

Gavin M. Bidelman, PhD

Curriculum Vitae

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Office address

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Education

Ph.D.	2011	Purdue University, Speech, Language, & Hearing Sciences (Auditory Neuroscience)
B.S.	2007	University of Michigan, Sound Engineering (<i>summa cum laude</i>)
B.M.	2007	University of Michigan, Music Theory (<i>summa cum laude</i>)

Professional

Academic appointments

Professor	Department of Speech, Language and Hearing Sciences Program in Neuroscience, <i>Core Faculty</i> Cognitive Science Program, <i>Affiliate</i> Indiana University	2022 –
University Research Professorship	University of Memphis	2021 – 2023
Asst/Assoc/Full Professor	School of Comm. Sci. & Disorders, University of Memphis Institute for Intelligent Systems, University of Memphis	2012 – 2022
Faculty Affiliate	UTHSC, Dept. Anatomy & Neurobiology	2016 – 2022
Postdoctoral Fellow	Rotman Research Inst., Baycrest Geriatric Hospital, Toronto	2011 – 2012
Research Assistant	Dept. of Speech, Language, & Hearing Sci., Purdue University	2007 – 2011
NIH Predoctoral Fellow	Dept. of Speech, Language, & Hearing Sci., Purdue University	2008 – 2010

Editorial

Associate Editor, <i>Psychomusicology: Music, Mind and Brain</i>	2019 –
Associate Editor, <i>Frontiers in Auditory Cognitive Neuroscience</i>	2015 –
Assistant Editor, <i>Ear & Hearing</i>	2010 – 2015

Research

Research interests

Neuroimaging of auditory perception/cognition in normal and hearing-impaired systems; experience-dependent plasticity; “cocktail party” listening; auditory-cognitive aging; individual differences in hearing; brainstem and cortical ERPs; EEG; hierarchical neurocomputation; neurobiology of music/language

Bibliometrics ([Google Scholar Bio](#))

h-index:	41 (≥ 41 papers each cited ≥ 41 times)
h10-index:	94 (≥ 94 papers each cited ≥ 10 times)
Total citations:	5752
Grant funding:	>\$2.9 million

Grant funding

Current grants

1. Co-I (PI: Claude Alain, Rotman Research Inst., Toronto). "The impacts of hearing aid use on auditory cognition: A functional connectivity analysis," William Demant Foundation (Denmark), 8/20–7/23, \$166,000 (USD).
2. PI. "Neuroimaging biomarkers of speech processing deficits in Mild Cognitive Impairments," National Institutes of Health (NIDCD/NIA) R01DC01626703-S1 (Supplement), 6/20–5/21, \$296,259.
3. PI. "Neural dynamics underlying the emergence of auditory categorization and learning," National Institutes of Health (NIDCD) R01DC016267, 5/18–4/23, \$1,879,543.

Pending grants

1. Consultant (PI: Yan Yu, St. John's University). "The neural development of lexical tone and music processing in bilingual Mandarin-English learning children," National Institutes of Health, \$10,000 (consultant fee).

Completed grants

1. Faculty Sponsor (PI: Kelsey Mankel, PhD student). "Neural bases of successful auditory learning," NIH/NIDCD F31 Predoctoral NSRA Fellowship, 6/20–5/22, \$91,040.
2. Co-I (PI: Miriam van Mersbergen). "Health for Artists," University of Memphis Communities of Research Scholars (CoRS) Program (intramural), 11/19-10/20, \$2,500.
3. PI. "Neural dynamics underlying the emergence of auditory categorization and learning," University of Memphis Research Investment Fund (intramural), 3/17–2/18, \$20,000.
4. PI. "Minimizing noise-induced hearing loss with musicianship," GRAMMY® Foundation, 4/14–6/16, \$20,000.
5. PI. "Central neurophysiological markers underlying speech-in-noise perception," American Academy of Audiology Foundation, New Investigator Grant, 4/14–5/15, \$10,000.
6. PI. "Central neurophysiological markers underlying degraded speech recognition," American Hearing Research Foundation, 5/14–6/15, \$20,000.
7. Co-PI (PI: S. Tak, UofM Nursing). "Therapeutic computer-assisted stimulating activity in dementia," FedEx Institute of Technology, University of Memphis (intramural), 1/14–3/16, \$332,000.
8. PI. "The impact of music on speech processing in older adults," GRAMMY® Foundation, 4/12–8/13, \$20,000.
9. PI. "Neural correlates of musical and linguistic pitch as revealed in the auditory brainstem," Bilsland Doctoral Dissertation Award, Purdue University (intramural), 9/10–6/11, \$44,622.

Publications

Peer-reviewed journal articles (*predoc/**postdoc trainee 1st author; †shared 1st author; [PDFs reprints](#))

1. *Momtaz, S., Moncrieff, D., Ray, M.A., & **Bidelman, G. M.** (2022). Children with amblyaudia show less flexibility in auditory cortical entrainment to periodic non-speech sounds. *International Journal of Audiology*, 1-7. doi: [10.1080/14992027.2022.2094289](https://doi.org/10.1080/14992027.2022.2094289)
2. **Bidelman, G. M.**, Chow, R., Noly-Gandon, A., Ryan, J. D., Bell, K. L., Rizzi, R., and Alain, C. (2022). Transcranial direct current stimulation (tDCS) combined with listening to preferred music alters cortical speech processing in older adults. *Frontiers in Neuroscience*, 16(884130), 1-13.
3. Lu, J. Moussard, A., Guo, S., Lee, Y., **Bidelman, G. M.**, Moreno, S., Skrotzki, C., Bugos, J., Shen, D., Yao, D., and Alain, C. (2022). Music training modulates theta brain oscillations associated with response suppression. *Annals of the New York Academy of Sciences*. <https://doi.org/10.1111/nyas.14861> [special issue for "Neuroscience of Music VII (NMVII): Connecting with music across the lifespan"].
4. **Price, C. N. & **Bidelman, G. M.** (2022). Musical experience partially counteracts temporal speech processing deficits in putative mild cognitive impairment. *Annals of the New York Academy of Sciences*,

- 1-9. <https://doi.org/10.1111/nyas.14853>. [special issue for "Neuroscience of Music VII (NMVII): Connecting with music across the lifespan"].
5. *Mankel, K. Shrestha, U., Tipirneni-Sajja, A., & **Bidelman, G.M.** (2022). Functional plasticity coupled with structural predispositions in auditory cortex shape successful music category learning. *Frontiers in Neuroscience*, 16(897239), 1-14.
 6. *Brown, J. A. & **Bidelman, G. M.** (in press). Song properties and familiarity affect speech recognition in musical noise. *Psychomusicology: Music, Mind, and Brain*. <https://doi.org/10.1037/pmu0000284>
 7. *Carter, J. A., Buder, E. H., & **Bidelman, G. M.** (2022). Nonlinear dynamics in auditory cortical activity reveal the neural basis of perceptual warping in speech categorization. *JASA Express Letters*, 2(4), 045201. [invited paper]
 8. Chung, W.-L. & **Bidelman, G. M.** (2022). Acoustic features of oral reading prosody and the relation with reading fluency and reading comprehension in Taiwanese children. *Journal of Speech, Language, and Hearing Research*, 65(1), 334-343.
 9. *Shukla, B. & **Bidelman, G.M.** (2021). Enhanced brainstem phase-locking in low-level noise reveals stochastic resonance in the frequency-following response (FFR). *Brain Research*, 1771, 147643. [special issue "New frontiers in studying the neural substrates enabling speech in noise comprehension"]
 10. Iannaccone, A., Brewer, C. C., Cheng, P., Duncan, J. L., Maguire, M. G., Audo, I., Ayala, A. R., Bernstein, P., **Bidelman, G. M.**, Cheetham, J. K., Doty, R., Durham, T. A., Hufnagel, R. B., Myers, M., Stingl, K., & Zein, W. (2021). Auditory and olfactory findings in patients with USH2A related retinal degeneration – findings at baseline from the rate of progression in USH2A-related retinal degeneration natural history study (RUSH2A). *American Journal of Medical Genetics- Part A*, 185A, 3717–3727.
 11. *Momtaz, S., Moncrieff, D., & **Bidelman, G. M.** (2021). Dichotic listening deficits in amblyaudia are characterized by aberrant neural oscillations in auditory cortex. *Clinical Neurophysiology*, 132(9), 2152-2162.
 12. *Price, C. N. & **Bidelman, G. M.** (2021). Attention reinforces human corticofugal system to aid speech perception in noise. *NeuroImage*, 235 (118014), 1-9.
 13. *Mahmud, S., Yeasin, M., & **Bidelman, G. M.** (2021). Data-driven machine learning models for decoding speech categorization from evoked brain responses. *Journal of Neural Engineering*, 18(4), 046012.
 14. *Mahmud, S., Yeasin, M., & **Bidelman, G. M.** (2021). Speech categorization is better described by induced rather than evoked neural activity. *Journal of the Acoustical Society of America*, 149(3), 1644-1656. [special issue on "Machine Learning in Acoustics"]
 15. **Bidelman, G. M.**, Pearson, C., & Harrison, A. (2021). Lexical influences on categorical speech perception are driven by a temporoparietal circuit. *Journal of Cognitive Neuroscience*, 33(5), 840–852.
 16. *Carter, J. A. & **Bidelman, G. M.** (2021). Auditory cortex is susceptible to lexical influence as revealed by informational vs. energetic masking of speech categorization. *Brain Research*, 1759, 147385. [special issue "New frontiers in studying the neural substrates enabling speech in noise comprehension"]
 17. **Bidelman, G. M.** & Momtaz, S. (2021). Subcortical rather than cortical sources of the frequency-following response (FFR) relate to speech-in-noise perception in normal-hearing listeners. *Neuroscience Letters*, 746, 135664.
 18. Chung, W.-L., Jarmulowicz, L., & **Bidelman, G. M.** (2021). Cross-linguistic contributions of acoustic cues and prosodic awareness to first and second language vocabulary knowledge. *Journal of Research in Reading*, 44(2), 434–452.
 19. Chung, W.-L. & **Bidelman, G. M.** (2021). Mandarin-speaking preschoolers' pitch discrimination, prosodic and phonological awareness, and their relation to receptive vocabulary and reading abilities. *Reading and Writing*, 34(2), 337–353
 20. **Bidelman, G. M.**, Brown, J., & Bashivan, P. (2021). Auditory cortex supports verbal working memory capacity. *NeuroReport*, 32(2), 163-168. [selected for cover art of journal issue]
 21. **Bidelman, G. M.** & Yoo, J. (2020). Musicians show improved speech segregation in competitive, multitalker cocktail party scenarios. *Frontiers in Psychology*, 11(1927), 1-11.

22. *Mahmud, S., Ahmed, F., Al-Fahad, R., Moinuddin, K. A., Yeasin, M., Alain, C., & **Bidelman, G. M.** (2020). Decoding hearing-related changes in older adults' spatiotemporal neural processing of speech using machine learning. *Frontiers in Neuroscience*, 14(748), 1-15.
23. Myers, M. H., Padmanabha, A., **Bidelman, G. M.**, & Wheless, J. W. (2020). Seizure localization using EEG analytical signals. *Clinical Neurophysiology*, 131(9), 2131-2139.
24. **Bidelman, G. M.** & Bhagat, S. P. (2020). Brainstem correlates of cochlear nonlinearity measured via the scalp-recorded frequency-following response (FFR). *NeuroReport*, 31(10), 702-707. [selected for cover art of journal issue]
25. **Bidelman, G. M.**, Bush, L. C., & Boudreaux, A. M. (2020). Effects of noise on the behavioral and neural categorization of speech. *Frontiers in Neuroscience*, 14(153), 1-13.
26. *Al-Fahad, R., Yeasin, M., & **Bidelman, G. M.** (2020). Decoding of single-trial EEG reveals unique states of functional brain connectivity that drive rapid speech categorization decisions. *Journal of Neural Engineering*, 17(1), 016045.
27. **Bidelman, G. M.** & Myers, M. H. (2020). Frontal cortex selectively overrides auditory sensory processing to bias perception for looming sonic motion. *Brain Research*, 1726 (146507), 1-8.
28. **Bidelman, G. M.**, Brown, B., Mankel, K., & Price, C. N. (2020). Psychobiological responses reveal audiovisual noise differentially challenges speech recognition. *Ear and Hearing*, 41(2), 268-277.
29. **Lewis, G. & **Bidelman, G. M.** (2020). Autonomic nervous system correlates of speech categorization revealed through pupillometry. *Frontiers in Neuroscience*, 13 (1418), 1-10.
30. *Mankel, K., *Barber, J., & **Bidelman, G. M.** (2020). Auditory categorical processing for speech is modulated by inherent musical listening skills. *NeuroReport*, 31(2), 162-166.
31. **Bidelman, G. M.**, Price, C. N., Shen, D., Arnott, S., & Alain, C. (2019). Afferent-efferent connectivity between auditory brainstem and cortex accounts for poorer speech-in-noise comprehension in older adults. *Hearing Research*, 382 (107795), 1-12.
32. **Bidelman, G. M.** & Walker, B. (2019). Plasticity in auditory categorization is supported by differential engagement of the auditory-linguistic network. *NeuroImage*, 201(116022), 1-10.
33. *Price, C. N., Alain, C., & **Bidelman, G. M.** (2019). Auditory-frontal channeling in α and β bands is altered by age-related hearing loss and relates to speech perception in noise. *Neuroscience*, 423, 18-28.
34. **Bidelman, G. M.**, Mahmud, M. S., Yeasin, M., Shen, D., Arnott, S., & Alain, C. (2019). Age-related hearing loss increases full-brain connectivity while reversing directed signaling within the dorsal-ventral pathway for speech. *Brain Structure and Function*, 224(8), 2661-2676.
35. **Bidelman, G. M.** & Heath, S. T. (2019). Enhanced temporal binding of audiovisual information in the bilingual brain. *Bilingualism: Language and Cognition*, 22(4), 752-762.
36. **Bidelman, G. M.**, Sigley, L., & Lewis, G. (2019). Acoustic noise and vision differentially warp speech categorization. *Journal of the Acoustical Society of America*, 146(1), 60-70.
37. Yoo, H., Buder, E. H., Bowman, D. D., **Bidelman, G. M.**, & Oller, D. K. (2019). Acoustic correlates and adult perceptions of distress in infant speech-like vocalizations and cries. *Frontiers in Psychology*, 10(1154), 1-18.
38. Lee, S., Mendel, L. L., & **Bidelman, G. M.** (2019). Predicting speech recognition using the speech intelligibility index and other variables for cochlear implant users. *Journal of Speech, Language, and Hearing Research*, 62(5), 1517-1531.
39. *Khatun, S., Morshed, B. I., & **Bidelman, G. M.** (2019). A single-channel EEG based approach to detect mild cognitive impairment via speech-evoked brain responses. *IEEE Transactions on Neural Systems & Rehabilitation Engineering*, 27(5), 1063-1070.
40. *Yoo, J. & **Bidelman, G. M.** (2019). Linguistic, perceptual, and cognitive factors underlying the musician benefit to noise-degraded speech perception. *Hearing Research*, 377, 185-195.
41. *Yellamsetty, A. & **Bidelman, G. M.** (2019). Brainstem correlates of concurrent speech identification in adverse listening conditions. *Brain Research*, 1714, 182-192.

42. Alain, C., Moussard, A., Singer, J., Lee, Y., **Bidelman, G. M.**, & Moreno, S. (2019). Music and visual art training modulate brain activity in older adults. *Frontiers in Neuroscience*, 13(182), 1-15.
43. **Bidelman, G. M.** & Heath, S. T. (2019). Neural correlates of enhanced audiovisual processing in the bilingual brain. *Neuroscience*, 401, 11-20
44. *Mankel, K. & **Bidelman, G. M.** (2018). Inherent auditory skills rather than formal music training shape the neural encoding of speech. *Proceedings of National Academy of Sciences of the United States of America*, 115(51), 13129-13134.
45. *Mahajan, R., Morshed, B. I., & **Bidelman, G. M.** (2018). BRAINsensors: Body-worn reconfigurable architecture of integrated network sensors. *Journal of Medical Systems*, 42(185), 1-14.
46. **Bidelman, G. M.**, Davis, M. K., & Pridgen, M. H. (2018). Brainstem-cortical functional connectivity for speech is differentially challenged by noise and reverberation. *Hearing Research*, 367, 149-160.
47. **Bidelman, G. M.** & Powers, L. (2018). Response properties of the human frequency-following response (FFR) to speech and nonspeech sounds: Level dependence, adaptation, and phase-locking limits. *International Journal of Audiology*, 57(9), 665-672.
48. **Bidelman, G. M.** (2018). Subcortical sources dominate the neuroelectric auditory frequency-following response to speech. *NeuroImage*, 175, 56-69.
49. *Yellamsetty, A. & **Bidelman, G. M.** (2018). Low- and high-frequency cortical brain oscillations reflect dissociable mechanisms of concurrent speech segregation in noise. *Hearing Research*, 361, 92-102.
50. **Bidelman, G. M.**, Pousson, M., Dugas, C., & Fehrenbach, A. (2018). Test-retest reliability of dual-recorded brainstem vs. cortical auditory evoked potentials to speech. *Journal of the American Academy of Audiology*, 29(2), 164-174.
51. **Bidelman, G. M.** (2018). Sonification of scalp-recorded frequency-following responses (FFRs) offers improved response detection over conventional statistical metrics. *Journal of Neuroscience Methods*, 293, 59-66.
52. Myers, M. H. Iannaccone, A., & **Bidelman, G. M.** (2017). A pilot investigation of audiovisual processing and multisensory integration in patients with inherited retinal dystrophies. *BMC Ophthalmology*, 17(240), 1-13.
53. *Chung, W.-L., Jarmulowicz, L., & **Bidelman, G. M.** (2017). Auditory processing, linguistic prosody awareness, and word reading in Mandarin-speaking children learning English. *Reading and Writing*, 30(7), 1407–1429.
54. *Lee, S. & **Bidelman, G. M.** (2017). Objective identification of simulated cochlear implant settings in normal-hearing listeners via auditory cortical evoked potentials. *Ear & Hearing*, 38(4), e215-e226.
55. **Bidelman, G. M.** & Yellamsetty, A. (2017). Noise and pitch interact during the cortical segregation of concurrent speech. *Hearing Research*, 351, 34-44.
56. **Bidelman, G. M.**, Lowther, J. E., Tak, S. H., & Alain, C. (2017). Mild cognitive impairment is characterized by deficient hierarchical speech coding between auditory brainstem and cortex. *Journal of Neuroscience*, 37(13), 3610-3620.
57. **Bidelman, G. M.** (2017). Amplified induced neural oscillatory activity predicts musicians' benefits in categorical speech perception. *Neuroscience*, 348, 107-113.
58. **Bidelman, G. M.** & Walker, B. (2017). Attentional modulation and domain specificity underlying the neural organization of auditory categorical perception. *European Journal of Neuroscience*, 45, 690-699.
59. Almishaal, A., **Bidelman, G. M.**, & Jennings, S. G. (2017). Notched-noise precursors improve detection of low-frequency amplitude modulation. *Journal of the Acoustical Society of America*, 141(1), 324- 333.
60. Alain, C., Arsenault, J. S., Garami, L., **Bidelman, G. M.**, & Snyder, J. S. (2017). Neural correlates of speech segregation based on formant frequencies of adjacent vowels. *Scientific Reports*, 7(40790), 1-11.
61. **Bidelman, G. M.**, Schneider, A. D., Heitzmann, V. R., & Bhagat, S. P. (2017). Musicianship enhances ipsilateral and contralateral efferent gain control to the cochlea. *Hearing Research*, 344, 275-283.

62. **Bidelman, G. M.** & Bhagat, S. P. (2017). Cochlear, brainstem, and psychophysical responses reveal spectrotemporal tradeoff in human auditory processing. *NeuroReport*, 28(1), 17-22.
63. **Bidelman, G. M.** (2016). Relative contribution of envelope and fine structure to the subcortical encoding of noise-degraded speech. *Journal of the Acoustical Society of America*, 140(4), EL358-363.
64. *Hutka, S., Carpentier, S., **Bidelman, G. M.**, Moreno, S., & McIntosh, A. R. (2016). Musicianship and tone language are associated with differential changes in brain signal variability. *Journal of Cognitive Neuroscience*, 28(12), 2044-2058.
65. **Bidelman, G. M.** (2016). Musicians have enhanced audiovisual multisensory binding: Experience-dependent effects in the double-flash illusion. *Experimental Brain Research*, 234(10), 3037-3047.
66. **Bidelman, G. M.** & Patro, C. (2016). Auditory perceptual restoration and illusory continuity correlates in the human brainstem. *Brain Research*, 1646, 84-90.
67. *Chung, W.-L. & **Bidelman, G. M.** (2016). Cortical encoding and neurophysiological tracking of English stress patterns in native and nonnative speakers. *Brain and Language*, 156-156, 49-57.
68. **Bidelman, G. M.** & Bhagat, S. P. (2016). Objective detection of auditory steady-state evoked potentials based on mutual information. *International Journal of Audiology*, 55(5), 313-319.
69. **Bidelman, G. M.**, Nelms, C., & Bhagat, S. P. (2016). Musical experience sharpens human cochlear tuning. *Hearing Research*, 335, 40-46.
70. **Bidelman, G. M.** & Howell, M. (2016). Functional changes in inter- and intra-hemispheric auditory cortical processing underlying degraded speech perception. *NeuroImage*, 124, 581-590.
71. Cousineau, M., **Bidelman, G. M.**, Peretz, I., & Lehmann, A. (2015). On the relevance of natural stimuli for the study of brainstem correlates: The example of consonance perception. *PLoS One*, 10(12), e0145439.
72. Rose, N. S., Rendell, P. G., Hering, A., Kliegel, M., **Bidelman, G. M.**, Craik, F. I. M. (2015). Cognitive and neural plasticity in older adults' prospective memory following training with the virtual week computer game. *Frontiers in Human Neuroscience*, 9(592), 1-13.
73. **Bidelman, G. M.**, Jennings, S. G., & Strickland, E. A. (2015). PsyAcoustX: A flexible MATLAB® package for psychoacoustics research. *Frontiers in Psychology*, 6(1498), 1-11.
74. **Bidelman, G. M.** & Chung, W.-L. (2015). Tone-language speakers show hemispheric specialization and differential cortical processing of contour and interval cues for pitch. *Neuroscience*, 305, 384-392.
75. **Bidelman, G. M.** (2015). Sensitivity of the cortical pitch onset response to height, time-variance, and directionality of dynamic pitch. *Neuroscience Letters*, 603, 89-93.
76. **Bidelman, G. M.** & Lee, C.-C. (2015). Effects of language experience and stimulus context on the neural organization and categorical perception of speech. *NeuroImage*, 120, 191-200.
77. **Bidelman, G. M.** & Bhagat, S. P. (2015). Right ear advantage drives the link between olivocochlear efferent "antimasking" and speech-in-noise listening benefits. *NeuroReport*, 26, 483-487.
78. *Hutka, S., **Bidelman, G. M.**, & Moreno, S. (2015). Pitch expertise is not created equal: Cross-domain effects of music and tone language experience on neural and behavioural discrimination of speech and music. *Neuropsychologia*, 71, 52-63.
79. **Bidelman, G. M.** (2015). Multichannel recordings of the human brainstem frequency-following response: Scalp topography, source generators, and distinctions from the transient ABR. *Hearing Research*, 323, 68-80.
80. **Bidelman, G. M.** & Dexter, L. (2015). Bilinguals at the "cocktail party": Dissociable neural activity in auditory-linguistic brain regions reveals neurobiological basis for nonnative listeners' speech-in-noise recognition deficits. *Brain and Language*, 143, 32-41.
81. *†Weiss, M. W. & †**Bidelman, G. M.** (2015). Listening to the brainstem: Musicianship enhances intelligibility of subcortical representations for speech. *Journal of Neuroscience*, 35(4), 1687-1691.

82. **Bidelman, G. M.** & Alain, C. (2015). Musical training orchestrates coordinated neuroplasticity in auditory brainstem and cortex to counteract age-related declines in categorical vowel perception. *Journal of Neuroscience*, 35(3), 1240–1249. [Press: CBS News, *The Washington Post*, *National Post*]
83. **Bidelman, G. M.** (2015). Towards an optimal paradigm for simultaneously recording cortical and brainstem auditory evoked potentials. *Journal of Neuroscience Methods*, 241, 94-100.
84. **Bidelman, G. M.** & Alain, C. (2015). Hierarchical neurocomputations underlying concurrent sound segregation: Connecting periphery to percept. *Neuropsychologia*, 68, 38–50.
85. **Bidelman, G. M.** (2015). Induced neural beta oscillations predict categorical speech perception abilities. *Brain and Language*, 141, 62-69.
86. *Bashivan, P., **Bidelman, G. M.**, & Yeasin, M. (2014). Spectrotemporal dynamics of the EEG during working memory encoding and maintenance predicts individual behavioral capacity. *European Journal of Neuroscience*, 40(12), 3774–3784.
87. Arsenault, J., He, Y., **Bidelman, G. M.**, & Alain, C. (2014). The impact of context on the perceptual organization of speech. *Journal of the Canadian Acoustical Association*, 42(3), 72-73.
88. **Bidelman, G. M.**, Villafuerte, J. W., & Moreno, S., & Alain, C. (2014). Age-related changes in the subcortical-cortical encoding and categorical perception of speech. *Neurobiology of Aging*, 35(11), 2526-2540.
89. **Bidelman, G. M.** & Grall, J. (2014). Functional organization for musical consonance and tonal pitch hierarchy in human auditory cortex. *NeuroImage*, 101, 204-214.
90. **Bidelman, G. M.** (2014). Objective information-theoretic algorithm for detecting brainstem evoked responses to complex stimuli. *Journal of the American Academy of Audiology*, 25(8), 711-722.
91. **Bidelman, G. M.**, Weiss, M. W., & Moreno, S., & Alain, C. (2014). Coordinated plasticity in brainstem and auditory cortex contributes to enhanced categorical speech perception in musicians. *European Journal of Neuroscience*, 40, 2662-2673.
92. **Bidelman, G. M.**, Schug, J. M., Jennings, S. G., & Bhagat, S. P. (2014). Psychophysical auditory filter estimates reveal sharper cochlear tuning in musicians. *Journal of the Acoustical Society of America*, 136(1), EL33-39.
93. **Bidelman, G. M.** & Syed Khaja, A. (2014). Spectrotemporal resolution tradeoff in auditory processing as revealed by human auditory brainstem responses and psychophysical indices. *Neuroscience Letters*, 572, 53-57.
94. Moreno, S. & **Bidelman, G. M.** (2014). Examining neural plasticity and cognitive benefit through the unique lens of musical training. *Hearing Research*, 308, 84-97. [invited paper for special issue “*Music: A window into the hearing brain*”; Top 25 most downloaded articles from *Hearing Research* (April 2016)]
95. Trainor, L. J., Marie, C., Bruce, I. C., & **Bidelman, G. M.** (2014). Explaining the high voice superiority effect in polyphonic music: Evidence from cortical evoked potentials and peripheral auditory models. *Hearing Research*, 308, 60-70. [invited paper for special issue “*Music: A window into the hearing brain*”]
96. Alain, C., Zendel, B. R., Hutka, S., & **Bidelman, G. M.** (2014). Turning down the noise: The benefit of musical training on the aging auditory brain. *Hearing Research*, 308, 162-173. [invited paper for special issue “*Music: A window into the hearing brain*”]
97. *Hutka, S., **Bidelman, G. M.**, & Moreno, S. (2013). Brain signal variability as a window into the bidirectionality between music and language processing: Moving from a linear to a nonlinear model. *Frontiers in Psychology*, 4(984), 1-11.
98. *Hutka, S. A., Binns, M. A., **Bidelman, G. M.**, & Alain, C. (2013). Age-related differences in the sequential organization of speech sounds. *Journal of the Acoustical Society of America*, 133(6), 4177–4187.
99. **Bidelman, G. M.**, Moreno, S., & Alain, C. (2013). Tracing the emergence of categorical speech perception in the human auditory system. *NeuroImage*, 79(1), 201-212.

100. **Bidelman, G. M.** (2013). The role of the auditory brainstem in processing musically-relevant pitch. *Frontiers in Psychology*, 4(264), 1-13. [invited paper for research topic on “*The Musical Brain*”]
101. **Bidelman, G. M.**, Hutka, S., & Moreno, S. (2013). Tone language speakers and musicians share enhanced perceptual and cognitive abilities for musical pitch: Evidence for bidirectionality between the domains of language and music. *PLoS One*, 8(4), e60676. [Press: *New York Times*, *Huffington Post*, *Globe & Mail*] [In June 2017, among the top 10% of most cited papers among >150K articles published in *PLoS One*]
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1. Rizzi, R. & Bidelman, G. M. (2023). Duplex perception reveals brainstem auditory representations are modulated by listeners' ongoing percept for speech. Poster presented at the *46th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, Orlando, FL, Feb. 11-15, 2023.
2. He, D., Buder, E. H., & Bidelman, G. M. (2022). Rate synchronization reveals a corresponding syllable rhythm in brain oscillations and speech productions. Poster presented at the *14th Annual Meeting of the Society for the Neurobiology of Language (SNL 22)*, Philadelphia, PA, Oct. 6-8, 2022.
3. Brown, J. A. & Bidelman, G. M. (2022). The familiarity of background music modulates the cortical tracking of target speech at the cocktail party. Poster presented at the *Society for Music Perception and Cognition (SMPC 22)*, Portland, OR, Aug. 4-7, 2022.
4. *Momtaz, S., Moncrieff, D., Ray, M.A., & Bidelman, G. M. (2022). Children with amblyaudia show less flexibility in auditory cortical entrainment to periodic non-speech sounds. Poster presented at the *182nd Meeting of the Acoustical Society of America*, Denver, CO, May 24, 2022.
5. *Huber, R., Johnson, J., & Bidelman, G. M. (2022). Decision-making factors impacting sound acceptability judgements by young typical hearers. Poster presented at *Annual Meeting of the American Auditory Society (AAS)*, Scottsdale, AZ, Feb. 24-26, 2022.
6. *Momtaz, S. & Bidelman, G. M. (2022). Effects of stimulus rate and periodicity on auditory cortical entrainment and their relation to speech rhythms. Poster presented at *Annual Meeting of the American Auditory Society (AAS)*, Scottsdale AZ, Feb. 24-26, 2022.
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11. *Brown, J. A. & Bidelman, G. M. (2021). Song properties and familiarity affect speech recognition in musical noise. Talk presented at the *16th International Conference on Music Perception and Cognition (ICMPC)*, University of Sheffield, UK, July 28-31, 2021.
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13. Iannaccone, A., Brewer, C. C., Duncan, J. L., Cheng, P., Maguire, M. G., Audo, I., Ayala, A. R., Bernstein, P., Bidelman, G., Cheetham, J. K., Doty, R., Durham, T. A., Hufnagel, R. B., Myers, M., Wadih Zein for the Foundation Fighting Blindness Consortium Investigator Group. (2021). Auditory and olfactory findings from the Rate of Progression of USH2A-related Retinal Degeneration (RUSH2A).

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22. *Mankel, K. & Bidelman, G. M. (2020). Neural correlates of successful auditory category learning. Poster presented at *Advances and Perspectives in Auditory Neuroscience (APAN 2020)*, Virtual conference, October 22-23, 2020.
23. Price, C. N. & Bidelman, G. M. (2020). Attention reinforces hierarchical speech-in-noise processing by mitigating noise effects. Poster presented at *Advances and Perspectives in Auditory Neuroscience (APAN 2020)*, Virtual conference, October 22-23, 2020.
24. Lewis, G., Pearson, C., Harrison, A., & Bidelman, G. M. (2020). Neural correlates of context-dependent lexical bias (Ganong effect) on categorical speech perception. Poster presented at the *43rd Annual MidWinter Meeting of the Association for Research in Otolaryngology*, San Jose, CA, Jan. 24-29, 2020.
25. Lewis, G., Pearson, C., Harrison, A., & Bidelman, G. M. (2020). Neural correlates of speech categorization in auditory and visual modalities. Poster presented at the *43rd Annual MidWinter Meeting of the Association for Research in Otolaryngology*, San Jose, CA, January 24-29, 2020.
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33. *Barber, J., *Mankel, K., & Bidelman, G. M. (2019). Individual differences in listening skills modulate the auditory categorical processing of speech and music. Poster presented at the *49th Annual Mid-South Conference on Communicative Disorders*, Memphis, TN, Feb. 21-22, 2019.
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36. *Yoo, J. & Bidelman, G. M. (2019). Linguistic, perceptual, and cognitive factors underlying musicians' benefits in noise-degraded speech perception. Poster presented at the *49th Annual Mid-South Conference on Communicative Disorders*, Memphis, TN, Feb. 21-22, 2019.
37. *Price, C. N., Bidelman, G. M., Shen, D., Arnott, S., & Alain, C. (2019). Afferent-efferent connectivity between auditory brainstem and cortex accounts for poorer speech-in-noise comprehension in older adults. Poster presented at the *42th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, Baltimore, MD, February 9-13, 2019.
38. Bidelman, G. M. (2019). Neural correlates of enhanced audiovisual processing in the bilingual brain. Poster presented at the *42th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, Baltimore, MD, February 9-13, 2019.
39. Bidelman, G. M., Bush, L., Boudreaux, A., & Sigley, L. (2019). Audiovisual cues influence the categorical perception of clear and degraded speech. Poster presented at the *42th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, Baltimore, MD, February 9-13, 2019.
40. *Yoo, J. & Bidelman, G. M. (2019). Linguistic, perceptual, and cognitive factors underlying musicians' benefits in noise-degraded speech perception. Poster presented at the *42th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, Baltimore, MD, February 9-13, 2019.
41. *Mankel, K., Barber, J., & Bidelman, G. M. (2019). Individual differences in listening skills modulate the auditory categorical processing of speech and music. Poster presented at the *42th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, Baltimore, MD, February 9-13, 2019.
42. *Khatun, S., Morshed, B. I., & Bidelman, G. M. (2018). Regression based automated scoring technique of mild cognitive impairment (MCI) severity using single channel EEG measures with auditory stimulus. *Proceedings of the 40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'18)*, Honolulu, HI, July 17-21, 2018.
43. *Yoo, J. & Bidelman, G. M. (2018). Linguistic, perceptual, and cognitive factors underlying musicians' benefits in noise-degraded speech perception. Poster presented at the *17th Annual Auditory Perception, Cognition and Action Meeting (APCAM 2018)*, New Orleans, LA, November 15, 2018.
44. Lee, S., Mendel, L.L., & Bidelman, G. M. (2018). Predicting speech recognition using the speech

intelligibility index (SII) for cochlear implantees. Poster presented at the *Annual American Academy of Audiology Convention (AAA 2018)*, Nashville, TN, April 18-21, 2018.

45. *Brown, B., Mankel, K., & Bidelman, G. M. (2018). Behavioral and physiological pupil responses reveal multimodal (audiovisual) noise differentially challenges speech recognition. Poster presented at the *48th Annual Mid-South Conference on Communicative Disorders*, Memphis, TN, Feb. 22-23, 2018.
46. *Powers, L. & Bidelman, G. M. (2018). Response properties of the human frequency-following response (FFR) to tones and speech: Level dependence, adaptation, and phase-locking limits. Poster presented at the *48th Annual Mid-South Conference on Communicative Disorders*, Memphis, TN, Feb. 22-23, 2018.
47. *Davis, M.K. & Bidelman, G. M. (2018). Subcortical and cortical neural encoding of speech is differentially challenged by noise and reverberation. Poster presented at the *48th Annual Mid-South Conference on Communicative Disorders*, Memphis, TN, February 22-23, 2018.
48. *Yellamsetty, A. & Bidelman, G. M. (2018). Dissociable mechanisms of concurrent speech segregation in noise at subcortical levels. Poster presented at the *Annual Meeting of the American Auditory Society (AAS)*, Scottsdale, AZ, March 1–3, 2018.
49. *Yellamsetty, A. & Bidelman, G. M. (2018). Low- and high-frequency cortical brain oscillations reflect dissociable mechanisms of concurrent speech segregation in noise. Poster presented at the *41th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, San Diego, CA, February 9-14, 2018.
50. Bidelman, G. M. & Heath, S. T. (2018). Enhanced temporal binding of audiovisual information in the bilingual brain. Poster presented at the *41th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, San Diego, CA, February 9-14, 2018.
51. Bidelman, G. M., Brown, B., Mankel, K. (2018). Behavioral and physiological pupil responses reveal multimodal (audiovisual) noise differentially challenges speech recognition. Poster presented at the *41th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, San Diego, CA, February 9-14, 2018.
52. Bidelman, G. M. & Powers, L. (2018). Response properties of the human frequency-following response (FFR) to tones and speech: Level dependence, adaptation, and phase-locking limits. Poster presented at the *41th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, San Diego, CA, February 9-14, 2018.
53. Bidelman, G. M. (2018). Relative contributions of auditory nerve, brainstem, and cortical generators to the auditory frequency-following response revealed by EEG. Poster presented at the *41th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, San Diego, CA, Feb. 9-14, 2018.
54. Bidelman, G. M., Knapp, J., Heitzmann, V. R., & Bhagat, S. P. (2018). Brainstem correlates of cochlear nonlinearity measured via frequency-following responses (FFRs): A neural marker of “hidden hearing loss” or individual variation in central auditory processing? Poster presented at the *41th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, San Diego, CA, February 9-14, 2018.
55. Bidelman, G. M., Howell, M., & Davis, M.K. (2018). Subcortical and cortical neural encoding of speech is differentially challenged by noise and reverberation. Poster presented at the *41th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, San Diego, CA, February 9-14, 2018.
56. *Mankel, K. & Bidelman, G. M. (2018). Nonmusicians with innate musicality exhibit enhanced subcortical encoding of speech. Poster presented at the *41th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, San Diego, CA, February 9-14, 2018.
57. Bidelman, G. M. & McElwain, C. (2018). Objective detection of auditory steady-state responses based on mutual information: Receiver operating characteristics and validation across modulation rates and levels. Poster presented at the *41th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, San Diego, CA, February 9-14, 2018.
58. *Yoo, H., Bidelman, G. M., Buder, E., van Mersbergen, M., & Oller, K. (2017). Differentiating infant cry from non-cry vocalizations based on negativity perception and acoustic features. Poster presented at the *173^d Meeting of the Acoustical Society of America*, Boston, MA, June 25-29, 2017.

59. Chung, W.-L., Jarmulowicz, L., & Bidelman, G. M. (2017). Amplitude envelope onset, native prosodic and phonological awareness, and nonnative word learning. Paper presented as part of the Symposium on The Secret Life of Suprasegmentals at the *24th Annual Meeting of the Society for the Scientific Study of Reading*, Halifax, Nova Scotia, Canada, July 12–15, 2017.
60. *Yellamsetty, A. & Bidelman, G. M. (2017). Induced cortical brain oscillations underlying concurrent speech segregation in noise. Poster presented at the *Annual Meeting of the American Auditory Society (AAS)*, Scottsdale, AZ, March 2–4, 2017.
61. Bidelman, G. M., Lowther, J., Tak, S., & Alain, C. (2017). Mild cognitive impairment is characterized by deficient hierarchy of speech coding between auditory brainstem and cortex. Poster presented at the *40th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, Baltimore, MD, February 11-15, 2017.
62. Bidelman, G. M., Fehrenbach, A., & Yellamsetty, A. (2017). Noise and pitch interact during the cortical segregation of concurrent speech sounds. Poster presented at the *40th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, Baltimore, MD, February 11-15, 2017.
63. Bidelman, G. M. & Lee, S. (2017). Objective identification of simulated cochlear implant settings in normal-hearing listeners via auditory cortical evoked potentials. Poster presented at the *40th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, Baltimore, MD, February 11-15, 2017.
64. Bidelman, G. M., Pousson, M., Dugas, C., & Fehrenbach, A. (2017). Test-retest reliability across brainstem and cortical classes of the auditory evoked potentials. Poster presented at the *40th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, Baltimore, MD, February 11-15, 2017.
65. Bidelman, G. M., Schneider, A., Heitzmann, V., & Bhagat, S. (2017). Musicianship enhances monaural and binaural efferent gain control to the cochlea. Poster presented at the *40th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, Baltimore, MD, February 11-15, 2017.
66. Bidelman, G. M. (2017). Musicians have enhanced audiovisual multisensory binding: Experience-dependent effects in the double-flash illusion. Poster presented at the *40th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, Baltimore, MD, February 11-15, 2017.
67. *Yoo, H. & Bidelman, G. M. (2016). Nonparent perception of infant cry and whine. Poster presented at the *American Speech-Language-Hearing Association Annual Convention*, Philadelphia, PA, November 17-19, 2016.
68. Bidelman, G. M., Nelms, C., & Bhagat, S. P. (2016). Musical experience sharpens human cochlear tuning. Poster presented at the *39th Annual MidWinter Meeting of the Association for Research in Otolaryngology*, San Diego, CA, February 20-24, 2016.
69. Bidelman, G. M. & Grall, J. (2015). Functional organization for musical consonance and tonal pitch hierarchy in human auditory cortex. Poster presented at the *Society for Music Perception and Cognition (SMPC 2015)*, Nashville, TN, August 1-5, 2015.
70. Myers, M. H., Albarran, D., Dobbins, A., Joure, C., Canales, A., & Bidelman, G.M. (2015). Induced audio/visual cortical remapping via looming stimulus. *Investigative Ophthalmology & Visual Science*, 56(7), 2929.
71. *Chung, W.-L., Jarmulowicz, L., & Bidelman, G. M. (2015). Auditory processing, linguistic prosody awareness, and word reading in Mandarin-English bilingual children. Paper presented as part of Symposium on “New Investigations into Suprasegmental Phonology and Reading” at the *22nd Annual Meeting of the Society for the Scientific Study of Reading*, Big Island, HI, July 15–18, 2015.
72. *Hutka, S., Carpentier, S., Bidelman, G. M., & McIntosh, R. (2015). Using brain signal variability to examine how music and speech shape auditory processing. Poster presented at the *Organization for Human Brain Mapping*, Honolulu, HI, June 2015.
73. *Hutka, S., Carpentier, S., Bidelman, G. M., & McIntosh, R. (2015). Using brain signal variability to examine how music and speech shape auditory processing. Poster presented at the *Brain Connectivity Workshop*, San Diego, CA, June 2015.

74. Bidelman, G. M. & Chung, W. (2015). Tone-language speakers show hemispheric specialization and differential cortical processing of contour and interval cues for pitch. Poster presented at the *22nd Annual meeting of the Cognitive Neuroscience Society*, San Francisco, CA, March 28–31, 2015.
75. *Chung, W. & Bidelman, G. M. (2015). Cortical encoding and neurophysiological tracking of English stress patterns in native and nonnative speakers. Poster presented at the *22nd Annual meeting of the Cognitive Neuroscience Society*, San Francisco, CA, March 28–31, 2015.
76. Bidelman, G. M. & Bhagat, S. P. (2015). Right ear advantage drives the link between olivocochlear efferent “antimasking” and speech-in-noise listening benefits. Poster presented at the *38th Annual meeting of the Association for Research in Otolaryngology*, Baltimore, MD, February 21–25, 2015.
77. Bidelman, G. M. (2015). Multichannel recordings of the human brainstem frequency-following response: Scalp topography, source generators, and distinctions from the transient ABR. Poster presented at the *38th Annual meeting of the Association for Res. in Otolaryngology*, Baltimore, MD, Feb. 21–25, 2015.
78. Bidelman, G. M. & Alain, C. (2015). Musical training orchestrates coordinated neuroplasticity in auditory brainstem and cortex to counteract age-related declines in categorical speech perception. Poster presented at the *38th Annual meeting of the Association for Research in Otolaryngology*, Baltimore, MD, February 21–25, 2015.
79. *Chung, W. & Bidelman, G. M. (2015). Tone-language speakers show hemispheric specialization and differential cortical processing of contour and interval cues for pitch. Poster presented at the *38th Annual meeting of the Association for Research in Otolaryngology*, Baltimore, MD, February 21–25, 2015.
80. *Hutka, S., Bidelman, G. M., & Moreno, S. (2014). Is the cognitive stimulation of music training specific to music? Poster presented at the *Neuroscience and Music V – Cognitive Stimulation and Rehabilitation Society*, Dijon, France, May 29–June 1, 2014.
81. Cousineau, M., Bidelman, G. M., Peretz, I., & Lehmann, A. (2014). Dissonance and the brainstem: Insights from natural stimuli and congenital amusia. Poster presented at the *Neuroscience and Music V – Cognitive Stimulation and Rehabilitation Society*, Dijon, France, May 29–June 1, 2014.
82. *Bashivan, P., Bidelman, G. M., & Yeasin, M. (2014). Predicting working memory capacity using spectro-temporal characteristics of the oscillatory EEG. Poster presented at the *21st Annual meeting of the Cognitive Neuroscience Society*, Boston, MA, April 5–8, 2014.
83. Bidelman, G. M., Villafuerte, J. W., & Moreno, S., & Alain, C. (2014). Age-related changes in subcortical-cortical encoding and categorical perception of speech. Poster presented at the *37th Annual meeting of the Association for Research in Otolaryngology*, San Diego, CA, February 2014.
84. *Syed Khaja, A. S. & Bidelman, G. M. (2014). Brainstem correlates of temporal-spectral resolution tradeoff in the human auditory system. Poster presented at the *37th Annual meeting of the Association for Research in Otolaryngology*, San Diego, CA, February 2014.
85. Moreno, S., Lee, Y., Bidelman, G. M., Moussard, A., & Alain, C. (2013). Cognitive benefits of music and art training in healthy older adults. Poster presented at the *20th Annual meeting of the Cognitive Neuroscience Society*, San Francisco, CA, April 13–16, 2013.
86. Bidelman, G. M., Moreno, S., Lee, Y., Moussard, A., & Alain, C. (2013). Short-term musical training enhances pre-attentive auditory processing in older adults. Poster presented at the *20th Annual meeting of the Cognitive Neuroscience Society*, San Francisco, CA, April 13–16, 2013.
87. Moreno, S., Lee, Y., Bidelman, G. M., Moussard, A., & Alain, C. (2013). Cognitive benefits of music and art training in healthy older adults. Poster presented at the *2nd Meeting of the Entertainment Software and Cognitive Neurotherapeutics Society*, Los Angeles, CA, March 15–17, 2013.
88. Bidelman, G. M., Moreno, S., Lee, Y., Moussard, A., & Alain, C. (2013). Short-term musical training enhances pre-attentive auditory processing in older adults. Poster presented at the *2nd Meeting of the Entertainment Software and Cognitive Neurotherapeutics Society*, Los Angeles, CA, March 15–17, 2013.
89. Moreno, S., Lee, Y., Bidelman, G. M., Moussard, A., & Alain, C. (2013). Cognitive benefits of music and art training in healthy older adults. Talk presented at the *Baycrest 23rd Annual Neuroscience Conference: Brain Plasticity & Neurorehabilitation*, Toronto, ON, Canada, March 3–6, 2013.

90. Bidelman, G. M., Weiss, M. W., Moreno, S., & Alain, C. (2013). Musical training strengthens the subcortical-cortical encoding and categorical perception of speech. Poster presented at the *36th Annual meeting of the Association for Research in Otolaryngology*, Baltimore, MD, February 16–20, 2013.
91. Bidelman, G. M., Moreno, S., Lee, Y., Moussard, A., & Alain, C. (2013). Enhanced pre-attentive auditory processing following short-term musical training in older adults. Poster presented at the *41st Meeting of International Neuropsychological Society*, Waikoloa, HI, February 6–9, 2013.
92. Moreno, S., Lee, Y., Bidelman, G. M., Moussard, A., & Alain, C. (2013). Cognitive benefits of music and art training in healthy older adults. Poster presented at the *41st Meeting of International Neuropsychological Society*, Waikoloa, HI, February 6–9, 2013.
93. *Hutka, S., Bidelman, G. M., Moreno, S. (2012). Evidence for bidirectionality in music-to-language transfer effects. Poster presented at the *42nd Annual Meeting of the Society for Neuroscience*, New Orleans, LA, October 13–17, 2012.
94. Kuhn-Popp, N., Herring, A., Rose, N., Craik, F., Rendell, P.G., Moreno, S., Bidelman, G.M., & Kliegel, M. (2012) Virtual-Week Training: A process-oriented training program to improve prospective memory performance in older adults. Poster presented at the *48th Congress of the German Society for Psychology*, Bielefeld, Germany, September 23–27, 2012.
95. Rose, N.S., Craik, F.M., Hering, A., Rendell, P. G., Moreno, S., Bidelman, G. M., & Kliegel, M. (2012) Differential predictors of prospective memory performance in old age: Laboratory and naturalistic tasks are associated with different cognitive processes. Poster presented at the *Cognitive Aging Conference*, Atlanta, GA, April 19–22, 2012.
96. Rose, N. S., Craik, F. I. M., Hering, A., Rendell, P., Moreno, S., Bidelman, G., & Kliegel, M. (2012). Training older adults' prospective memory with the Virtual Week video game. Poster presented at the *Cognitive Aging Conference*, Atlanta, GA.
97. Bidelman, G. M. (2012). Objective information-theoretic algorithm for detecting brainstem evoked responses to complex stimuli. Poster presented at the *35th Annual meeting of the Association for Research in Otolaryngology*, San Diego, CA, February 25–29, 2012.
98. Ananthakrishnan, S., Krishnan, A., Smalt, C.J., & Bidelman, G. M. (2012). Brainstem-level Temporal Fine Structure Encoding in Cochlear Hearing Loss. Poster presented at the *35th Annual meeting of the Association for Research in Otolaryngology*, San Diego, CA, February 25–29, 2012.
99. Krishnan, A., Smalt, C. J., Bidelman, G. M., Ananthakrishnan, S., & Gandour, J. T. (2012). Evaluation of Pitch Representations Measured Concurrently in Auditory Brainstem and Cortex, and Their Relationship to Behavioral Measures of Pitch Salience. Poster presented at the *35th Annual meeting of the Association for Research in Otolaryngology*, San Diego, CA, February 25–29, 2012.
100. Bidelman, G. M., & Heinz, M.G. (2011). Auditory-nerve responses predict pitch attributes related to musical consonance and dissonance for normal and impaired hearing. Poster presented at the *34th Annual meeting of the Association for Research in Otolaryngology*, Baltimore, MD, February 19–23, 2011.
101. Bidelman, G. M., Krishnan, A., & Gandour, J. T. (2011). Enhanced brainstem pitch encoding in tone-language speakers does not translate to perceptual benefits for music. Poster presented at the *34th Annual meeting of the Association for Research in Otolaryngology*, Baltimore, MD, Feb. 19–23, 2011.
102. Ananthakrishnan, S., Krishnan, A., Gandour, J.T., Bidelman, G.M., & Smalt, C.J. (2011). Brainstem origins of the differential hemispheric laterality for linguistic and nonlinguistic pitch. Poster presented at the *34th Annual meeting of the Association for Research in Otolaryngology*, Baltimore, MD, February 19–23, 2011.
103. Bidelman, G. M., & Heinz, M. G. (2011). Auditory-nerve responses predict pitch attributes related to musical consonance and dissonance for normal and impaired hearing. Poster presented at the *Sigma Xi Graduate Student Research Awards Competition*, Purdue University, February 7, 2011.
104. Bidelman, G. M., Krishnan, A., & Gandour, J. T. (2010). Neural representation of pitch salience in the human brainstem revealed by psychophysical and electrophysiological indices. Poster presented at the *33rd Annual meeting of the Association for Research in Otolaryngology*, Anaheim, CA, Feb. 6–10, 2010.

105. Bidelman, G. M., Krishnan, A., & Gandour, J. T. (2010). Brainstem pitch representation in native speakers of mandarin is less susceptible to degradation of stimulus temporal regularity. Poster presented at the 33rd Annual meeting of the Association for Research in Otolaryngology, Anaheim, CA, February 6–10, 2010.
106. Ananthakrishnan, S., Krishnan, A., & Bidelman, G. M. (2010). Human frequency following response: Differential responses to positive & negative gain of iterated rippled noise (IRN) stimuli. Poster presented at the 33rd Annual meeting of the Association for Res in Otolaryngology, Anaheim, CA, Feb. 6–10, 2010.
107. Bidelman, G. M., Krishnan, A., & Gandour, J.T. (2009). The effects of tone language experience on pitch processing in the brainstem. Poster presented at the inaugural *Neurobiology of Language Conference (NLC '09)*, Chicago, IL, October 15–16, 2009.
108. Bidelman, G. M., Gandour, J.T., & Krishnan, A. (2009). Relative influence of musical and linguistic experience on the subcortical encoding of pitch. Poster presented at the *Annual Conference of the Society for Music Perception and Cognition (SMPC '09)*, Indianapolis, IN, August 3–7, 2009.
109. Bidelman, G. M., & Krishnan, A. (2009). Subcortical correlates of consonance, dissonance, and musical pitch hierarchy in the human brainstem. Poster presented at the *Annual Conference of the Society for Music Perception and Cognition (SMPC '09)*, Indianapolis, IN, August 3–7, 2009.
110. Bidelman, G. M., Gandour, J. T., & Krishnan, A. (2009). Cross-domain effects of language and music experience on the representation of pitch in the human auditory brainstem. Poster presented at the 16th Annual meeting of the Cognitive Neuroscience Society, San Francisco, CA, March 21–24, 2009.
111. Krishnan, A., Gandour, J. T., Bidelman, G. M., & Swaminathan, J. (2009). Experience-dependent neural representation of dynamic pitch in the brainstem. Poster presented at the *American Auditory Society Annual Meeting*, Scottsdale, AZ, March 5–7, 2009.

Other publications (non-peer reviewed)

1. Bidelman, G. M. Price, C. N., Mahmud, S., & Yeasin, M. (2020). Decoding hearing loss from brain signals. *The Hearing Journal*, 73(11), 42-45. (invited)
2. Bidelman, G. M. (Ed.) (2018; 2020). Research in Communication Sciences and Disorders, University of Memphis publication, pp.1-28. ([link](#))
3. Bidelman, G. M. & Alain, C. (2017). Auditory biomarker identified for early cognitive impairment. *The Hearing Journal*, 70(5), 18-20. (invited)
4. Bidelman, G. M. (2015). Musicianship for promoting brain health and perceptual-cognitive skills across the lifespan. *Health Naturally Magazine*, May Issue, 49-57.

Books

Rardin, P., Bidelman, G., Smith, C., & Bagaglia, E. (Eds.). (2010). *Sing to the Colors: The University of Michigan Songbook*. Ann Arbor, MI: Edwards Brothers.

Software

1. Moinuddin, K. A., Yeasin, M., & Bidelman, G. M. (2019). BrainO software (Version 1.0.3). Retrieved from <https://github.com/cvpia-uofm/BrainO>
2. Bidelman, G. M., Jennings, S. & Strickland, B. (2015). PsyAcoustX: A flexible MATLAB® package for psychoacoustics research (v1). Retrieved from <https://sites.google.com/site/psyacoustx/>

Doctoral dissertation

Bidelman, G. M. (2011). Neural correlates of musical and linguistic pitch as revealed in the auditory brainstem (Order No. 3475478, Purdue University). *ProQuest Dissertations and Theses*, 174.

Video

Bidelman, G. M. (Producer), (2008). *Hearing conservation: Protecting your ears against harmful sound* [DVD]. Produced for OSHA hearing screenings for the Purdue University Speech and Hearing Clinic.

Presentations

Conference talks (invited)

1. Bidelman, G. M. (2021). "Unraveling the impact of auditory aging on speech processing via concurrent brainstem and cortical evoked potentials," XXVII Biennial Symposium of the International Evoked Response Audiometry Study Group (IERASG), Cologne, Germany, June 20-24, 2021. [**Keynote lecture**]
2. Bidelman, G. M. (2021). "The impact of musicianship on the neural processing of speech across the lifespan," Neurosciences and Music – VII: Connecting with music across the lifespan, Aarhus, Denmark, June 18-21, 2021.
3. Bidelman, G. M. (2019). "Brain Benefits of Music: Spotlight on Aging," 15th Annual NeuroMusic, McMaster University, Hamilton, ON, Canada, November 9, 2019. [**Keynote speaker**]
4. Bidelman, G. M. (2018). "Relative contributions of auditory nerve, brainstem, and cortical generators to the auditory frequency-following response revealed by EEG," 58th Annual Meeting of the Society for Psychophysiological Research (SPR), Quebec City, Quebec, Canada, October 3-7, 2018.
5. Bidelman, G. M. (2017). "Age- and training-related plasticity in the auditory neural processing of speech: Connecting periphery to percept," 47th Annual Mid-South Conference on Communicative Disorders, Memphis, TN, February 16, 2017.
6. Bidelman, G. M. (2016). "Age- and training-related plasticity in the auditory neural processing of speech: Connecting periphery to percept," 33rd World Congress of Audiology, Vancouver, Canada, September 18-21, 2016.
7. Bidelman, G. M. & Howell, M. (2016). "Functional changes in inter- and intra-hemispheric cortical processing underlying degraded speech perception," 39th Annual MidWinter Meeting of the Association for Research in Otolaryngology, San Diego, CA, February 20-24, 2016.
8. Bidelman, G. M. (2015). "Neurophysiological origins of consonance, dissonance, and the hierarchy of musical pitch," Society for Music Perception and Cognition (SMPC 2015), Nashville, TN, August 1-5, 2015.
9. Bhagat, S. & Bidelman, G. M. (2014). "Optimizing otoacoustic emissions as biomarkers for hormone regulation in healthy women," American Speech-Language-Hearing Association Annual Convention, Orlando, FL, November 20-22, 2014.
10. Alain, C. & Bidelman, G. M. (2013). "Neurocomputation underlying sound segregation: From periphery to percept," 53rd Annual Meeting of the Society for Psychophysiological Research (SPR), Florence, Italy, October 2-6, 2013.
11. Bidelman, G. M., Weiss, M. W., Moreno, S., & Alain, C. (2013). "Musical training strengthens the subcortical-cortical encoding and categorical perception of speech," Society for Music Perception and Cognition (SMPC 2013), Toronto, ON, Canada, August 8–11, 2013.
12. Moreno, S., Lee, Y., Bidelman, G. M., Moussard, A., & Alain, C. (2013). "Cognitive benefits of music and art training in healthy older adults," Society for Music Perception and Cognition (SMPC 2013), Toronto, ON, Canada, August 8–11, 2013.
13. Marie, C., Bidelman, G. M., Bruce, I. C., & Trainor, L. (2013). "Investigating the origin of the high voice superiority effect in music," Society for Music Perception and Cognition (SMPC 2013), Toronto, ON, Canada, August 8–11, 2013.
14. Hutka, S., Bidelman, G. M., & Moreno, S. (2013). "On the bidirectionality of music-to-language transfer effects," Society for Music Perception and Cognition (SMPC 2013), Toronto, ON, Canada, August 8–11, 2013.
15. Bidelman, G. M. (2013). "The effects of music/language expertise on subcortical plasticity, auditory perceptual abilities, and cognitive transfer," 36th Annual meeting of the Association for Research in Otolaryngology, Baltimore, MD, February 2013.
16. Bidelman, G. M., & Alain, C. (2013). "Hierarchical neurocomputations underlying concurrent sound segregation: Connecting periphery to percept," 36th Annual meeting of the Association for Research in Otolaryngology, Baltimore, MD, February 2013.

17. Bidelman, G. M. (2012). "Translating art to science: Music induced benefits to human cognition," *Inaugural Brain Power Conference*, Toronto, ON, May 3–4, 2012.

Other talks and seminars (invited)

1. Bidelman, G. M. (2021). "Unraveling the impact of auditory aging on speech processing via a systems level neuroimaging approach," Indiana University, SLHS Colloquium, April 9, 2021.
2. Bidelman, G. M. (2020). "Unraveling the impact of auditory aging on speech processing via a systems level neuroimaging approach," University of Iowa, January 31, 2020.
3. Bidelman, G. M. (2020). "Unraveling the impact of auditory aging on speech processing via a systems level neuroimaging approach," University of Utah Division of Otolaryngology, Inner Ear Seminar Series, January 15, 2020.
4. Bidelman, G. M. (2020). "Unraveling the impact of auditory aging on speech processing via a systems level neuroimaging approach," University of Texas-Dallas Callier Center, January 13, 2020.
5. Bidelman, G. M. (2017). "The effects of music and tone-language experience on neuroplasticity, perceptual abilities, and cognitive transfer," Eastman School of Music, Music Cognition Symposium, Rochester, NY, November 18, 2017.
6. Bidelman, G. M. (2017). "Hierarchical auditory neural processing underlying speech perception at the cocktail party," University of Maryland, Neuroscience and Cognitive Science (NACS) Seminar, College Park, MD, October 27, 2017.
7. Bidelman, G. M. (2017). "The effects of music and tone-language experience on neuroplasticity, perceptual abilities, and cognitive transfer," Florida International University, Miami, FL, March 22, 2017.
8. Bidelman, G. M. (2016). "Minimizing noise-induced hearing loss with musicianship," University of Memphis CSD Research Colloquium, September 23, 2016.
9. Bidelman, G. M. (2016) "Experience-dependent effects in the analysis of the auditory scene," Cognitive Science Seminar, University of Memphis, September 14, 2016.
10. Bidelman, G. M. (2016). "Hierarchical auditory neural processing underlying degraded speech listening skills," University of Memphis CSD Research Colloquium, January 29, 2016.
11. Bidelman, G. M. (2015). STEM Talk: "Music and Language—Effects on the Brain," Oakton Community College, Des Plaines, IL, November 18, 2015.
12. Bidelman, G. M. (2015) "Auditory neurodynamics in "cocktail party listening," Cognitive Science Seminar, University of Memphis, September 23, 2015.
13. Walker, B., Reed, M. & Bidelman, G. M. (2015). "Investigation of Musicianship on Categorical Perception of Music and Speech Stimuli," University of Memphis Undergraduate Student Research Forum, March 30, 2015.
14. Bidelman, G. M. (2014). "Hierarchical neurocomputations underlying concurrent sound segregation: Connecting periphery to percept," University of Memphis CSD Research Colloquium, October 17, 2014.
15. Bidelman, G. M. (2014). "Categorical speech perception," A USP 8002 Speech Perception Seminar, University of Memphis, June 26, 2014.
16. Bidelman, G. M. (2014). "Auditory neural coding of speech," A USP 8002 Speech Perception Seminar, University of Memphis, June 26, 2014.
17. Hutka, S., Bidelman, G. M., & Moreno, S. (2014). "Studying the music-speech association using linear and non-linear frameworks." Invited talk given at the International Laboratory for Brain, Music and Sound Research (BRAMS) MindMeld, BRAMS, Montreal, QC, July 2014.
18. Hutka, S., Bidelman, G. M., & Moreno, S. (2013). "On the neural responses underlying bidirectionality of music-to-language transfer." Poster presented at the NSERC-Create: Auditory Cognitive Neuroscience Workshop, McMaster University, Hamilton, ON, August, 2013.

19. Hutka, S., Gordon, C., Bidelman, G. M., McIntosh, R., & Moreno, S. (2013). "The behavioural aspects of bidirectionality in music-to-language transfer." Poster presented at the NSERC-Create: Auditory Cognitive Neuroscience Workshop, McMaster University, Hamilton, ON, August, 2013.
20. Hutka, S., Bidelman, G. M., & Moreno, S. (2013, June). "The bidirectionality in music-to-language transfer effects." Poster presented at the Collaborative Program in Neuroscience Research Day/Inter, Symposium on Structural Neurobiology, University of Toronto, Toronto, ON, June, 2013.
21. Bidelman, G. M. (2013) "The neural basis of categorical speech perception," Cognitive Science Seminar, University of Memphis, April 3, 2013.
22. Bidelman, G. M. (2012) "Transfer effects between language and music: Examining the road less traveled," University of Memphis CSD Research Colloquium, October 5, 2012.
23. Bidelman, G. M. (2012) "Neurophysiological origins of consonance, dissonance, and the hierarchy of musical pitch," The Institute for Music & the Mind, McMaster University, Hamilton, ON, March 16, 2012.
24. Bidelman, G. M. (2011) "Sensory tuning to cognitive benefits: The missing link in transfer effects between music and language processing," International Laboratory for Brain, Music, and Sound Research (BRAMS), McGill University, Montreal, QC, November 30, 2011.
25. Bidelman, G. M. (2011) "The Role of the Auditory Brainstem in Speech & Music Processing," Rotman Research Institute, Baycrest Research Rounds, Toronto, ON, October 24, 2011.
26. Bidelman, G. M. (2011) "Brain-behavior connections in the encoding of music and speech: Innate and acquired effects," Center for Computer Research in Music and Acoustics (CCRMA), Stanford University, Stanford, CA, February 14, 2011.
27. Bidelman, G.M. (2010) "Subcortical correlates of consonance, dissonance, & the hierarchy of musical pitch," Purdue University Robert L. Ringel Symposium, W. Lafayette, IN, April 30, 2010.
28. Bidelman, G.M. (2008) "Influence of language and music experience on the representation of pitch in the human brainstem," Purdue University Robert L. Ringel Symposium, W. Lafayette, IN, Sept. 26, 2008.

Teaching & Mentoring

Professional development

Emerging Scientists: Train-the-trainers workshop on professional development, RCR, and inclusion 2021

Didactic courses

Graduate

Indiana University

S777 – Applied Topics in Audiology (Fa22)

S674 – PhD Seminar, Hearing Science: "Models and Mechanisms of Hearing" [Fa22 (team)]

University of Memphis

AUSP 8118 – Electrophysiologic Assessment of the Auditory System (Fa17, Fa18, Fa19, Fa20, Fa21)

AUSP 8001 – Psychoacoustics (Fa14, Fa15, Fa16, Fa17)

AUSP 8121 – Special topics: EEG time-frequency analysis (Sp21)

AUSP 8121 – Special topics: EEG source analysis (Sp21)

AUSP 8112 – Neuroimaging Applications for Speech & Hearing Science (Sp13, Sp15, Sp17)

AUSP 8017 – Digital Signal Processing for Speech/Hearing (Sp14, Sp16).

PSYC/COMP/PHIL 7514/8514 – Cognitive Science Seminar:

"Music, Language, and the Brain" (Fa13)

"The Brain Basis of Human Behavior" (Sp20)

AUSP 7130/8130 – Responsible Conduct in Research (RCR) & Scientific Ethics (Fa21)

AUSP 8021 – Professional Prep. for Scientists: Scientific Writing and Peer Review (Su19, Sp22)

AUSP 8400 – Mentored Teaching (Fa18, Fa20)

AUSP 8121 – Independent Readings/Research Projects (x4-5/term, 2012-2022)

Purdue University

SLHS 519 – Clinical Research and Treatment Efficacy (Sp10)

Undergraduate

University of Memphis

BIOM 4782 - Biomedical Design Practicum

Purdue University

SLHS 215 Exploring Audiology & Hearing Science

SLHS 304 Anatomy & Physiology of the Speech & Hearing Mechanism

SLHS 460 Language and the Brain

Mentoring, Postdocs

Jesyin Lai, PhD 2021–2022

Current position: St. Jude Postdoctoral Fellow

Karen Bell, AuD, PhD 2020–2021

Current position: Assistant Professor, San Jose State University, CSD

Caitlin Price, AuD, PhD 2020–2021

Current position: Assistant Professor, University of Arkansas, CSD

Gwyneth Lewis, PhD 2018–2020

Mentoring, PhD students – major professor and dissertation chair

Jane Brown University of Memphis, CSD 2019–

Jared Carter University of Memphis, CSD 2019–2022

Dissertation: “*Effects of nonlinear dynamics of speech categorization on cortical and brainstem responses*”

Sara Momtaz University of Memphis, CSD 2018–2022

Dissertation: “*Effects of stimulus rate and periodicity on auditory cortical entrainment and their relation to speech rhythms*”

Kelsey Mankel University of Memphis, CSD 2016–2021

Dissertation: “*Individual auditory categorization abilities are shaped by intrinsic and experience-driven neural factors*”

Current position: Postdoc, UC Davis Center for Mind & Brain

Caitlin N. Price (AuD-PhD) University of Memphis, CSD 2017–2020

Dissertation: “*Neural mechanisms underlying hierarchical speech-in-noise processing*”

Current position: Assistant Professor, University of Arkansas, CSD

Jessica Yoo University of Memphis, CSD 2017–2019 (switched to AuD)

Anusha Yellamsetty University of Memphis, CSD 2014–2018

Dissertation: “*Dissociable mechanisms of concurrent speech segregation in noise at cortical and brainstem levels*”

Current position: Assistant Professor, San Jose State University, CSD

Other mentoring, PhD student –dissertation committees (*co-chair, †external reader)

Lipika Sarangi University of Memphis, CSD 2021

Dissertation: “*An investigation of the relative impacts of hearing aid self-efficacy and personality on aspects of hearing aid success*”

Megan Battles Parsons University of Memphis, CSD 2021

Dissertation: “*Investigating speech rate alignment in individuals with traumatic brain injury*”

*Md Sultan Mahmud University of Memphis, EECE 2021

Dissertation: “*Multivariate analysis for understanding cognitive speech processing*”

Current position: Fedex (industry)

Rakib Al-Fahad University of Memphis, EECE 2020

Dissertation: “*Multivariate modeling of cognitive performance and categorical perception from neuroimaging data*”

Current position: Intel (industry)

Saleha Khatun University of Memphis, EECE 2018

Dissertation: “*Automated artifact removal and detection of mild cognitive impairment from single channel electroencephalography signals for real-time implementations on wearables*”

Current position: Cadence Design Systems, software engineer (industry)

- Shi Feng University of Memphis, Music 2018
Dissertation: “*The role of source monitoring in resolving cognitive disequilibrium on texts with controversial topics*”
Current position: Postdoc, Purdue University
- Hyunjoo Yoo University of Memphis, CSD 2016–
Dissertation: “*Reactions of adult listeners to infant distress vocalizations and protophones*”
Current position: Assistant Professor, University of Alabama
- Chia-Cheng Lee University of Memphis, CSD 2017
Dissertation: “*Vocal Development in English- and Chinese-learning infants*”
Current position: Research Assistant Professor, Portland State University
- †Christopher Slugocki McMaster University, Psychology 2017
Dissertation: “*Examining distributed change-detection processes through concurrent measurement of subcortical and cortical auditory-evoked potentials*” (Chair: Laurel Trainor)
Current position: Widex (industry)
- †Caitlin Dawson University of Helsinki, Psychology 2017
Dissertation: “*Effects of linguistic and musical experience on early auditory processing: Electrophysiological and behavioral evidence*” (Chair: Mari Tervaniemi)
- Johnnie Bass University of Memphis, CSD 2017
Dissertation: “*Auditory Function in Patients Who Received Cranial Radiation Therapy for Childhood Cancer*”
Current position: Research Audiologist, St. Jude’s Children Research Hospital
- Sungmin Lee University of Memphis, CSD 2017
Dissertation: “*Predicting Speech Recognition using the Speech Intelligibility Index (SII) for Cochlear Implant Users and Listeners with Normal Hearing*”
Current position: Assistant Professor, Tongmyung University, Korea
- Jeremy Grall University of Memphis, Music 2017
Dissertation: “*From Impressionism to ‘Impressions’: Intertextuality, rhetoric, and Signifyin’ in John Coltrane’s ‘Impressions’*”
Current position: Associate Professor of Music, Birmingham-Southern College
- Chhayakant Patro University of Memphis, CSD 2016
Dissertation: “*The effect of top-down compensation on speech perception using simulated cochlear implant processing and post-lingual cochlear implant users*”
Current position: Postdoc, University of Minnesota (Oxenham Lab)
- Ruhi Mahajan University of Memphis, EECE 2016
Dissertation: “*BRAINSENS: body-worn reconfigurable architecture of integrated network sensors*”
- *Pouya Bashivan University of Memphis, EECE 2016
Dissertation: “*Commonality and Singularity in Working Memory Network Predicting Performance and Individual Diff.*”
Current position: Assistant Professor, McGill University, Department of Physiology
- Henry Hua University of Memphis, Psychology 2015
Dissertation: “*Effects of spaced practice on learning musical intervals*”
- Weilun Chung University of Memphis, CSD 2015
Dissertation: “*Auditory processing and linguistic prosody as cross-linguistic precursors in reading development*”
Current position: Assistant Professor, Department of Education National Taipei University of Education

Doctoral Advisory Committees (*Chair)

- *Jessica McLean Indiana University, SLHS 2022–
Dual Major: Speech, language and hearing sciences; Neuroscience
- *Rose Rizzi Indiana University, SLHS 2022–

Dual Major: Speech, language and hearing sciences; Neuroscience

Bin Shulhub Indiana University, SLHS 2022–
Major: Speech, language and hearing sciences

Bullard Indiana University, SLHS 2022–
Major: Speech, language and hearing sciences

Mentoring, AuD student research projects, chaired (*co-chair, †external reader)

Christine Sledge University of Memphis 2021–2022

Kimberly Skubic University of Memphis 2021–2022

Maddie Server University of Memphis 2021–2022

Fallon Bernard University of Memphis 2021–2022

Brian Decker University of Memphis 2021–2022

†Lydia Barber Towson University, SLHS 2021

AuD Thesis: “*Neural correlates of spatial hearing*” (Chair: Saradha Ananthakrishnan)

†Kathryn Pagliarulo Towson University, SLHS 2021

AuD Thesis: “*Neural correlates of auditory stream segregation*” (Chair: Saradha Ananthakrishnan)

†Lauren Martin Towson University, SLHS 2020

AuD Thesis: “*Frequency following response: An electrophysiological approach to assessing noise exposure*” (Chair: Saradha Ananthakrishnan)

Claire Pearson University of Memphis 2019–2020

Ashleigh Harrison University of Memphis 2019–2020

Lauren Sigley University of Memphis 2018–2019

Kate Rivers Allen University of Memphis 2018–2019

Ashley Anne Peeples University of Memphis 2018–2019

Lauren Bush University of Memphis 2018–2019

Alex Boudreaux University of Memphis 2018–2019

Jacob Barber University of Memphis 2018–2019

Bonnie Brown University of Memphis 2017–2018

Louise Powers University of Memphis 2017–2018

Mary Katherine Davis University of Memphis 2017–2018

Gelareh Faz University of Memphis 2017–2018

Victoria Heitzmann University of Memphis 2016–2017

Jessany Knapp University of Memphis 2016–2017

Claire McElwain University of Memphis 2016–2017

Calli Dugas University of Memphis 2015–2016

Shelley Traylor University of Memphis 2015–2016

Jill Lowther University of Memphis 2014–2015

Megan Howell University of Memphis 2013–2014

Lauren Dexter University of Memphis 2013–2014

Jon Schug University of Memphis 2013–2014

Mentoring, MA students – thesis committees, chair (*co-chair, †external reader)

Katherine Crenshaw University of Memphis, CSD (SLP) 2022

Thesis: “*Language and cognition in mild Alzheimer’s disease*”

Felix Havugimana University of Memphis, EECE 2021

Thesis: “*Deep Generative and Discriminative Approach in Modelling Spatial-spectral Dynamics of Varying Cognitive Load from EEG Recordings*”

*Kazi Ashraf Moinuddin University of Memphis, EECE 2020

Thesis: “*Decoding perception of speech from behavioral response using spatio-temporal CNNs*”

Rakib Al-Fahad University of Memphis, EECE 2018

Thesis: “*Neuroimaging based predictive modeling of cognitive events*”

*Md Sultan Mahmud University of Memphis, EECE 2018

Thesis: “Brain connectivity analysis of normal hearing and hearing- impaired participants based on the cortical surface EEG data”

Ariel Mathis University of Memphis, Psychology 2017
Thesis: “Formation and perceptual categorization of spatial relationships across languages”

Breya Walker University of Memphis, Psychology 2016
Thesis: “Stimulus familiarity and attentional effects on the neural org. of auditory categorical perception”

Shi Feng University of Memphis, Psychology 2015
Thesis: “Detecting contradiction in agent source monitoring during expository text comprehension”

Mentoring, UG students – senior design projects, chair (*co-chair, †external reader)

†Klavey Jardine, Robyn Miller, Utsav Shrestha, Hassan Hsry, David Hale
University of Memphis, BIOM 4782 2021
Thesis: “Design and implementation of an EEG phantom”

Recognition

Awards and honors

Graduate Student Association (GSA) Faculty Mentor Award, University of Memphis	2022
University Research Professorship, University of Memphis Office of the Provost	2021-2023
Article featured on journal cover, <i>NeuroReport</i> (Vol. 32, Issue 2)	2021
Article featured on journal cover, <i>NeuroReport</i> (Vol. 31, Issue 10)	2020
PI Millionaire, University of Memphis	2020
Eye of the Tiger Award, University of Memphis Alumni Association	2018
Top 10% of cited articles appearing in <i>PloS One</i> among >150K published articles	2017
Early Career Research Award (ECRA), University of Memphis	2016
Faculty Travel Enrichment Award, University of Memphis College of Arts & Sciences	2016
Invited participant with travel award, Annual Research Conference: “Lessons for Success: Developing the Emerging Scientist”, American Speech-Language-Hearing Association (ASHA)	2013
Sigma Xi (full member)	2012
Ismail Interdisciplinary Doctoral Research Award, Purdue University	2011
Robert L. Ringel Research Award, Purdue University	2010
Weinburg Research Scholarship, Purdue University	2010
NIDCD/NIH Pre-Doctoral Fellowship (T32 DC 00030)	2008 – 2010
Speech, Language, & Hearing Sciences Alumni & Friends Scholarship, Purdue University	2008 – 2009
Ross Fellowship, Purdue University	2007 – 2008
Valedictorian, Ypsilanti High School	2002

Media and press coverage

1. IU Research Impact. “How musical training impacts cognitive impairment.” Podcast (Episode 294), August 8, 2022. <https://research.impact.iu.edu/research-news/podcasts/index.html>
2. IU Research Impact (Chambliss, A). “Past musical training may benefit those with mild cognitive impairment.” Feature in *IU Research Impact*, August 1, 2022. <https://research.impact.iu.edu/key-areas/neuroscience/stories/musical-training-and-mci.html>
3. Aldridge, M. S. “Interdisciplinary Collaborations: Engineering.” Feature in *Now Hear This! University of Memphis CSD Newsletter*, Issue 12, August, 2021.
4. Gallagher, N. “Our attention can shift our ability to process sounds—starting in the brain stem.” *The Academic times*, April 8, 2021.
5. UofM, Feature in *University of Memphis Research and Innovation Magazine*. “UofM IMPACT: Breakthroughs in Speech and Hearing: Harnessing Brain Noise,” pp. 46-47, Spring 2021.
6. UofM, Feature in *University of Memphis Research and Innovation Newsletter*. “Bidelman Receives NIH Grant,” August 2020.
7. UofM, Feature in *University of Memphis Research and Innovation Newsletter*. “Faculty Featured on Cover of *NeuroReport*,” August 2020.
8. UofM Media Room, *University of Memphis doctoral student awarded NIH F31 fellowship*, May 14, 2020.
9. UofM, *University of Memphis Magazine*. “Campus News: #6 Research Challenges Assumptions About Impact of Musical Training on the Brain,” p.7, Spring 2019.

10. EurekAlert! AAAS. "Innate auditory skills and music training." Dec 3, 2018.
11. *University of Memphis President's Report Winter 2018, "Advances in Research."* Dec. 5, 2018, p. 22.
12. Codey Behles, *University of Memphis*, "University of Memphis Researchers Challenge the Relationship Between Musical Training and the Brain's Speech Processing Function." December 4, 2018.
13. UofM, *University of Memphis Magazine*. "Brain Waves," p.8, Fall 2018.
14. Michelle Corbet, *Memphis Business Journal*. "U of M researchers trying to determine where, when and how the human brain maps sound." June 1, 2018.
15. *This Week*, U Memphis. "Names in the News." August 12, 2017.
16. ScienceDaily.com. "The way the brain processes speech could serve as a predictor of early dementia before obvious communication problems appear." March 15, 2017.
17. NeuroscienceNews.com. "The way the brain processes speech could serve as a predictor of early dementia before obvious communication problems appear." March 15, 2017.
18. EurekAlert! AAAS. "The way the brain processes speech could serve as a predictor of early dementia before obvious communication problems appear." March 15, 2017.
19. J. Lim. "The way the brain processes speech could serve as a predictor of early dementia before obvious communication problems appear." *Baycrest Health Sciences*, March 8, 2017.
20. E. Maiberg. "This Virtual Board Game Could Help Your Grandpa Remember to Take His Pills." *Motherboard*, October 30, 2015.
21. EurekAlert! AAAS. "More evidence that musical training protects the brain." February 2, 2015.
22. Toronto Star. "Toronto researchers find playing music in youth helps hearing in old age." Feb. 6, 2015.
23. CTV News, Canada. "Musical training in youth keeps brain functioning longer: study." February, 4, 2015.
24. The Tribune, India. "Early musical training boosts 20pc brainpower in later life." February 3, 2015.
25. New York Daily News. "Musical training in youth keeps brain functioning longer: study." Feb. 4, 2015.
26. CBS *This Morning*, Science Roundtable Segment, National TV Broadcast, February 6, 2015.
27. N. Toche. "Learning to play an instrument compensates for the loss of language, *El Economista*, Mexico, February 5, 2015.
28. A. Nutt. "Early music training prevents loss of listening skills later in life," *The Washington Post*, February 3, 2015.
29. "Musical training protects brain," *Iran Daily*, February 4, 2015.
30. CKNW News Talk Radio, AM 980, British Columbia. Radio interview. February 3, 2015.
31. M. Benz. "Musical Training My Bolster Brain Plasticity Across A Lifetime," *MedicalResearch.com*, February 2, 2015.
32. D. Creech. "University receives grant from GRAMMY Foundation," *The Daily Helmsman*, April 29, 2014.
33. G. Maxey. "GRAMMY Foundation Awards U of M Grant for Hearing Study," *UofM News*, April. 2014.
34. K. Powers. "The Music Benefits of Speaking a Tonal Language," Research feature in *Teaching Music Magazine*, Oct. 2013.
35. M. Vuolo. "Can a Language Make You More Musical?" *Lexicon Valley Podcast* Episode No. 31, Washington, D.C., www.slate.com, July 15, 2013.
36. J. Hammock. "Examining music, language, and the brain," *The Sackville Tribune Post*, New Brunswick, Canada, April 10, 2013.
37. A. O'Connor. "Musical training and language skills chance one another," *The New York Times*, April 9, 2013.
38. "Sing-Song Cantonese Language Helps Musicality, Study," *Asian Scientist*, April 8, 2013.
39. S. Gates. "Tonal Languages, Music Ability Linked In New Study of Cantonese Speakers," *Huffington Post*, April 5, 2013.
40. C. Cheng. "Tonal languages help with learning music," *Counsel & Heal*, April 4, 2013.
41. "Report finds Asians, Africans and South Americans Might Make Better Musicians," *Voice of America News*, April 2, 2013.
42. "Report Finds Asians, Africans and South Americans Might Make Better Musicians," *Science World*, April 2, 2013.
43. "Speaking a Tonal Language (Such as Cantonese) Primes the Brain for Musical Training," *Science Daily*, April 2, 2013.
44. W. Leung. "Speakers of tonal languages are better able to hear music, study finds," *The Globe and Mail*, Toronto, ON, Canada, April 2, 2013.
45. "Young Baycrest researcher and his co-principal investigators win GRAMMY Foundation Award," *Baycrest News*, Toronto, ON, Canada, April 9, 2012.
46. C. Cronwlad. "Biology: Harmony resonates in the brain," *Experimentarium: Science*, Denmark, June 2010.

Service & Outreach activities

National

- Olney, A., Pavlik, P., Bidelman, G. Braasch, J., Huette, S. M., & Windsor, L. C. (2017). "Understanding Science as a Mixture of Research Quality and Social Influence," Response to request for information (RFI), (DARPA-SB- 17-57: Confidence Levels for the Social and Behavioral Sci.), 1-6.
- Program Committee, *Society for Music Perception and Cognition Annual Meeting (SMPC 2015)*, Nashville TN, 2015.
- Session Chair, "Young Investigator Symposium: Computational Modeling," 38th Annual meeting of the Association for Research in Otolaryngology, Baltimore, MD, February 2015.
- Session Chair, "Publishing & Grant Applications," ARO student mentoring session, 37th Annual meeting of the Association for Research in Otolaryngology, San Diego, CA, February 2014.
- Session Chair, "Music Therapy & Cognitive Processing," Society for Music Perception and Cognition (SMPC 2013), Toronto, ON, Canada, August 11, 2013.

Institutional

University

Indiana University

University of Memphis

- Faculty Judge, University of Memphis Student Research Forum (2018–2022)
- Teaching & Learning Advisory Committee (TLAC) (2020–2022)
- University Strategic Planning Committee, focus group (2017)
- Van Vleet Doctoral Fellowship Selection Committee (2015)

Departmental

Indiana University

- AuD Program Coordinator (2012–present)
- Promotion & Tenure (202 - Full professor [x1]), Clinical Assoc [x1], Senior Lect. [x2])

University of Memphis

- PhD Program Committee/PhD Coordinator (2012 – 2022; Chair: 2018-2022)
- Dean's Advisory Committee (2017-present)
- Curriculum Committee (2020-present)
- Public Information Committee (Website, Visibility, and Social Media) (2015-2022; Chair, 2017-18)
- Appointments Committee (Chair, 2014-2018, 2019-20)
- Admissions Committee (ad hoc, 2016-2022)
- Faculty Search Committee (2017-2018)
- Tenure & Promotions (CSD: 2019, 2020 [x2], 2021; IIS: 2020)
- HIPAA Compliance Committee (2014–2016)
- Library Committee (Chair, 2013–2015)
- Website Oversight Committee (2012–2017)
- IIS Strategic Planning Committee (2014–2016)
- CSD Future Planning Task Force Committee (2013 – 2014)
- Audiology Subcommittee (2012–2022)
- SLP Comprehensive Examiner (2012–2017)

External

- Tenure & Promotion evaluator, University of the Pacific, Audiology (2020)

Review of manuscripts (ad hoc, ~15-20/year; see [Publons Reviewer Profile](#))

- | | |
|--|------------------------|
| American Journal of Audiology | Brain Research |
| American Journal of Psychology | Brain Topography |
| Applied Psycholinguistics | Cerebral Cortex |
| Biomedical Signal Processing & Control | Cognition |
| Brain & Cognition | Cognitive Science |
| Brain & Language | Communications Biology |

Ear & Hearing
Experimental Brain Research
European Journal of Neuroscience
Frontiers in Auditory Cognitive Neuroscience
Frontiers in Human Neuroscience Neuroscience
Hearing Research
Human Brain Mapping
International Journal of Audiology
Journal of Cognitive Neuroscience
Journal of Memory and Language
Journal of Neuroscience
Journal of Neurophysiology
J. of Speech, Language, and Hearing Research
Journal of the Acoustical Society of America
JASA Express Letters
JoVE
J. Association for Research in Otolaryngology
Medical Principles and Practice

Memory & Cognition
Music Perception
Nature Neuroscience
Nature Communications
Neurobiology of Aging
NeuroImage
Neuropsychologia
NeuroReport
Neuroscience Letters
Physiological Research
PLoS One
Psychological Bulletin
Psychology of Music
Psychonomic Bulletin & Review
Psychophysiology
Quietly Journal of Experimental Psychology
Scientific Reports

Review of books

Elsevier (Neuroscience) (2019)
Plural Publishing (2020)
Oxford University Press (2020)

Review of grants

National Institutes of Health (NIH), AUD study section (2021)
National Institutes of Health (NIH), LCOM study section (2018)
CSD Faculty Grant Reviewer (2018, 2019, 2020)
Novo Nordisk Foundation, Denmark (2017)
Binational Science Foundation (BSF) –USA-Israel (2015)
National Science Foundation (NSF), USA (2014)
National Science Foundation (Switzerland) (2016)
Research Grants Council (RGC), China (2015; 2018 x2)
University of Texas System (UTS) (2015)
Graduate Women in Science, USA (2014)
Medical Research Council (MRC), UK (2012)
Biotechnology & Biological Sciences Research Council (BBSRC), UK (2014)

Review of scholarships

American Speech-Language-Hearing Foundation Graduate Student Scholarship (2013)

Professional society memberships

Society for Neuroscience (since 2015)
American Speech-Language-Hearing Association (since 2012)
Cognitive Neuroscience Society (since 2009)
Society for Music Perception and Cognition (since 2009)
Association for Research in Otolaryngology (since 2008)
Acoustical Society of America (since 2007)

Outreach (public talks and presentations)

1. Bidelman, G. M. (2019). "Brain Benefits of Music: Spotlight on Aging," Taste of Science [https://tasteofscience.org] public lecture series, Café Eclectic, Memphis, TN, April 23, 2019.
2. Bidelman, G. M. (2019). "What does a neuroscientist do?" Discussion and demo with Woodland Presbyterian School preschoolers, Memphis, TN, Jan 14, 2019.
3. Bidelman, G. M. (2018). Public CSD Lab Tours, FedEx Institute of Technology and School of Communication Sciences and Disorders, Memphis, TN, July 10, 2018.

4. Bidelman, G. M. (2017). "Brain Benefits of Musical Training," Taste of Science [<https://tasteofscience.org>] public lecture series, Café Eclectic, Memphis, TN, April 27, 2017.
5. Faculty representative. 31st Annual National Conference on Undergraduate Research (NCUR), University of Memphis, Memphis, TN, April 6, 2017.
6. Bidelman, G. M. (2015). STEM Talk: "Music and Language—Effects on the Brain," Oakton Community College, Des Plaines, IL, November 18, 2015.
7. Bidelman, G. M. "Research Partnerships Panel Discussion," College of Arts and Sciences, University of Memphis, November 20, 2014.
8. Bidelman, G. M. "Minimizing Noise-induced Hearing Loss with Musicianship," Public Presentation to the Memphis Chapter of the Recording Academy of America and GRAMMY Foundation Board, Memphis, TN, September 8, 2014.
9. Bidelman, G. M. "Brain correlates of complex human perception and training induced plasticity," Research demo presented at the FedEx Institute of Technology Memphis Research and Innovation Expo, Memphis, TN, September 27, 2012.