplines, including ecological population dynamics, infectious disease models, molecular evolution, and phylogenetic tree construction. Mathematical skills developed along the way include: solving non-linear difference equations, eigenvector analysis, multi-dimensional stability analysis, and the use of Excel and Matlab to implement these algorithms as computer models.

BIOL 708L/NACS 728B, *Quantitative Analysis of Biological Data* is a course created in 2002 entirely from scratch, designed for graduate students with a strong research background in biology but a weak background in mathematics. The curriculum covers: basic signal processing (filtering, Fourier analysis, spectrograms, noise), statistics (estimating validity with bootstrap and permutation tests), programming in MATLAB (signal processing, data analysis, statistics), and simple modeling. The weekly format is 3 hours of lecture plus computer lab, with a final project in which each student applies concepts of the course to his or her own research.

BSCI 474, *Mathematical Biology* had not been taught in almost a decade and was re-designed from scratch to teach applications of math in biology, for senior-level biology students. As of Fall 2016, this course is now taught as BSCI 374H and cross-listed with HLSC 374.

ENEE 425, *Digital Signal Processing*. I adjusted the curriculum of to make extensive use of MATLAB. The textbook by Oppenheim & Schaffer makes this difficult, so I redesigned some of the course and all of the homework to make MATLAB an integral part of the curriculum.

(*Curriculum development for an external course, in neural modeling and neural data analysis, below*).

Manuals, Notes, Software, Webpages, and Other Contributions to Teaching

HST 723 (Harvard-MIT Division of Health Sciences and Technology) *Neural Coding and Perception of Sound*. Contributed one of four labs: Compartmental Model of Binaural Coincidence Detector Neurons. Available through MIT Open Courseware:
<<http://ocw.mit.edu/OcwWeb/Health-Sciences-and-Technology/HST-723Neural-Coding-and-Perception-of-SoundSpring2003/Labs/index.htm>>.

Advising: Other than Research Direction

Doctoral and Masters Committees

Nikos Kanlis	ECE Ph.D.	2002
Sudha Sridaran	ECE MS.	2002
Jiwanjot K. Tulsi	ECE MS.	2002
Taishih Chi	ECE Ph.D.	2003
Virginie van Wassenhove	NACS Ph.D.	2004
Mounya El-Hilali	ECE Ph.D.	2004
Bijan Afsari	ECE M.S.	2004
Ahlia Tillman	ECE (M.S.)	2004
Shiva Sinha	NACS Ph.D.	2005
Kaushik Ghose	NACS Ph.D.	2006
Om Deshmukh	ECE Ph.D.	2006
Huan Luo	NACS Ph.D.	2007
Haiyan He	Biology Ph.D.	2007
Tarun Pruthi	ECE Ph.D.	2007
Avanti Shetye	ECE M.S.	2007
Murat Aytakin	NACS Ph.D.	2007
Feng Rong	NACS Ph.D.	2008
Christopher Glaze	NACS Ph.D.	2008
Xing Tian	NACS Ph.D.	2008
Chen Chiu	NACS Ph.D.	2008
Nima Mesgarani	ECE Ph.D.	2008
Krishna Rajaram	Biology M.S.	2008
Barak Shechter	U.M.B., Ph.D.	2009
Serin Atiani	NACS Ph.D.	2010
Greg Cogan	NACS Ph.D.	2010

Ling Ma	BioE Ph.D.	2011
Julian Jenkins	Biology Ph.D.	2011
Steve Tjoa	ECE Ph.D.	2011
Elise Zipkin	Biology Ph.D.	2012
Vladimir Ivanov	ECE Ph.D.	2012
Tarek Massoud	ECE Ph.D.	2012
Michael Jones	ECE MS.	2012
Matthew Runchey	ECE MS.	2013
Yanbo Xu	ECE MS.	2013
Caitlin Baxter	NACS MS.	2014
Ashish Shrivastava	ECE Ph.D.	2014
Sahar Akram	ECE Ph.D.	2015
Yuwei Cui	NACS Ph.D.	2015
Adam Jones	NACS Ph.D.	2015
Yi-Chun Ko	ECE MS.	2016
Amanda Chicoli	NACS Ph.D.	2016
Mark Saffer	NACS Ph.D.	2016
Chia-Chu Chou	ECE Ph.D.	2016
William Bologna	HESP Ph.D.	2017
Jessica Wess	NACS Ph.D.	2017
Ganesh Sivaraman	ECE Ph.D.	2017
Alireza Sheikhattar	ECE Ph.D.	2018
Keith Doelling (NYU)	PSYC Ph.D.	2018
Yujing Wang	BioE Ph.D.	2018
Kyunghun Lee	ECE Ph.D.	2018
Narayan Sankaran (U. Sydney)	Neurosci Ph.D.	2019
Saurabh Sahu	ECE Ph.D.	2019
Mattson Ogg	NACS Ph.D.	2019
Sina Miran	ECE Ph.D.	2019
Proloy Das	ECE Ph.D.	2020
Manasij Venkatesh	ECE Ph.D.	2020
Yexin Cao	ECE MS.	2020
Anne Tootell	PSYC Ph.D.	2021
Kelsey Dutta	ECE Ph.D.	
Ji Liu	BISI Ph.D.	
Yu Jin	ECE Ph.D.	
Ira Kraemer	NACS Ph.D.	
Felix Bartsch	NACS Ph.D.	
Yishi Xing	ECE MS.	
Jason Dunlap	HESP Ph.D.	
Neha Joshi	ECE Ph.D.	
Mohsen Rezaeizadeh	ECE Ph.D.	
Anuththara Rupasinghe	ECE Ph.D.	
Minjie Zhu	ECE Ph.D.	
Asha Pavuluri	NACS Ph.D.	
Shoutik Mukherjee	ECE Ph.D.	

Advising: Research Direction

Undergraduate

Sarah McCormack (Wesleyan)—Summer 2001, Research Internships in Neuroscience
Chris Rodgers (Purdue)—Summer 2004, REU/MERIT
Julien Dagenais (Emory)—Summer 2004
Joon Kim (UMCP)—Fall 2004
John Chai (UMCP)—Spring 2006
Robert Prior (UMCP)—Fall 2006
Minsuk Park (UMCP)—Spring 2007, Advanced Special Student
Emily Sosin (UMCP)—Spring 2008
Kevin Kahn (UMCP)—Summer 2008, REU/MERIT
Sonja Bohr (Harvey Mudd)—Summer 2008, REU/CSS
Andrea Shome (Virginia Tech)—Summer 2008, REU/CSS
Nicholas Asendorf (UMCP)—Summer 2009, REU/MERIT
Marisel Villafane Delgado (U. Puerto Rico)—Summer 2009, REU/MERIT
Leelah Jaber (UMCP)—2009/2010, Biology Honors Thesis
Corinne Cameron (U. Alaska)—Summer 2010, REU/MERIT
Abdulaziz Al-Turki (UMCP)—Summer 2010, REU/MERIT
Marko Modric (UMCP)—Fall 2010–Spring 2011
Danni Tang (Johns Hopkins)—January 2011
Mikhail Podgornyak (UMCP)—Spring 2011
Rose Agger (UMCP)—Summer 2011
Elizabeth Camenga (U. Wisconsin)—Summer 2012, REU/MERIT
Katya Dombrowski (Princeton)—Summer 2012
Ben Walsh (UMCP)—Summer 2012, REU/MERIT
Madeleine Varmer (Lehigh)—Summer 2013, REU/MERIT
Kevin Hogan (UMCP)—Summer 2013, REU/MERIT
Alexandria Miller (UMCP)—Spring 2015–Spring 2016
James Williams (UMCP)—Fall 2014–Spring 2017
Sandra Soltz (UMCP) — Fall 2016
Anurupa Bhonsale (UMCP) — Fall 2015–Summer 2017
Ross Baehr (UMCP) — Fall 2017–Fall 2018
Justin Buck (UMCP) — Fall 2017– Spring 2019
Alex Jiao (UMCP) — Spring 2018–present
Ganesh Chandrasekaran (UMCP) — Spring 2019
Theodore Dutcher (UMCP) — Spring 2019-present
Kevin Hu (UMCP) — Fall 2019-present

Masters

Raul Rodriguez ECE M.S. 2002; Thesis: *A model of the avian superior olivary nucleus.*
Current Position: Senior Scientist, Roche Pharmaceuticals.

Victor Grau-Serrat	ECE	M.S. 2003; <i>Thesis: Methods in realistic computational modeling of the avian Nucleus Laminaris.</i> Current Position: Co-Director, D-Lab at M.I.T.
Nayef Ahmar	ECE	M.S. 2005; <i>Thesis: da Vinci's Encephalogram: In search of significant brain signals.</i> Current Position: Ph.D. Student, Georgia Institute of Technology
Prathyusha Kanala	ECE	M.S. 2010; Scholarly Paper: <i>Modulation Filter Banks for Auditory Modeling.</i> Current Position: Application Software Engineer, Danfoss LLC.
Kai Sum Li	ECE	M.S. 2010; <i>Thesis: The Neural Dynamics of Amplitude Modulation Processing in the Human Auditory System.</i> Current Position: Senior Consultant, Ernst & Young.
Marisel Villafaña Delgado	ECE	M.S. 2013; <i>Thesis: The Cortical Representations of Speech in Reverberant Conditions.</i> Current Position: Johns Hopkins University Advanced Physics Lab
Ben Walsh	ECE	M.S. 2015; <i>Thesis: Analysis of Gamma-Band Auditory Responses in Schizophrenia.</i> Current Position: Engineer, Northrop Grumman Corporation.
Shailaja Akella	ENTS	Current Position: M.S. Program, University of Florida

Doctoral

Maria Chait	NACS	Ph.D. 2006 <i>Thesis: Auditory edge detection: the dynamics of the construction of auditory perceptual representations.</i> (Co-advised by David Poeppel) Current Position: Professor, University College London
Juanjuan Xiang	ECE	Ph.D. 2008 <i>Thesis: Hearing vs. Listening: Attention Changes the Neural Representations of Auditory Percepts.</i> Current Position: Director, Ping An Insurance.
Claudia Bonin	NACS	Ph.D. 2010 <i>Thesis: Spatial and Temporal Characteristics of Electromagnetic Activity in the Brain Prior to Reaches to Visual Targets.</i> Current Position: Self-Employed.
Jiachen Zhuo	ECE	Ph.D. 2011 <i>Thesis: Diffusion Kurtosis Magnetic Resonance Imaging and Its Application to Traumatic Brain Injury.</i> Current

			Position: Assistant Professor, University of Maryland Baltimore
Nai Ding	ECE	Ph.D. 2012	Thesis: <i>Temporal Coding of Speech in Human Auditory Cortex</i> . Current Position: Assistant Professor, Zhejiang University
Kim Drnec	NACS	Ph.D. 2013	Thesis: <i>Electroencephalography (EEG) and Measures of Nociception in Domestic Cattle (Bos taurus)</i> . (Co-advised by Ray Stricklin) Current Position: Postdoc, Army Research Laboratory
Alessandro Presacco	NACS	Ph.D. 2016	Thesis: <i>Effects of Aging on Midbrain and Cortical Speech-In-Noise Processing</i> . (Co-advised by Samira Anderson) Current Position: Postdoc, University of California, Irvine
Mahshid Najafi	ECE	Ph.D. 2017	Thesis: <i>Spatial and Temporal Modeling of Large-Scale Brain Networks</i> . (Co-advised by Luiz Pessoa) Current Position: Data Scientist, Facebook
Francisco Cervantes Constantino	NACS	Ph.D. 2017	Thesis: <i>Sensory and Perceptual Codes in Cortical Auditory Processing</i> . Current Position: Research associate, Universidad de la República, Uruguay
Krishna Puvvada	ECE	Ph.D. 2017	Thesis: <i>Cortical Representation of Speech in Complex Auditory Environments and Applications</i> . Current Position: Applied Scientist, Amazon
Peng Zan	ECE	Ph.D. 2019	Thesis: <i>Decoding Auditory Brain Responses with Mutual Information and the Effects of Aging</i> . Current Position: Principal Scientist, Origin Wireless AI
David Nahmias	ECE	Ph.D. 2020	Thesis: <i>Advances in Quantitative Characterizations of Electrophysiological Neural Activity</i> . Current Position: Research Fellow, US Food and Drug Administration
Joshua Kulasingham	ECE	<i>in progress</i>	
Dushyanthi Karunathilake	ECE	<i>in progress</i>	

Visiting Researcher

Aline Gesualdi Manhães	2014–2015	Current Position: Associate Professor, Federal Center for Technological Education, Rio de Janeiro, Brazil
Jonas Vanthornhout	2015	Current Position: Postdoc, KU Leuven, Belgium
Marlies Gillis	2019	Current Position: Ph.D. Student, KU Leuven, Belgium

Post-Doc

Yadong Wang	2003–2006	(Co-advised by David Poeppel) Current Position: Senior Technical Staff, Maxim Integrated.
Daniel Hertz	2008–2010	Current Position: Tutor at Marks Education
Christian Brodbeck	2016–2020	Current Position: Research Assistant Professor, University of Connecticut
Alessandro Presacco	2018–2020	Current Position: Researcher at Stanford Parser
Lien Decruy	2020–present	
Gina Calloway	2021–present	