

Sarah Colby

Department of Psychological and Brain Sciences
Department of Otolaryngology – Head and Neck Surgery
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Education

- 2013 - 2018 Ph.D., Communication Sciences & Disorders
McGill University, Montreal, QC
- 2012 - 2013 M.A., Linguistics
University of Ottawa, Ottawa, ON
- 2008 - 2012 B.A., Linguistics & Psychology (Joint Honours)
University of Ottawa, Ottawa, ON

Academic Positions

- 2018 - Present Postdoctoral Research Scholar
Department of Psychological and Brain Sciences
Department of Otolaryngology – Head and Neck Surgery
Cochlear Implant Research Center
University of Iowa, Iowa City, IA

Peer-reviewed Publications

Manuscripts in preparation

Colby, S. & McMurray, B. (2022, under review). Efficiency of spoken word recognition slows across the adult lifespan. *Cognition*.

McMurray, B., Apfelbaum, K.S., **Colby, S.**, & Tomblin, J.B., (2022, in revision). Understanding language processing in variable populations on their own terms: Towards a functionalist psycholinguistics of individual differences, development and disorders. *Applied Psycholinguistics*.

Choi, I., Gander, P.E., Berger, J.I., Hong, J., **Colby, S.**, McMurray, B., & Griffiths, T.D. (2022, under review). Spectral grouping of electrically encoded sounds predicts speech-in-noise performance in cochlear implantees. *Journal of the Association for Research in Otolaryngology*.

Colby, S. & Clayards, M.A. (in prep). Inhibitory control impacts older adults' resolution of lexical competition: Evidence from tracking phonetic ambiguity in the Visual World Paradigm.

Colby, S. & McMurray, B. (in prep). Individual differences in spoken word recognition for Cochlear Implant users: The role of language experience and inhibitory control.

Smith, F.X., **Colby, S.**, Geller, J., Choi, I., & McMurray, B. (in prep). Neural correlates of effortful listening with vocoded speech.

Journal Articles

Colby, S., Seedorff, M., & McMurray, B. (2022, accepted). Audiological and Demographic Factors that Impact the Precision of Speech Categorization in Cochlear Implant Users. *Ear and Hearing*.

Colby, S. & Orena, A. (2022). Recognizing voices through a cochlear implant: A systematic review of talker identification, discrimination, and perception. *Journal of Speech, Language, and Hearing Research*, 65, 3165-3194.

Colby, S. & McMurray, B. (2021). Cognitive and physiological measures of listening effort during degraded speech perception: Relating dual-task and pupillometry paradigms. *Journal of Speech, Language, and Hearing Research*, 64 (9), 3627–3652.

Colby, S., Shiller, D., Clayards, M., & Baum, S. (2019). Lexical bias in older and younger adults: Different responses to altered auditory feedback. *Journal of Speech, Language, and Hearing Research*, 62 (4S), 1144-1151.

Colby, S., Clayards, M. A., & Baum, S. R. (2018). The role of lexical status and individual differences for perceptual learning in younger and older adults. *Journal of Speech, Language, and Hearing Research*, 61 (8), 1855–1874.

Proceedings

Colby, S., Poulton, V., & Clayards, M. (2017). The role of inhibition in older and younger adults' lexical competition. *Canadian Acoustics*, 45 (3), 174-175.

Refereed Conference Presentations

Oral Presentations

Colby, S., & McMurray, B. (2022, June). *Efficiency of Spoken Word Recognition Declines Across the Adult Lifespan*. Oral presentation at 6th International Conference on Cognitive Hearing Science for Communication, Linköping, Sweden.

Colby, S., Seedorff, M., & McMurray, B. (2022, February). *Audiological and Demographic Factors that Impact Phonetic Categorization by Cochlear Implant Users*. Oral presentation at 45th Midwinter Meeting of the Association for Research in Otolaryngology (Virtual).

Colby, S., Smith, F., Roof, K., & McMurray B. (2022, February). *The Effects of Language Experience and Inhibitory Control on Spoken Word Recognition for Cochlear Implant Users*. Oral presentation at the 45th Midwinter Meeting of the Association for Research in Otolaryngology (Virtual).

Colby, S., Shiller, D., Clayards, M., & Baum, S. (2019, December). *The lexical bias in older adults' compensation to altered auditory feedback*. Oral presentation at 178th Meeting of the Acoustical Society of America, San Diego, CA, U.S.A.

Colby, S., Poulton, V., Clayards, M. (2017, October). *The role of inhibition in older and younger adults' lexical competition*. Oral presentation at Acoustics Week in Canada 2017, Guelph, ON, Canada.

Colby, S., Clayards, M., & Baum, S. (2017, April). *Top-down and bottom-up perceptual learning for speech is maintained in older adults*. Oral presentation at Workshop on Speech Perception and Production across the Lifespan (SPPL 2017), University College London, London, U.K.

Poster Presentations

Colby, S., Huffman, M., & McMurray, B. (2022, December). *Engaging effort improves efficiency during word recognition in cochlear implant users*. Poster presented at the 183rd Meeting of the Acoustical Society of America, Nashville, TN, U.S.A.

Smith, F.X., **Colby, S.**, Geller, J., Choi, I., & McMurray, B. (2022, February). *Neural correlates of effortful listening with vocoded speech*. Poster presented at the 45th Midwinter Meeting of the Association for Research in Otolaryngology (Virtual).

Colby, S., Smith, F.X., Roof, K., & McMurray, B. (2020, November). *Cognitive control and the resolution of lexical competition in cochlear implant users*. Poster presented at Psychonomic Society's 61st Annual Meeting (Virtual).

Colby, S., & McMurray, B. (2019, December). *The role of listening effort during degraded speech recognition: A comparison of the dual-task and pupillometry paradigms*. Poster presented at 178th Meeting of the Acoustical Society of America, San Diego, CA, U.S.A.

Colby, S., Poulton, V., & Clayards, M. (2018, May). *Inhibitory and lexical frequency effects in younger and older adults' spoken word recognition: Evidence from eye-tracking*. Poster presented at Cognitive Aging Conference, Atlanta, Georgia, U.S.A.

Colby, S., Poulton, V., & Clayards, M. (2017, December). *Inhibitory and lexical frequency effects in younger and older adults' spoken word recognition*. Poster presented at 174th Meeting of the Acoustical Society of America, New Orleans, Louisiana, U.S.A.

Colby, S., Shiller, D., Clayards, M., & Baum, S. (2017, November). *Lexical effects in older adults' sensorimotor adaptation for speech*. Poster presented at 7th International Conference on Aging and Speech Communication Research, University of South Florida, Tampa, U.S.A.

Colby, S., Poulton, V., & Clayards, M. (2017, April). *Inhibition predicts lexical competition in older adults' spoken word recognition*. Poster presented at Workshop on Speech Perception and Production across the Lifespan (SPPL 2017), University College London, London, U.K.

Colby, S., Clayards, M., & Baum, S. (2016, November). *Top-down and bottom-up learning for speech in younger and older adults*. Poster presented at Congrès international en orthophonie et en audiologie (International Conference on Speech Language Pathology and Audiology). Université de Montréal, Montreal, Canada.

Clayards, M. & **Colby, S.** (2015, December). *Individual differences in cue weights are correlated across contrasts*. Poster presented at Workshop on Individual Differences in Language Processing Across the Lifespan. Max Planck Institute for Psycholinguistics, Nijmegen, Netherlands.

Colby, S. & Niembro, A.S. (2013, February). *Lexical Competition as Affected by Subcategorical Cues: A project proposal*. Poster presented at Psychoshorts 2013. University of Ottawa, Ottawa, Canada.

Funding

- Revision submitted NIH Exploratory/Developmental Research Grant Program (R21), National Institutes of Health - National Institute of Aging (NIH NIA)
Project title: The real-time dynamics of language processing across the lifespan
Role: Co-PI
- 2015 - 2018 Bourse de doctorat en recherche, Fonds de recherche du Québec – Société et culture (Doctoral Research Fellowship, Quebec Research Fund – Society and Culture)
- 2013 - 2015 Graduate Excellence Award, McGill University, Montreal, QC
- 2013 - 2014 Max Stern Recruitment Fellowship, McGill University, Montreal, QC

Awards

- 2022 ARO Midwinter Meeting Travel Award, 45th Annual Midwinter Meeting of the Association for Research in Otolaryngology (Virtual)
- 2017 Speech Communication Student Poster Competition (2nd place), 174th Meeting of the Acoustical Society of America, New Orleans, USA
- 2017 Student Presentation Prize, Acoustics Week in Canada 2017 (Canadian Acoustical Association), Guelph, ON
- 2017 Alexander Graham Bell Prize in Speech Communication and Hearing, Canadian Acoustical Association
- 2016 Prix d'excellence en recherche, Congrès international en orthophonie et en audiologie (Prize for excellence in research, International Conference on Speech Language Pathology and Audiology), Université de Montréal, Montreal, Canada
- 2013 Dean's Scholarship, University of Ottawa, Ottawa, ON

Teaching Experience

- Winter 2022 Guest Lecturer, Villanova University, Philadelphia, PA
- Cognitive & Behavioral Neuroscience
"Age-related changes to cognition"
- Fall 2021 Guest Lecturer, Rutgers University, New Brunswick, NJ
- 185:320 Research Methods in Cognitive Science
"Understanding Cognition Through the Eyes: Introduction to Pupillometry"
- Winter 2018 Guest Lecturer, McGill University, Montreal, QC
- SCSD 631: Speech Science
"Speech perception in adverse conditions"
- LING 602: Graduate Seminar
"Introduction to eye-tracking"

Fall 2017	Lab Instructor, McGill University, Montreal, QC - SCSD 619: Phonological Development Phonetic Transcription Lab
Winter 2017	Guest Lecturer, McGill University, Montreal, QC - SCSD 631: Speech Science "Speech perception in adverse conditions"
Fall 2016 - Winter 2017	Co-supervisor, McGill University, Montreal, QC - COGS 444: Honours Research in Cognitive Science
Summer 2016	Co-instructor, McGill University, Montreal, QC - LING 488: Independent Study I
Winter 2016	Guest Tutorial, McGill University, Montreal, QC - SCSD 631: Speech Science Hands-on SPIN & HINT tutorial
Winter 2013	Teaching Assistant, University of Ottawa, Ottawa, ON - LIN 1320: Introduction to Linguistics II
Fall 2012	Teaching Assistant, University of Ottawa, Ottawa, ON - LIN 1310: Introduction to Linguistics I

Service

Departmental service

2016 - 2018	Research Training Enrichment Committee Member, School of Communication Sciences & Disorders, McGill University
2016 - 2018	Co-organizer, PhD Reading Group, School of Communication Sciences & Disorders, McGill University
2015 - 2017	Research Representative, Communication Sciences & Disorders Graduate Students' Society (CSDGSS), McGill University
2015 - 2017	Communication Sciences & Disorders Representative, Post-graduate Students' Society (PGSS), McGill University
2012 - 2013	Steward, Canadian Union of Public Employees (CUPE) 2626 (representing University of Ottawa's Teaching Assistants & Research Assistants)

Conference & other association service

2022	Poster Session Chair, "Healthcare Settings and Clinical Populations" Speech Communication Session, 183 rd Meeting of the Acoustical Society of America, Nashville, TN
2022	Judge, Speech Communication Student Poster Competition, 183 rd Meeting of the Acoustical Society of America, Nashville, TN
2016 - 2017	Science Outreach Volunteer, Let's Talk Science, McGill University, Montreal, QC
2013 - 2014	Eureka Festival Committee, Brain Awareness Montreal, Montreal, QC
2013	Organizing Committee, Psychoshorts 2013, University of Ottawa, Ottawa, ON

Ad hoc Journal and Grant Review

2022	4 total: Applied Psycholinguistics (1); Cognition (1); Journal of Communication Disorders (1); Journal of Speech, Language, and Hearing Research (1)
2021	6 total: American Journal of Audiology (2); Brain and Language (1); Journal of Communication Disorders (1); Journal of Speech, Language, and Hearing Research (1); Mitacs Accelerate Proposal (1)

2020

1 total:

Journal of Speech, Language, and Hearing Research (1)

2019

2 total:

Cognition (1); Journal of Experimental Psychology: Learning, Memory, and Cognition (1)