

Visar S. Berisha, PhD

Lattie F. Coor Building
Arizona State University
975 S. Myrtle Ave. COOR 3472
Tempe, AZ 85287

Phone: 480.727.6455
Email: visar@asu.edu
Web: <http://www.public.asu.edu/~visar>

Google Scholar profile: <https://scholar.google.com/citations?user=MQBn718AAAAJ&hl=en>

Education:

2007 Ph.D. Electrical Engineering
Arizona State University
Dissertation: “*Bandwidth extension of speech using perceptual criteria*”

2005 M.S. Electrical Engineering
Arizona State University
Direct to Ph.D. student

2003 B.S. Electrical Engineering
Arizona State University
Summa Cum Laude

Academic Appointments:

2024 – present Associate Dean of Research Commercialization, Fulton Schools of Engineering, Arizona State University

2023 – present Professor, School of Electrical Computer and Energy Engineering (ECEE), Arizona State University

2023 – present Professor, College of Health Solutions, Arizona State University

2019 – 2023 Associate Professor, School of Electrical Computer and Energy Engineering (ECEE), Arizona State University

2019 – 2023 Associate Professor, College of Health Solutions, Arizona State University

2013 – 2019 Assistant Professor, College of Health Solutions, Arizona State University

2013 – 2019 Assistant Professor, School of Electrical Computer and Energy Engineering (ECEE), Arizona State University

2013 – present Faculty, Barrett Honors College, Arizona State University

2017 – present Mayo-ASU Alliance Research Fellow, Mayo Clinic Department of Neurology

2007 – 2009 Research Scientist, Massachusetts Institute of Technology Lincoln Laboratory

Industry Appointments:

2024 – present Co-founder, OriginStory

2015 – 2023 Co-founder and Chief Analytics Officer, Aural Analytics

2009 – 2013 Principal Research Engineer, Raytheon Co., Tucson, AZ

Honors and Awards:

2024 Invited expert participant in White House Voice Cloning Working Group

2024 FTC Voice Cloning Challenge Winner

2023 Distinguished Lecturer in Clinical Speech Analytics, International Speech and Communication Association

2021 College of Health Solutions 2021 Research Award

2017 Winner of the Scrip Award for Best Technological Development for Clinical Trials
 2017 The 2016 Journal of Speech, Language, and Hearing Editor's Award
 2017 Mayo Clinic-ASU Alliance Fellow
 2017 ASU Fulton Entrepreneurial Professor
 2015 National Academy of Sciences Keck Futures Initiative Invitee, 2015
 2015 Harvard Business School New Venture Competition Finalist (SW Region)
 2015 International Vodafone Wireless Innovation Challenge Finalist
 2013 Acoustical Society of America Signal Processing Application Challenge, 1st place
 2013 Winner of the Raytheon Innovation Challenge
 2007 - 2008 Palais Outstanding Doctoral Student Award
 2005 - 2007 ARCS Foundation Fellow
 2004 - 2007 National Science Foundation Graduate Research Fellow

Recognition in the national and international press:

1. **National Public Radio:** “The government announced winners of a contest to tell real voices from deepfake audio” Interview about our winning submission to the FTC voice cloning challenge.
2. **National Public Radio:** “OpenAI's new ChatGPT talks and sings. But how human is it?” Interview with Bobby Allyn.
3. **National Public Radio:** “Voice analysis shows striking similarity between Scarlett Johansson and ChatGPT” Interview with Bobby Allyn.
4. **Scientific American:** “AI in Medicine is Overhyped,” written by Visar Berisha and Julie Liss.
5. **Wired:** “When It Comes to Health Care, AI Has a Long Way to Go,” written by Tom Simonite, January 2022.
6. **Wall Street Journal:** “New study shows boxing’s early toll on Muhammad Ali,” written by Jonathan Eig, Visar Berisha, and Julie Liss, August 2017.
7. **ESPN:** “Muhammad Ali exhibited slowed, slurred speech well before Parkinson's diagnosis, study finds,” written by William Weinbaum, August 2017.
8. **New York Times, Science Section:** “The earliest signs of brain damage in athletes? Listen for them,” written by Dr. Larry Altman, June 2017.
9. **New York Times, Science Section:** “Parsing Ronald Reagan’s Words for Early Signs of Alzheimer’s,” written by Dr. Larry Altman, March 2015.
10. **Yahoo! Health:** “Researchers Analyze Ronald Reagan’s Speech For Early Signs Of Alzheimer’s,” written by Korin Miller, March 2015.
11. **Interview on National Public Radio:** “Arizona State University Researchers Explore New Way To Diagnose Neurological Diseases,” interview by Mark Brodie, April 2015.
12. **USA Today, Technology Section:** “CES to include new generation of smartwear for health,” written by Michael Feibus, December 2015

PUBLICATIONS

Asterisk denotes a graduate or undergraduate student that I advise; an underline indicates a postdoctoral researcher I advised/co-advised. The listing below shows the most recent publications first; they are numbered in descending order. Each set of publications has a different prefix: J=Journal Publication; JUR=Journal Manuscript in Preparation or Under Review; C=Conference Proceedings; CUR=Conference Proceedings Manuscript in Preparation or Under Review; CA=Conference Abstract; CAUR= Conference Abstract Manuscript in Preparation or Under Review; P=Issued patent; PP=Submitted patent; E=Editorial; B=Book; CO=Invited colloquium.

Following each journal publication is the SCImago Journal Rank Indicator (SJR) index (see <http://www.scimagojr.com/>). This index is an established measure of the journal's impact and prestige. In addition, we also provide information about which quarter/tier the journal belongs to according to the same website (from 2020 SJR values).

Please note that in this field, senior author is typically the last author of the publication, unless explicitly noted in the publication. For example, although Berisha is not last author in [J57] and [J52], in the published manuscript it explicitly states that senior authorship was shared among Berisha and two other authors.

Peer-Reviewed Journal Publications:

Published:

- J79. Smith, D.C., *Zhang, J., Jayasuriya, S., **Berisha, V.**, Starling, A., Schwedt, T.J. and Chong, C.D., 2024. The impact of headache intensity on speech in participants with migraine and acute post-traumatic headache. *Headache: The Journal of Head and Face Pain*.
- J78. *Kinahan, S.P., Saidi, P., Daliri, A., Liss, J. and **Berisha, V.**, 2024. Electroencephalographic Classification Reveals Atypical Speech Motor Planning in Stuttering Adults. *Journal of Speech, Language, and Hearing Research*, 67(7), pp.2053-2076.
- J77. *Xu, L., Chen, K., Mueller, K.D., Liss, J. and **Berisha, V.**, 2024. Articulatory precision from connected speech as a marker of cognitive decline in Alzheimer's disease risk-enriched cohorts. *Journal of Alzheimer's Disease*, p.13872877241300149.
- J76. **Berisha, V.** and Liss, J.M., 2024. Responsible development of clinical speech AI: Bridging the gap between clinical research and technology. *npj Digital Medicine*, 7(1), p.208.
- J75. *Li, W., Dasarathy, G., **Berisha, V.** 2024. Active Sequential Two-Sample Testing. *Transactions on Machine Learning Research*. In press.
- J74. Liss, J. and **Berisha, V.**, 2024. Operationalizing Clinical Speech Analytics: Moving From Features to Measures for Real-World Clinical Impact. *Journal of Speech, Language, and Hearing Research*, pp.1-7.
- J73. Stegmann, G., Krantsevich, C., Liss, J., Charles, S., Bartlett, M., Shefner, J., Rutkove, S., Kawabata, K., Talkar, T. and **Berisha, V.**, 2024. Automated speech analytics in ALS: higher sensitivity of digital articulatory precision over the ALSFRS-R. *Amyotrophic Lateral Sclerosis and Frontotemporal Degeneration*, pp.1-9.

- J72. Kinahan*, S., P, Saidi, P., Daliri, A., Liss, J. and **Berisha, V.**, 2024. Electroencephalographic Classification Reveals Atypical Speech Motor Planning in Stuttering Adults. *Journal of Speech, Language, and Hearing Research*, pp.1-24.
- J71. Shukla, A., Dadhich, R., Singh, R., Rayas, A., Saidi, P., Dasarathy, G., **Berisha, V.** and Turaga, P., 2024. Orthogonality and graph divergence losses promote disentanglement in generative models. *Frontiers in Computer Science*, 6, p.1274779.
- J70. Yawer*, B.A., Liss, J. and **Berisha, V.**, 2023. Reliability and validity of a widely-available AI tool for assessment of stress based on speech. *Nature Scientific reports*, 13(1), p.20224.
- J69. Wynn, C.J., Barrett, T.S., **Berisha, V.**, Liss, J.M. and Borrie, S.A., 2023. Speech Entrainment in Adolescent Conversations: A Developmental Perspective. *Journal of Speech, Language, and Hearing Research*, pp.1-19.
- J68. Kinahan*, S.P., Liss, J.M. and **Berisha, V.**, 2023. TorchDIVA: An extensible computational model of speech production built on an open-source machine learning library. *PloS one*, 18(2), p.e0281306.
- J67. Voleti*, R., Woolridge, S.M., Liss, J.M., Milanovic, M., Stegmann, G., Hahn, S., Harvey, P.D., Patterson, T.L., Bowie, C.R. and **Berisha, V.**, 2023. Language analytics for assessment of mental health status and functional competency. *Schizophrenia Bulletin*, 49(Supplement_2), pp.S183-S195.
- J66. Woolridge, S.M., Wood-Ross, C., Voleti, R., Harrison, G.W., **Berisha, V.** and Bowie, C.R., 2023. A neuropsychological approach to differentiating cannabis-induced and primary psychotic disorders. *Early Intervention in Psychiatry*, 17(6), pp.564-572.
- J65. Stegmann, G., Charles, S., Liss, J., Shefner, J., Rutkove, S. and **Berisha, V.**, 2023. A speech-based prognostic model for dysarthria progression in ALS. *Amyotrophic Lateral Sclerosis and Frontotemporal Degeneration*, pp.1-6.
- J64. Zhang, J., Liss, J., Jayasuriya, S. and **Berisha, V.**, 2023. Robust Vocal Quality Feature Embeddings for Dysphonic Voice Detection. *IEEE/ACM Transactions on Audio, Speech, and Language Processing*, 31, pp.1348-1359.
- J63. Mao, L., Li, J., Schwedt, T.J., **Berisha, V.**, Nikjou, D., Wu, T., Dumkrieger, G.M., Ross, K.B. and Chong, C.D., 2023. Questionnaire and structural imaging data accurately predict headache improvement in patients with acute post-traumatic headache attributed to mild traumatic brain injury. *Cephalalgia*, 43(5), p.03331024231172736.
- J62. Mao, L., Dumkrieger, G., Ku, D., Ross, K., **Berisha, V.**, Schwedt, T.J., Li, J. and Chong, C.D., 2023. Developing multivariable models for predicting headache improvement in patients with acute post-traumatic headache attributed to mild traumatic brain injury: A preliminary study. *Headache: The Journal of Head and Face Pain*, 63(1), pp.136-145.
- J61. Mathad, V.C., Liss, J.M., Chapman, K., Scherer, N. and **Berisha, V.**, 2022. Consonant-Vowel Transition Models Based on Deep Learning for Objective

Evaluation of Articulation. in *IEEE/ACM Transactions on Audio, Speech, and Language Processing*, [10.1109/TASLP.2022.3209937](https://doi.org/10.1109/TASLP.2022.3209937).
[SJR: 0.926; Q1 journal in Acoustics and Ultrasonics, Electrical and Electronic Engineering]

- J60. *Xu, L., Liss, J. and **Berisha, V.**, 2023. Dysarthria detection based on a deep learning model with a clinically-interpretable layer. *Journal of the Acoustical Society of America*, 3(1), p.015201.
[SJR: 0.749; Q1 journal in Acoustics and Ultrasonics, Q2 journal in Arts and Humanities (miscellaneous)]
- J59. Hsu, S.C., Jiao, Y., **Berisha, V.**, McAuliffe, M.J., Lin, P., Wu, R.M., Cheng, S.J. and Levy, E.S., 2022. The Effects of Intensive Voice Treatment in Mandarin Speakers With Parkinson's Disease: Acoustic and Perceptual Findings. *American Journal of Speech-Language Pathology*, 31(3), pp.1354-1367.
[SJR: 0.993; Q1 journal in Language and Linguistics and Speech and Hearing]
- J58. Nikolova, S., Schwedt, T.J., Li, J., Wu, T., Dumkrieger, G.M., Ross, K.B., **Berisha, V.** and Chong, C.D., 2022. T2* reduction in patients with acute post-traumatic headache. *Cephalalgia*, 42(4-5), pp.357-365.
[SJR: 1.57; Q1 journal in Neurology and Medicine]
- J57. Stegmann, G., Hahn, S., Bhandari, S., Kawabata, K., Shefner, J., Duncan, C.J., Liss, J., **Berisha, V.** and Mueller, K., 2022. Automated semantic relevance as an indicator of cognitive decline: Out-of-sample validation on a large-scale longitudinal dataset. *Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring*, 14(1), p.e12294.
[Note: As noted in the published manuscript, J. Liss, V. Berisha, and K. Mueller share senior authorship.]
[SJR: 2.497; Q1 journal in Neurology and Psychiatry and Mental Health]
- J56. *Xu, L., Chavez-Echeagaray, M., **Berisha, V.** (2022) Unsupervised EEG channel selection based on nonnegative matrix factorization. *Biomedical Signal Processing and Control*, in press.
[SJR: 0.767. Q2 journal in Health Informatics]
- J55. Chong, C., *Zhang, J., Li, J., Wu, T., Dumkrieger, G., Nikolova, S., Ross, K., Stegmann, G., Liss, J., Schwedt, T.J. and Jayasuriya, S., **Berisha, V.** (2021). Altered Speech Patterns in Subjects with Post-Traumatic Headache Due to Mild Traumatic Brain Injury. *Journal of Headache and Pain*, 22 (8).
[SJR: 1.559. Q1 journal in Neurology and Medicine]
- J54. Dutta, A., Steiner, E., Proulx, J., **Berisha, V.**, Bliss, D.W., Poole, S. and Corman, S., (2021). Analyzing the relationship between productivity and human communication in an organizational setting. *Plos one*, 16(7), p.e0250301.
[SJR: 0.99. Q1 multidisciplinary journal]
- J53. Stegmann, G.M., Hahn, S., Duncan, C.J., Rutkove, S.B., Liss, J., Shefner, J.M. and **Berisha, V.**, 2021. Estimation of forced vital capacity using speech acoustics in patients with ALS. *Amyotrophic Lateral Sclerosis and Frontotemporal Degeneration*, 22(sup1), pp.14-21.

[SJR: 1.302; Q1 journal in Neurology (clinical) and Medicine]

- J52. *Ambadi, P.S., Basche, K., Kosciak, R.L., **Berisha, V.**, Liss, J.M. and Mueller, K.D., 2021. Spatio-Semantic Graphs From Picture Description: Applications to Detection of Cognitive Impairment. *Frontiers in Neurology*, 12, pp.795374-795374.
[Note: As noted in the published manuscript, J. Liss, V. Berisha, and K. Mueller share senior authorship.]
[SJR 1.23. Q2 journal in Neurology]
- J51. **Berisha, V.**, Krantsevich, C., Hahn, P. R., Hahn, S., Dasarathy, G., Turaga, P., & Liss, J. 2021. Digital medicine and the curse of dimensionality. *Nature NPJ digital medicine*, 4(1), 1-8.
[New journal; Reliable SJR numbers not available]
- J50. Nikolova, S., Schwedt, T.J., Li, J., Wu, T., Dumkrieger, G.M., Ross, K.B., **Berisha, V.** and Chong, C.D., 2021. T2* reduction in patients with acute post-traumatic headache. *Cephalalgia*, p.03331024211048509.
[SJR: 1.57; Q1 journal in Neurology and Medicine]
- J49. Chong, C.D., **Berisha, V.**, Ross, K., Kahn, M., Dumkrieger, G. and Schwedt, T.J., 2021. Distinguishing persistent post-traumatic headache from migraine: Classification based on clinical symptoms and brain structural MRI data. *Cephalalgia*, p.0333102421991819.
[SJR: 1.57; Q1 journal in Neurology and Medicine]
- J48. Borrie, S.A., Wynn, C.J., **Berisha, V.** and Barrett, T.S., 2021. From Speech Acoustics to Communicative Participation in Dysarthria: Toward a Causal Framework. *Journal of Speech, Language, and Hearing Research*, pp.1-14.
[SJR: 0.958; Q1 journal in Speech and Hearing, Language and Linguistics, Medicine (miscellaneous)]
- J47. Mathad, V., Scherer, N., Chapman, K., Liss, J. and **Berisha, V.**, 2021. A Deep Learning Algorithm for Objective Assessment of Hypernasality in Children with Cleft Palate. *IEEE Transactions on Biomedical Engineering*. Jan 2021.
[SJR: 1.148; Q1 journal in Biomedical Engineering]
- J46. Lubold, N., Willi, M., Barrett, T., Borrie, S., **Berisha, V.** Healthy communication partners modify their speech when conversing with individuals with Parkinson's disease. *Journal of Speech, Language, and Hearing Research*, 64(5), pp.1539-1549.
[SJR: 0.958; Q1 journal in Speech and Hearing, Language and Linguistics, Medicine (miscellaneous)]
- J45. Corman, S.R., Steiner, E., Proulx, J.D., Dutta, A., Yahja, A., Poole, M.S., **Berisha, V.** and Bliss, D.W.B., 2021. Revisiting the accuracy problem in network analysis using a unique dataset. *Social Networks*, 66, pp.1-9.
[SJR: 1.599. Q1 journal in sociology and political sciences, social sciences, and psychology]

- J44. Mahr, T., **Berisha, V.**, Kawabata, K., Liss, J. and Hustad, K., 2021. Performance of forced-alignment algorithms on children's speech. *Journal of Speech, Language, and Hearing Research*. 1-10.
[SJR: 0.958; Q1 journal in Speech and Hearing, Language and Linguistics, Medicine (miscellaneous)]
- J43. Peña, A., Dumkrieger, G., **Berisha, V.**, Ross, K., Chong, C.D. and Schwedt, T.J., 2021. Headache Characteristics and Psychological Factors Associated with Functional Impairment in Individuals with Persistent Posttraumatic Headache. *Pain Medicine*.
[SJR: 0.893; Q1 journal in Anesthesiology and Pain Medicine]
- J42. Borrie, S.A., Wynn, C.J., **Berisha, V.**, Lubold, N., Willi, M.M., Coelho, C.A. and Barrett, T.S., 2020. Conversational Coordination of Articulation Responds to Context: A Clinical Test Case With Traumatic Brain Injury. *Journal of Speech, Language, and Hearing Research*, 63(8), pp.2567-2577.
[SJR: 0.958; Q1 journal in Speech and Hearing, Language and Linguistics, Medicine (miscellaneous)]
- J41. Stegmann, G.M., Hahn, S., Liss, J., Shefner, J., Rutkove, S.B., Kawabata, K., Bhandari, S., Shelton, K., Duncan, C.J. and **Berisha, V.**, 2020. Repeatability of Commonly Used Speech and Language Features for Clinical Applications. *Digital Biomarkers*, 4(3), pp.109-122
[New journal; Reliable SJR numbers not available]
- J40. Rutkove, S.B., Narayanaswami, P., **Berisha, V.**, Liss, J., Hahn, S., Shelton, K., Qi, K., Pandeya, S. and Shefner, J.M., 2020. Improved ALS clinical trials through frequent at-home self-assessment: a proof of concept study. *Annals of Clinical and Translational Neurology*.
[SJR: 1.824; Q1 journal in Neurology and Neuroscience]
- J39. Stegmann, G.M., Hahn, S., Liss, J., Shefner, J., Rutkove, S., Shelton, K., Duncan, C.J. and **Berisha, V.**, 2020. Early detection and tracking of bulbar changes in ALS via frequent and remote speech analysis. *Nature npj Digital Medicine*, 3(1), pp.1-5.
[New journal; Reliable SJR numbers not available]
- J38. *M. Saxon, A. Tripathi, Y. Jiao, J. M. Liss and **V. Berisha**, "Robust Estimation of Hypernasality in Dysarthria With Acoustic Model Likelihood Features," in *IEEE/ACM Transactions on Audio, Speech, and Language Processing*, vol. 28, pp. 2511-2522, 2020, doi: 10.1109/TASLP.2020.3015035.
[SJR: 0.926; Q1 journal in Acoustics and Ultrasonics, Electrical and Electronic Engineering]
- J37. Kadetotad, D., **Berisha, V.**, Chakrabarti, C., Seo, J. A 8.93 TOPS/W LSTM Recurrent Neural Network Accelerator Featuring Hierarchical Coarse-Grain Sparsity for On-Device Speech Recognition. *IEEE Journal of Solid State Circuits*. 2020.
[SJR: 2.571; Q1 journal in Electrical and Electronic Engineering]
- J36. Kim, SK, Chong, C, Dumkrieger, G., Ross, K., **Berisha, V.**, Schwedt, T.. Clinical Correlates of Insomnia in Patients with Persistent Post-Traumatic Headache Compared with Migraine. *The Journal of Headache and Pain*. 2020.

[SJR: 1.559; Q1 journal in Neurology, Anesthesiology and Pain Medicine, Medicine (miscellaneous)]

- J35. *Voleti, R., Liss, J.M. and **Berisha, V.**, 2019. A Review of Automated Speech and Language Features for Assessment of Cognitive and Thought Disorders. *IEEE Journal of Selected Topics in Signal Processing*, 14(2), pp.282-298.
[SJR: 1.603; Q1 journal in Signal Processing and Electrical and Electronic Engineering]
- J34. Shah, M., *Tu, M., **Berisha, V.**, Chakrabarti, C., & Spanias, A. (2019). Articulation constrained learning with application to speech emotion recognition. *EURASIP journal on audio, speech, and music processing*, 2019(1), 14.
[SJR: 0.259; Q3 journal in Electrical and Electronic Engineering, Acoustics and Ultrasonics]
- J33. Borrie, S. A., Barrett, T. S., Willi, M. M., & **Berisha, V.** (2019). Syncing Up for a Good Conversation: A Clinically Meaningful Methodology for Capturing Conversational Entrainment in the Speech Domain. *Journal of Speech, Language, and Hearing Research*, 62(2), 283-296.
[SJR: 0.958; Q1 journal in Speech and Hearing, Language and Linguistics, Medicine (miscellaneous)]
- J32. Borrie, S. A., Barrett, T. S., Liss, J. M., & **Berisha, V.** (2020). Sync Pending: Characterizing Conversational Entrainment in Dysarthria Using a Multidimensional, Clinically Informed Approach. *Journal of Speech, Language, and Hearing Research*, 1-12.
[SJR: 0.958; Q1 journal in Speech and Hearing, Language and Linguistics, Medicine (miscellaneous)]
- J31. *Jiao, Y., LaCross, A., **Berisha, V.**, & Liss, J. (2019). Objective Intelligibility Assessment by Automated Segmental and Suprasegmental Listening Error Analysis. *Journal of Speech, Language, and Hearing Research*, 62(9), 3359-3366.
[SJR: 0.958; Q1 journal in Speech and Hearing, Language and Linguistics, Medicine (miscellaneous)]
- J30. Dumkrieger, G., Chong, C. D., Ross, K., **Berisha, V.**, & Schwedt, T. J. (2019). Static and dynamic functional connectivity differences between migraine and persistent post-traumatic headache: A resting-state magnetic resonance imaging study. *Cephalalgia*, 0333102419847728.
[SJR: 1.57; Q1 journal in Neurology and Medicine]
- J29. Schwedt, T. J., *Peplinski, J., Garcia-Filion, P., & **Berisha, V.** (2019). Altered speech with migraine attacks: A prospective, longitudinal study of episodic migraine without aura. *Cephalalgia*, 39(6), 722-731.
[SJR: 1.57; Q1 journal in Neurology and Medicine]
- J28. Chong, C. D., *Peplinski, J., **Berisha, V.**, Ross, K., & Schwedt, T. J. (2019). Differences in fibertract profiles between patients with migraine and those with persistent post-traumatic headache. *Cephalalgia*, 0333102418815650.
[SJR: 1.57; Q1 journal in Neurology and Medicine]

- J27. Rutkove, S. B., Qi, K., Shelton, K., Liss, J., **Berisha, V.**, & Shefner, J. M. (2019). ALS longitudinal studies with frequent data collection at home: study design and baseline data. *Amyotrophic Lateral Sclerosis and Frontotemporal Degeneration*, 20(1-2), 61-67.
[SJR: 1.302; Q1 journal in Neurology (clinical) and Medicine]
- J26. *Utianski, R., *Sandoval, S., **Berisha, V.**, Lansford, K., Liss, J. (2018) The effects of speech compression algorithms on the intelligibility of two individuals with dysarthric speech. *American Journal of Speech-Language Pathology*, 1-9.
[SJR: 0.993; Q1 journal in Language and Linguistics and Speech and Hearing]
- J25. Howard, L., Dumkrieger, G., Chong, C. D., Ross, K., **Berisha, V.**, & Schwedt, T. J. (2018). Symptoms of Autonomic Dysfunction Among Those With Persistent Posttraumatic Headache Attributed to Mild Traumatic Brain Injury: A Comparison to Migraine and Healthy Controls. *Headache: The Journal of Head and Face Pain*, 58(9), 1397-1407.
[SJR: 1.14; Q2 journal in Neurology]
- J24. **Berisha, V.**, *Gilton, D., Baxter, L., Corman, S., Blais, C., Brewer, G., Ruston, S., Ball, H., Peter, B., Wingert, K., Rogalsky, C. (2018). Structural neural predictors of Farsi-English bilingualism. *Brain and Language*, 180, 42-49.
[SJR: 1.158; Q1 journal in Speech and Hearing, Language and Linguistics]
- J23. *Wisler, A., **Berisha, V.**, Spanias, A., & Hero, A. O. (2017). Direct estimation of density functionals using a polynomial basis. *IEEE Transactions on Signal Processing*, 66(3), 558-572.
[SJR: 1.638; Q1 journal in Electrical and Electronic Engineering, Signal Processing]
- J22. Schwedt, T. J., Chong, C. D., *Peplinski, J., Ross, K., & **Berisha, V.** (2017). Persistent post-traumatic headache vs. migraine: an MRI study demonstrating differences in brain structure. *The journal of headache and pain*, 18(1), 87.
[SJR: 1.559; Q1 journal in Anesthesiology and Pain Medicine, Medicine (miscellaneous), and Neurology]
- J21. **Berisha, V.**, *Wang, S., LaCross, A., Liss, J., Garcia-Filion, P. (2017). Longitudinal changes in linguistic complexity among professional football players. *Brain and language*, 169, 57-63.
[SJR: 1.158; Q1 journal in Speech and Hearing, Language and Linguistics]
- J20. Xu, Z., Skorheim, S., *Tu, M., **Berisha, V.**, Yu, S., Seo, J. S., ... & Cao, Y. (2017). Improving efficiency in sparse learning with the feedforward inhibitory motif. *Neurocomputing*, 267, 141-151.
[SJR: 1.085; Q1 journal in Artificial Intelligence, CS Applications]
- J19. Hsu, S. C., *Jiao, Y., McAuliffe, M. J., **Berisha, V.**, Wu, R. M., & Levy, E. S. (2017). Acoustic and perceptual speech characteristics of native Mandarin speakers with Parkinson's disease. *The Journal of the Acoustical Society of America*, 141(3), EL293-EL299.
[SJR: 0.749; Q1 journal in Acoustics and Ultrasonics, Q2 journal in Arts and Humanities (miscellaneous)]

- J18. *Jiao, Y., **Berisha, V.**, Liss, J., *Hsu, S. C., Levy, E., & McAuliffe, M. (2017). Articulation entropy: An unsupervised measure of articulatory precision. *IEEE Signal Processing Letters*, 24(4), 485-489.
[SJR: 0.942; Q1 journal in Signal Processing, Electrical and Electronic Engineering]
- J17. LaCross, A., Liss, J., Barragan, B., Adams, A., **Berisha, V.**, McAuliffe, M., & Fromont, R. (2016). The role of stress and word size in Spanish speech segmentation. *The Journal of the Acoustical Society of America*, 140(6), EL484-EL490.
[SJR: 0.619; Q1 journal in Acoustics and Ultrasonics, Arts and Humanities (miscellaneous)]
- J16. *Tu, M., *Wisler, A., **Berisha, V.**, & Liss, J. M. (2016). The relationship between perceptual disturbances in dysarthric speech and automatic speech recognition performance. *The Journal of the Acoustical Society of America*, 140(5), ELR416-EL422.
[SJR: 0.619; Q1 journal in Acoustics and Ultrasonics, Arts and Humanities (miscellaneous)]
- J15. Dorman, M. F., Liss, J., *Wang, S., **Berisha, V.**, Ludwig, C., & Natale, S. C. (2016). Experiments on auditory-visual perception of sentences by users of unilateral, bimodal, and bilateral cochlear implants. *Journal of Speech, Language, and Hearing Research*, 59(6), 1505-1519. **(2016 Editors Award)**
[SJR: 0.958; Q1 journal in Speech and Hearing, Language and Linguistics, Medicine (miscellaneous)]
- J14. Lansford, K. L., **Berisha, V.**, & *Utianski, R. L. (2016). Modeling listener perception of speaker similarity in dysarthria. *The Journal of the Acoustical Society of America*, 139(6), EL209-EL215.
[SJR: 0.619; Q1 journal in Acoustics and Ultrasonics, Arts and Humanities (miscellaneous)]
- J13. **Berisha, V.**, *Wisler, A., Hero, A. O., & Spanias, A. (2016). Empirically estimable classification bounds based on a nonparametric divergence measure. *IEEE Transactions on Signal Processing*, 64(3), 580-591.
[SJR: 1.638; Q1 journal in Electrical and Electronic Engineering, Signal Processing]
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- PP10. **Berisha, V.**, Jayasuriya, S., Zhang, J. (Filed 2021). Restoring degraded speech via a modified diffusion model. *Under Review*. Washington, DC: U.S. Patent and Trademark Office.
- PP9. **Berisha, V.**, Bhandari, S., Hahn, S., Liss, J., Stegmann, G. (Filed 2021). Large-scale cross-sectional and longitudinal validation of a digital speech-based measure of cognition. *Under Review*. Washington, DC: U.S. Patent and Trademark Office. (Licensed)
- PP8. **Berisha, V.**, Chakrabarti, C., Kadetotad, D., Seo, J. (Filed 2021). Hierarchical Coarse-Grain Sparsity for Deep Neural Networks. *Under Review*. Washington, DC: U.S. Patent and Trademark Office. (Licensed)
- PP7. **Berisha, V.**, Chong, C., Jayasuriya, S., Schwedt, T., Zhang, J. (Filed 2020). Speech Prognosis System for Diagnosing, Tracking, and Predicting Recovery Patterns in Patients with TBI. *Under Review*. Washington, DC: U.S. Patent and Trademark Office. (Licensed)

- PP6. **Berisha, V.**, Hahn, S., Liss, J., Shefner, J., Stegmann, G. (Filed 2020). Estimation of Forced Vital Capacity Using Speech Acoustics in Patients with ALS. *Under Review*. Washington, DC: U.S. Patent and Trademark Office. (Licensed)
- PP5. **Berisha, V.**, Jones, D., Liss, J. (Filed 2020). Objective assessment of speech resulting from congestion or decongestion. *Under Review*. Washington, DC: U.S. Patent and Trademark Office.
- PP4. **Berisha, V.**, Jones, D., Liss, J. (Filed 2020). Objective assessment of speech and respiration changes after smoking cessation. *Under Review*. Washington, DC: U.S. Patent and Trademark Office. (Licensed)
- PP3. **Berisha, V.**, Hustad, K., Kawabata, K., Liss, J., Mahr, T. (Filed 2019). Tracking articulatory and prosodic development in children. *Under Review*. Washington, DC: U.S. Patent and Trademark Office. (Licensed)
- PP2. Bates, D., **Berisha, V.**, Jones, D., Liss, J., Toh, S. (Filed 2019). Objective assessment of pain for calibration of patient-controlled analgesia devices. *Under Review*. Washington, DC: U.S. Patent and Trademark Office.
- PP1. **Berisha, V.**, Peplinski, J., Schwedt, T. (Filed 2018). Speech analyses for predicting migraine attacks. *Under Review*. Washington, DC: U.S. Patent and Trademark Office. (Licensed)

Books:

- B1. **Berisha, V.**, *Sandoval, S., & Liss, J. (2013). Bandwidth extension of speech using perceptual criteria. *Synthesis Lectures on Algorithms and Software in Engineering*, 5(2), 1-83.

Editorials:

- E2. **Berisha, V.**, & Liss, J. (2017, June). What if your cell phone data can reveal whether you have Alzheimer's? *Slate Magazine*.
- E1. Eig, J., **Berisha, V.**, & Liss, J. (2017, August 23). New study shows boxing's early toll on Muhammad Ali. *The Wall Street Journal*.

Invited colloquia:

- C025. **Berisha, V.** (2023 November). Developing clinical speech analytics models that generalize: Challenges and Opportunities. SPECOM conference keynote (Dharwad, India) [International].
- C024. **Berisha, V.** (2023 October). Operationalizing clinical speech analytics. ASHA workshop on AI (Boston, MA) [International].
- C023. **Berisha, V.** (2023, March). *Building speech-based clinical measures that generalize. Multimodal Biomarkers for Central Nervous System* - National Academies of Sciences, Engineering, and Medicine. (Washington, DC) [International]
- C022. **Berisha, V.** (2022, July). *Building machine learning models that generalize: lessons from the literature on what works and what doesn't. CIMPA-2022 Summer School - Mathematical Methods in Data Analysis.* (Tirana, Albania – COVID permitting) [International]
- C021. **Berisha, V.** (2022, June). *Developing speech-based clinical machine learning models that work: should we believe reported accuracies in the academic literature?* RaPID-2022 keynote invitation. (Marseille, France – COVID permitting) [International]
- C020. **Berisha, V.** (2022, January). Digital Medicine and the Curse of Dimensionality. Mayo Clinic Neuroscience Ground Rounds. (Virtual Presentation) [National]
- C019. **Berisha, V.** (2021, December). Digital Medicine and the Curse of Dimensionality. Digital Medicine Society Virtual Journal Club. (Virtual Presentation) [International]
- C018. **Berisha, V.** (2021, September). Real-world speech analysis as an objective and premonitory marker of headache. International Headache Conference – Scientific Session. Berlin, Germany. (Virtual Conference) [International]
- C017. **Berisha, V.** (2021, May). Extracting clinically-relevant information from acoustic signals. Boehringer Ingelheim Open SpeciSound Challenge. Biberach, Germany. (Virtual Conference) [International]
- C016. **Berisha, V.** (2021, Feb). Speech as a window into human health: Digital biomarkers based on speech analytics. Mayo Medical School AI Selective, Scottsdale, AZ. (Virtual Conference) [National]
- C015. **Berisha, V.** (2020, October). Information divergences for meta learning of prediction error in machine learning. RTG Seminar School of Mathematical and Statistical Sciences, ASU. Tempe, AZ. (Virtual Conference) [National]
- C014. **Berisha, V.** (2020, September). Clinical speech analytics: algorithms, applications, and information limits. LIONS Seminar, ASU. Tempe, AZ (Virtual Conference). [National]

- C013. **Berisha, V.** (2020, February). The promise of digital speech-based biomarkers. Evidation Health. Santa Barbara, CA. [National]
- C012. **Berisha, V.** (2019, November). Robust speech-based endpoints for clinical trials. CNS Summit – Speech Workshop. Boca Raton, FL. [National]
- C011. **Berisha, V.** (2019, September). Robust speech-based endpoints for clinical trials. Boehringer Ingelheim Speech Conference. Frankfurt, Germany. [International]
- CO10. **Berisha, V.** (2018, July). Speech and language analytics for early detection of neurological decline. Invited presentation at the 2018 American Academy of Neurology Sports Concussion Conference, Indianapolis, IN. [National]
- CO9. **Berisha, V.** (2018, April). Clinical speech analytics: interpretable algorithms and information limits. Seminar presented at the *University of California Los Angeles*, Los Angeles, CA. [National]
- CO8. **Berisha, V.** (2018, April). Detecting paralinguistic information from speech for clinical applications: Interpretable algorithms and information limits. Seminar presented at the *IEEE Dallas Chapter of Signal Processing Society*, Dallas, TX. [National]
- CO7. **Berisha, V.**, & Liss, J. (2017, December). New technologies for measures of clinical progression. Seminar presented at the *28th International Symposium on ALS/MND*, Boston, MA. [International]
- CO6. **Berisha, V.** (2017, March). Detecting paralinguistic information from speech for clinical applications: Interpretable algorithms and information limits. Seminar presented at the *University of Southern California Signal Analysis and Interpretation Laboratory, Ming Hsieh Department of Electrical Engineering*, Los Angeles, CA. [National]
- CO5. **Berisha, V.** (2016, December). Speech and language analytics for health applications. Seminar presented at the *University of Arizona Fall Colloquium Series*. Tucson, AZ. [National]
- CO4. **Berisha, V.** (2015, November). Tracking outcome measures in neurological disorders through speech and language processing. Seminar presented at the *Mayo Clinic Neuroscience Conference*, Scottsdale, AZ. [National]
- CO3. **Berisha, V.** (2007, September). Speech compression using loudness criteria. Seminar presented at *Lincoln Laboratory*, Boston, MA. [National]
- CO2. **Berisha, V.** (2007, November). Speech enhancement using perceptual criteria. Seminar presented at *Center for Computer Research in Music and Acoustics at Stanford University*, Palo Alto, CA. [National]

CO1. **Berisha, V.** (2007, December). Recent developments in bandwidth extension of speech. Seminar presented at *Microsoft Research*, Redmond, WA.
[National]

Research Funding

The total allocated to Berisha was calculated based on the PI recognition percentage (column titled Investigator Recognition in the Faculty Sponsored Activity Report). This is calculated by multiplying the recognition percentage by the total award value.

Expected

26 **Title:** GIST Innovates the Balkans (Phase II)
Sponsor: US State Department
PI: Visar Berisha
Berisha's Role: PI
Total Award Value: \$493,748
Total Allocated to Berisha: \$345, 623
Performance Period: 04/01/2025 – 03/30/2027

Funded:

25 **Title:** R01: Connected Language and Speech along the spectrum of ADRD: Digital assessment and monitoring
Sponsor: National Institutes of Health
PI: Kimberly Mueller
Berisha's Role: ASU PI (Co-I on award)
Total Award Value: \$2,000,000
Total Allocated to Berisha: \$550,000
Performance Period: 05/01/2023 – 04/30/2028

24 **Title:** GIST Innovates the Balkans
Sponsor: US State Department
PI: Visar Berisha
Berisha's Role: PI
Total Award Value: \$493,748
Total Allocated to Berisha: \$296, 248
Performance Period: 09/01/2022 – 04/30/2025

23 **Title:** PIPP Phase I: Computational foundations for bio-social modeling of unseen pandemics
Sponsor: National Science Foundation
PI: Pavan Turaga
Berisha's Role: Co-PI
Total Award Value: \$897, 531
Total Allocated to Berisha: \$71, 802
Performance Period: 09/01/2022 – 02/29/2024

22 **Title:** R01: Quantifying articulatory performance in children with dysarthria: Development of an automated tool for clinical use
Sponsor: National Institutes of Health
PI: Visar Berisha, Katherine Hustad (mPI proposal)
Berisha's Role: 1 of 2 principal investigators
Total Award Value: \$1,245,866

Total Allocated to Berisha: \$622,933
Performance Period: 05/01/2022 – 04/30/2027

- 21 **Title:** MaCRoLearn: Manifold Controls for Robust Learning
Sponsor: Defense Advanced Research Projects Agency (DARPA)
PI: Pavan Turaga
Berisha's Role: Co-Investigator
Total Award Value: \$998,906
Total Allocated to Berisha: \$99,890
Performance Period: 4/4/2022 – 10/3/2023
- 20 **Title:** Speech Biomarkers for Cognitive Decline
Sponsor: John and Tami Marick Foundation
PI: Visar Berisha, Julie Liss (mPI proposal)
Berisha's Role: 1 of 2 principal investigators
Total Award Value: \$549,878
Total Allocated to Berisha: \$274,939
Performance Period: 6/1/2022 – 5/31/2025
- 19 **Title:** Active meta learning
Sponsor: Office of Naval Research
PI: Visar Berisha (Gautam Dasarathy co-PI)
Berisha's Role: Principal Investigator
Total Award Value: \$552,106
Total Allocated to Berisha: \$276,053
Performance Period: 6/1/2021 - 5/31/2024
- 18 **Title:** R21: The effects of telepractice technology on dysarthric speech evaluation
Sponsor: National Institutes of Health
PI: Visar Berisha, Julie Liss (mPI proposal)
Berisha's Role: 1 of 2 principal investigators
Total Award Value: \$413,546
Total Allocated to Berisha: \$206,773
Performance Period: 6/1/2021 - 5/31/2023
- 17 **Title:** CPS: Small: Real-time spatial audio on the Internet of Things
Sponsor: National Science Foundation
PI: Robert LiKamWa
Berisha's Role: Co-Principal Investigator
Total Award Value: \$360,880
Total Allocated to Berisha: \$90,220
Performance Period: 10/1/2019 - 9/30/2022
- 16 **Title:** R61: Biomarker Signature to Predict the Persistence of Post-Traumatic Headache
Sponsor: National Institutes of Health
PI: Catherine Chong (Mayo Clinic)
Berisha's Role: 1 of 3 co-Is
Total Award Value: \$885,875
Total Allocated to Berisha: \$292,338

Performance Period: 7/1/2019 - 6/30/2024

- 15 **Title:** Objectively Quantifying Speech Outcomes of Children with Cleft Palate
Sponsor: National Institutes of Health – National Institute on Deafness and Other Communication Disorders
PIs: Visar Berisha, Nancy Scherer (mPI proposal)
Berisha's Role: 1 of 2 Principal Investigators
Total Award Value: \$429,243
Total Allocated to Berisha: \$145, 942
Performance Period: 9/1/2018 – 8/31/2020

- 14 **Title:** An information-theoretic approach to improving the robustness of deep learning architectures
Sponsor: Office of Naval Research
PIs: Visar Berisha
Berisha's Role: Principal Investigator
Total Award Value: \$349,012
Total Allocated to Berisha: \$349, 012
Performance Period: 9/1/2017 – 8/31/2020

- 13 **Title:** R01: Perception of dysarthric speech: An objective model of dysarthric speech with actionable outcomes
Sponsor: National Institutes of Health – National Institute on Deafness and Other Communication Disorders
PIs: Visar Berisha, Julie M. Liss (mPI proposal)
Berisha's Role: 1 of 2 Principal Investigators
Total Award Value: \$1,815,012
Total Allocated to Berisha: \$907, 506
Performance Period: 4/1/2017 – 3/31/2022

- 12 **Title:** R21: Speech rhythm entrainment in the context of dysarthria
Sponsor: National Institutes of Health – National Institute on Deafness and Other Communication Disorders
PIs: Stephanie Borrie (Utah State University)
Berisha's Role: Co-Investigator (PI of ASU subcontract)
Total Award Value: \$450,000 (approx.)
Total Allocated to Berisha: \$158, 795
Performance Period: 4/1/2017 – 3/31/2020

- 11 **Title:** Speech and Language Analytics for Early Detection of Psychosis
Sponsor: Boehringer Ingelheim GmbH
PIs: Visar Berisha
Berisha's Role: Principal Investigator
Total Award Value: \$139,018
Total Allocated to Berisha: \$69,509
Performance Period: 1/1/2017 – 12/31/2019

- 10 **Title:** Speech Changes as Predictors of Migraine Attack Onset
Sponsor: Mayo Clinic Robert D. and Patricia E. Kern Center for the Science of Health Care Delivery
PIs: Visar Berisha, Todd Schwedt

Berisha's Role: Co-Principal Investigator
Total Award Value: \$100,000 (approx.)
Total Allocated to Berisha: \$56, 035
Performance Period: 1/1/2017 – 12/31/2017

- 9 **Title:** Asthma Control / Cough Assessment with Smart Wearable Devices
Sponsor: Boehringer Ingelheim GmbH
PIs: Yu Cao, Visar Berisha,
Berisha's Role: Co-Principal Investigator
Total Award Value: \$113,747
Total Allocated to Berisha: \$11, 374
Performance Period: 1/1/2017 – 6/1/2017

- 8 **Title:** Passive monitoring of motoric abilities using mobile technology
Sponsor: Google Inc.
PIs: Visar Berisha
Berisha's Role: Principal Investigator
Total Award Value: \$193,789
Total Allocated to Berisha: \$193, 789
Performance Period: 7/1/2016 – 12/31/2017
Notes: Appears as two projects on the Sponsored Activities Report

- 7 **Title:** Robust low-power implementations of complex models
Sponsor: Raytheon Co.
PIs: Visar Berisha
Berisha's Role: Principal Investigator
Total Award Value: \$100,265
Total Allocated to Berisha: \$100, 265
Performance Period: 5/1/2016 – 5/31/2017

- 6 **Title:** The reticulation/activation nexus in organizations: An agent-based model and empirical test using unique data
Sponsor: National Science Foundation
PIs: Steven Corman, Daniel Bliss, Visar Berisha
Berisha's Role: Co-Principal Investigator
Total Award Value: \$205,060
Total Allocated to Berisha: \$41, 012
Performance Period: 9/1/2016 – 8/31/2018

- 5 **Title:** MRI-based algorithms that differentiate between patients with post-traumatic headaches and migraine
Sponsor: Department of Defense
PIs: Todd Schwedt
Berisha's Role: Co-Principal Investigator (PI of ASU Subcontract)
Total Award Value: \$1,570,000
Total Allocated to Berisha: \$203, 517
Performance Period: 9/1/2015 – 9/1/2018

- 4 **Title:** STTR: speaklear: an augmentative tool to connect speech language pathologists with patients
Sponsor: National Science Foundation (STTR)

PIs: Visar Berisha

Berisha's Role: Principal Investigator

Total Award Value: \$119,996

Total Allocated to Berisha: \$119, 996

Performance Period: 1/1/2015 – 8/1/2016

Notes: Later transitioned to Michael Dorman due to conflict of interest. Does not appear in Sponsored Activity Report and I do not count it as a part of the total amount reported.

- 3 **Title:** Multivariable Models of Brain Structure that Classify Post-Traumatic Headache and Differentiate It from Migraine
Sponsor: ASU – Mayo Seed Grant
PIs: Visar Berisha, Todd Schwedt
Berisha's Role: Co-Principal Investigator (PI of ASU subcontract)
Total Award Value: \$40,000 (approx.)
Total Allocated to Berisha: \$14, 816
Performance Period: 1/1/2015 – 12/31/2015

- 2 **Title:** R21: A web-based platform for cross-linguistic research in dysarthric speech
Sponsor: National Institutes of Health – National Institute on Deafness and Other Communication Disorders
PIs: Julie Liss, Visar Berisha, Megan McAuliffe (mPI proposal)
Berisha's Role: 1 of 3 Principal Investigators (Liss contact PI)
Total Award Value: \$359,175
Total Allocated to Berisha: \$179, 587
Performance Period: 1/1/2015 – 12/31/2016

- 1 **Title:** Improving the Robustness of Deployed Machine Learning Algorithms
Sponsor: Office of Naval Research
PIs: Visar Berisha
Berisha's Role: Principal Investigator
Total Award Value: \$293,877
Total Allocated to Berisha: \$293, 877
Performance Period: 7/1/2014 – 6/30/2017

Competitive but not yet funded:

- 23 **Title:** R01: Validating an objective assessment of speech outcomes of children with cleft palate pre and post-secondary surgery
Sponsor: National Institutes of Health
PI: Visar Berisha, Nancy Scherer (MPI proposal)
Berisha's Role: 1 of 2 principal investigators
Total Award Value: \$1,250,000
Total Allocated to Berisha: \$500,000
Performance Period: 09/01/2022 – 08/30/2027
Notes: This grant has not been recommended for award, but it scored at the 23rd percentile. According to the program officer, there is a possibility it will be awarded.

Service

Service to ASU

- Curriculum committee for ASU medical school
 - Helped develop the AI curriculum for the new medical school. The curriculum was approved by ABOR in Feb 2024
- Faculty search committee chair
 - AI in Medicine Search, 2023 – 2024
 - We hired an expert in surgical robotics.
- University Graduate Council representative for CHS, 2023 - 2026
- Faculty search committee chair
 - Director of Human Performance, 2021 – 2022
 - This role is of critical importance to the College of Health Solutions (CHS). CHS is focused on three college-wide principal initiatives, one of which is Human Performance. I am leading this search to find a candidate that can build from the ground-up this new focus area within CHS and work with other colleges at ASU and external stakeholders to position CHS as a leader in Human Performance.
 - Associate Professor Sports Science, 2020 - 2021
- Invited to participate on a university-level ad-hoc committee to evaluate technology for tracking COVID spread by ASU's Chief Science and Technology Officer, Spring and Summer 2020
- Member of faculty search committee for Digital Health, Fall 2019 – Spring 2020
- Member of CHS Research Council, Fall 2019 – Fall 2020
- Mentor for ASU faculty interested in entrepreneurship, 2020 – present
- Member of PhD program committee in SHS, Fall 2019 – current
- Chair of PhD program committee in SHS, Fall 2018 – Fall 2019
- Member of College of Engineering Fulton Entrepreneurship Professor Review Committee, 2019 and 2020
- Member of the ECEE *Systems* search committee, Spring 2018
- Co-chair of the Translational Team Structure, Process, and Evaluation working group in the College of Health Solutions, Spring 2018
- Co-founder of the Coffee and Cognition (CoCo) seminar, 2014
- Member of PhD program committee in SHS, 2016 - 2018
- Member of the ECEE ad-hoc committee to improve student recruitment, 2015 - 2016
- Member of web-design committee in SHS, 2013-2014

External Service:

- Invited participant, Biden White House Working Group on Voice Cloning, 2024
- Co-founder, organizer, and chair of Speech Analytics for Motor Speech (SAMS) workshop, 2020, 2022
 - We organized the inaugural SAMS workshop in 2020 as a pre-conference workshop for the Motor Speech Conference – the flagship conference in the field of motor speech disorders. Attendance was double the initial expectations (we expected 40 but there were ~80 attendees)
 - We organized the workshop again in 2022 as a pre-conference workshop for the Motor Speech Conference
 - We intend to organize SAMS every 2 years from now as a pre-conference workshop for the Motor Speech Conference
- Digital Medicine Society Invitee for Workshop on Sensor Data Integration, 2022

- Review Editor, *Frontiers in Aging of Neuroscience*, 2022
- Panelist in International Speech Communication Association (ISCA) Doctoral Consortium, 2021
- Session chair: SPE-56: Paralinguistics in Speech: International conference on acoustic and speech signal processing (ICASSP), 2021
- Organizing committee for the Motor Speech Conference, 2020, 2022
- Member of the IEEE Speech and Language Technical Committee, 2018-2020
- Mentor for International Speech Communication Association (ISCA) – Student advisory committee (SAC) Mentoring Event, 2020
- Chair of External Relations committee, IEEE Speech and Language Technical Committee, 2020
- Virtual review panelist for NSF (Smart Health), 2018
- Session chair: Acoustic analysis-synthesis of speech disorders, ISCA Interspeech conference, 2018
- In person review panelist for NSF (CCF), 2018
- Virtual review panelist for NSF (Smart Health), 2017
- In person review panelist for NSF (CCF), 2017
- Organizer and session chair of an invited session: Speech and language analysis for health applications, Asilomar Conference, 2016
- Associate editor, *Journal of Alzheimer's Disease*, 2014 – 2016
- Virtual review panelist for NSF (Smart Health), 2015
- Vice-chair of the IEEE Industry DSP Standing Committee, 2010 - 2012
- Guest editor, Elsevier *Digital Signal Processing Journal Special Issue on Defense Applications of Signal Processing*, 2009
- Reviewer for:
 - *IEEE Transactions on Audio, Speech, and Language Processing*
 - *IEEE Transactions on Signal Processing*
 - *IEEE Transactions on Biomedical Engineering*
 - *Journal of Alzheimer's Disease*
 - *Alzheimer's and Dementia*
 - *Journal of the Acoustical Society of America*
 - *Journal of Speech Language and Hearing Research*
 - *Frontiers in Neuroscience*
 - *PLOS One*
 - ICASSP conference proceedings
 - Interspeech conference proceedings
 - Several others