

## **Allison Hilger, PhD, CCC-SLP**

E-mail: allison.hilger@colorado.edu

### **PROFESSIONAL CREDENTIALS**

Certificate of Clinical Competency in Speech-Language Pathology (2016-Present)

Licensed Speech-Language Pathologist: State of Colorado (2021-Present)

Licensed Speech-Language Pathologist: State of Illinois (2016-2020)

Illinois Educator License (2016-2020)

### **RESEARCH INTERESTS**

Motor control of speech production for prosody; intonational phonology and motor speech disorders; speech naturalness in second language acquisition; prosodic impairment in ataxia and other dysarthrias; speech acoustics and aerosol generation.

### **ACADEMIC AND PROFESSIONAL POSITIONS**

2020-Now     Assistant Professor (Tenure-track), University of Colorado Boulder,  
Department of Speech, Language, and Hearing Sciences, Boulder, CO

2016-2020     Graduate Research Assistant, Speech Physiology Lab, Northwestern  
University, Department of Communication sciences and Disorders,  
Evanston, IL

### **EDUCATIONAL BACKGROUND**

2020             Northwestern University  
Doctor of Philosophy (PhD), Communication Sciences and Disorders  
Dissertation: *Impaired sensorimotor integration for prosodic production in ataxic dysarthria*, Chair: Dr. Charles Larson; Committee members: Drs. Jennifer Cole, Bonnie Martin-Harris, and Tina Grieco-Calub  
Additional Certification and Training: Cognitive Science Specialist (02/2018);  
Teaching Certificate (06/2019); Research Communication Training Program  
(12/2019)

2015             Purdue University  
Master of Science (MS), Speech, Language, and Hearing Science  
Thesis: *Examining a bimanual motor timing deficit in preschool children who stutter*,  
Thesis Chair: Dr. Anne Smith; Committee Members: Drs. Christine Weber, Howard Zelaznik, and Anu Subramanian

2013             University of Illinois  
Bachelor of Science, Speech and Hearing Science

Thesis: *Characterizing American Sign Language fluency using the Spatiotemporal Index*, Thesis Co-Chairs: Drs. Torrey Loucks and Matthew Dye

## **FELLOWSHIPS/GRANTS**

Title: Mechanisms for Aerosol Generation from Speech Production for Airborne Disease Transmission (PI; Shelly Miller, Co-PI; Sarah Clark, Co-PI)  
Agency: University of Colorado Research and Innovation Office Seed Grant, \$50,000.  
Status: **Awarded, 2022.**

Title: Ataxic Dysarthria as a Cerebellar Neurocognitive Disorder (PI)  
Agency: National Institute of Deafness and Other Communication Disorders (R21), \$568,374.  
Status: Not Discussed, 2022

Title: Respiratory-Phonatory Coordination in Cerebellar Ataxia: Implications for Speech and Swallowing (PI)  
Agency: National Ataxia Foundation, \$49,903  
Status: Not Awarded, 2022

Title: The Role of Vocal Fold Movement in Aerosol Generation for Airborne Transmission of Influenza (Shelly Miller, Co-PI; Sarah Clark, Co-PI)  
Agency: National Institute of Allergies and Infectious Diseases (R21), \$405,024.00  
Status: Not Discussed, 2021

Title: The Influence of Perceived Phrasal Prosody on Speech Naturalness in Ataxic Dysarthria  
Agency: ASHFoundation New Investigators Research Grant, \$10,000  
Status: Not Awarded, 2021

Title: Acoustic Speech Characteristics of Increased Aerosol Generation for Infectious Disease Transmission (PI) (Shelly Miller, Co-PI; Jean Hertzberg, Co-PI)  
Agency: National Institute of Allergies and Infectious Diseases (R21), \$398,966  
Status: Disqualified, 2021

Title: Acoustic Speech Characteristics of Increased Aerosol Generation for Infectious Disease Transmission (PI) (Shelly Miller, Co-PI; Jean Hertzberg, Co-PI)  
Agency: University of Colorado Research and Innovation Office Seed Grant, \$50,000  
Status: Not Awarded, 2021

Title: Perception of Phrasal Prosody in Ataxic Dysarthria (PI)  
Agency: National Institute of Deafness and Other Communication Disorders (R21), \$561,622  
Status: Not Discussed, 2021

Title: Impaired sensorimotor integration for prosodic production in ataxic dysarthria (PI)  
Agency: National Institutes of Health National Research Service Award (F31), \$69,738  
Status: **Awarded, 2019**

Agency: Acoustic Society of America (ASA) Raymond H. Stetson Fellowship in Phonetics and Speech Production  
Status: **Honorable Mention, 2019**

Title: Impaired sensorimotor integration for prosodic production in ataxic dysarthria  
Agency: Council of Academic Programs in Communication Sciences and Disorders (CAPCSD) Ph.D. Scholarship, \$20,000  
Status: **Awarded, 2019**

Title: Audio-vocal efficiency in early childhood: an insight into speech-motor development  
Agency: National Science Foundation Graduate Research Fellowship Program  
Status: **Honorable Mention, 2017**

Title: The effect of early motor skills on speech and language development in Autism Spectrum Disorder: Insights into system interactions in typical development  
Agency: National Science Foundation Graduate Research Fellowship Program  
Status: **Honorable Mention, 2016**

## **RECOGNITION IN NATIONAL PRESS**

Lifewire Magazine: "Why Google's New App Is A Gamechanger For Speech Therapy Patients," written by Allison Matyus, December 2020.

## **PODCAST INTERVIEWS**

Learning Bayesian Statistics: Episode 40 "Bayesian Stats for Speech and Language Sciences with Allison Hilger and Timo Roettger," interviewed by Alex Andorra, May 2021.

## **PUBLICATIONS**

(\*Publications marked with asterisk are based on research conducted by students or lab members under my sole or joint supervision)

**Hilger, A.,** Levant, S., Kim, J., Lester-Smith, R., Larson, C. (*In Preparation*) Auditory feedback control of vocal intensity during speech and sustained-vowel production. *Journal of Voice*.

**Hilger A.,** Cloud C\*, Fahey T\*. (*Under Revision*) Intelligibility and Naturalness in Ataxic Dysarthria and the Influence of Pitch and Loudness Control. *The Cerebellum*.

**Hilger, A.** & Dunne-Platero, K.\* (*Under Revision*) Speech therapy referral and communicative participation in cerebellar ataxia: a survey study in the United States. *International Journal of Speech Language Pathology*.

**Hilger, A.**, Cole, J., & Larson, C. (*Under Revision*) Semantic focus mediates pitch auditory feedback control in phrasal prosody. *Language, Cognition, and Neuroscience*.

Lester-Smith, R., **Hilger, A.**, Dunne-Platero, K., Kim, J., Chan, C., & Larson C. (2022) The Effects of Masked and Delayed Auditory Feedback on Fundamental Frequency Modulation in Vocal Vibrato. *Journal of Voice*.

Lester-Smith, R., Kim, J., **Hilger A.**, Chan, CL., Larson, C. (2021) Auditory-motor control of fundamental frequency in vocal vibrato. *Journal of Voice*.

Schenk, A., **Hilger., A.**, Levant, A., Kim, A., Lester-Smith, R., Larson, C. (2020) The effect of pitch and loudness auditory feedback perturbations on voice quality during sustained phonation. *Journal of Voice*.

**Hilger, A.**, Cole, J., Kim, J., Lester-Smith, R., Larson, C. (2020) Using auditory feedback to scale anticipatory intonation targets in phrasal production. *Journal of Speech, Language, and Hearing Research*.

**Hilger, A.**, Zelaznik, H., Smith, A. (2016) Evidence that bimanual motor timing performance is not a significant factor in developmental stuttering. *Journal of Speech, Language, and Hearing Research*.

**Hilger, A.**, Loucks, T., Quinto-Pozos, D., Dye, M.W. (2015) Second language acquisition across modalities: production variability in adult L2 learners of American Sign Language. *Journal of Second Language Research*.

## INVITED CHAPTERS

Cole, J., **Hilger, A.**, & Patel, S. (*In progress*) Prosody: Linguistic and clinical perspectives. In Grindrod, C. & Gurevich, N. *Clinical Applications of Linguistics to Speech-Language Pathology*.

## PRESENTATIONS

(\*Presentations marked with asterisk are based on research conducted by students or lab members under my sole or joint supervision)

Dunne-Platero, K. & **Hilger, A.** (2022). Impact of speech naturalness, intelligibility, and referral to speech therapy on quality of life in cerebellar ataxia. Conference for Motor Speech. Charleston, SC.

Fahey, T. & **Hilger, A.** (2022). Impact of manual American Sign Language parameters on intelligibility. Conference for Motor Speech. Charleston, SC.

**Hilger, A.** & Simeon, K. (2021) Reflecting on Universal Design for Learning in hybrid & in-person acoustics education. Oral presentation at the Acoustical Society of America. December 2021.

\*Cloud, C. & **Hilger, A.** (2021) Pure and Mixed Dysarthria Subtypes in Cerebellar Ataxia. Oral seminar presented at the American-Speech-Language-Hearing Convention in November 2021.

\*Esver, M. & **Hilger, A.** (2021) Receptive prosody in cerebellar ataxia. Oral seminar presented at the American-Speech-Language-Hearing Convention in November 2021.

**Hilger, A.** & Spencer, C. (2021) Characteristics of Speech in Ataxia and Implications for Speech Therapy. Oral seminar presented at the American-Speech-Language-Hearing Convention in November 2021.

\*Sebestyen, A., **Hilger, A.**, & Kleiber, H. (2021) Efficacy of LSVT in Multilingual Patient with Hypokinetic Dysarthria and Comorbid Unspecified Dementia. Pre-recorded technical session presented at the American-Speech-Language-Hearing Convention in November 2021.

\*Dunne-Platero, K. & **Hilger, A.** (2021) Living with Ataxic Dysarthria: Quality of Life Implications for Clinical Evaluation and Intervention. Pre-recorded technical session presented at the American-Speech-Language-Hearing Convention in November 2021.

\*Cloud, C. & **Hilger, A.** (2021) Cerebellar injury, Speech, and Quality of Life: Considerations for Comprehensive Care. Oral presentation presented at the Brain Injury Symposium in November 2021.

\***Hilger, A.** & Cloud, C. (2021) Determining When Speech Therapy is Appropriate for Clients With Ataxia. Oral presentation presented at the Colorado Speech-Language-Hearing Association (CSHA)/Wyoming Speech-Language-Hearing Association (WyoSHA) Joint Conference in October 2021.

\*Cloud, C. & **Hilger, A.** (2021) The contribution of pitch and loudness control to speech naturalness in ataxia. Poster Presentation. Boston Speech Motor Control Symposium. Virtual platform.

**Hilger, A.** (2021). Experiential learning in Categorical Perception. Flash talk at the Acoustics in Focus Conference through the Acoustical Society of America. Virtual.

**Hilger, A. & Spencer, C. (2020).** Characteristics of speech in ataxia and implications for speech therapy. Proposal accepted at the Annual Convention of the American Speech-Language-Hearing Association, San Diego, CA (Convention canceled).

**Hilger, A. & Larson, C. (2020)** Impaired auditory feedback control for pitch production in speech in ataxic dysarthria. Poster Presentation. Ataxia Investigators Meeting. Denver, CO. (Convention canceled).

**Hilger, A., Cole J., Kim, J., Larson, C. (2020)** Impaired sensorimotor integration for the adjustment of phrasal prominence in ataxic dysarthria. Oral Presentation. Conference for Motor Speech. Santa Barbara, CA.

**Hilger, A., Levant, S., Kim, J., Lester-Smith, R., Larson, C. (2019)** Auditory feedback control of vocal intensity during speech and sustained-vowel production. Poster presented at the Acoustical Society of America Meeting. San Diego, CA.

**Hilger, A., Kim, J., Levant, S., Larson, C. (2019)** Acoustic correlates of prosody work as integrated channels with weightings varying by linguistic intent. Oral Seminar presented at the American speech Language Hearing Association Meeting. Orlando, FL.

**Hilger, A. & Larson, C. (2019)** Increased Auditory Feedback Sensitivity Early in Phrasal Production. The Voice Foundation. Poster Presentation. Philadelphia, PA. (Best Student Presentation Award)

Sandepudi, K., **Hilger, A., Kim, J., Larson, C. (2019)** Attention to Vocal Source Modulates Responses to Pitch-shifted Voice Auditory Feedback. The Voice Foundation. Oral Presentation. Philadelphia, PA.

Kreidler, K. & **Hilger, A. (2018)** Putting Research into Practice: Performing Research as a Clinician. American Speech Language Hearing Association Meeting. Technical Clinical Talk. Boston, MA.

**Hilger, A., Cole, J., Larson, C. (2018).** The timecourse of F0 planning for intonational tones. Poster presented at Laboratory Phonology, Lisbon, Portugal.

**Hilger, A., Cole, J., Larson, C. (2018)** Manipulating prosody: speech-acoustic responses to vocal feedback perturbations prior to phrasal prominence. Motor Speech Conference. Oral Presentation. Savannah, Georgia.

**Hilger, A. & Kreidler, K. (2017)** Navigating the Clinical Fellowship. American Speech Language Hearing Association Meeting. Poster. Los Angeles, CA.

**Hilger, A., Cole, J., Roberts., A. (2017)** A proposed method for analyzing phrase-level prosodic analysis of hypokinetic dysarthria: an auto-segmental metrical approach. American Speech Language Hearing Association Meeting. Poster. Los Angeles, CA.

**Hilger, A., Zelaznik, H., Smith, A. (2014)** Examining a bimanual motor deficit in Preschool children who stutter. Technical Research Talk. American Speech Language Hearing Association Meeting, Orlando, Florida.

**Hilger, A., Loucks, T., Quinto-Pozos, D., Dye, M.W. (2013)** Characterizing American Sign Language fluency using the Spatiotemporal Index. Poster presented at the Theoretical Issues in Sign Language Research Conference, London, England.

### **INVITED TALKS**

Miller, S., Stockman, T., & **Hilger, A. (2021)** Implications of aerosol research findings for speech and singing. 2021 NFHS Performing Arts Conference.

**Hilger, A. (2020)** Speech and swallowing in Ataxia. Madison Ataxia Support Group. Denver, CO. (Over Zoom)

**Hilger, A. (2020)** Speech and swallowing in Ataxia. Denver Ataxia Support Group. Madison, WI. (Over Zoom)

**Hilger, A. (2019)** Speech and Swallowing in Ataxia. St. Louis Ataxia Support Group. St. Louis, IL.

**Hilger, A. (2019)** Speech difficulties in Ataxia. Fox Valley Ataxia Support Group. Crystal Lake, IL.

**Hilger, A. (2019)** Speech difficulties in Ataxia. Fight Ataxia Support Group. Video-conference meeting.

**Hilger, A. (2019)** Swallowing difficulties in Ataxia. Fox Valley Ataxia Support Group. Crystal Lake, IL.

**Hilger, A. (2018)** Manipulating prosody: speech-acoustic responses to vocal feedback perturbations prior to phrasal prominence. Motor Speech Conference. Phonatics Journal Club. Evanston, IL

### **HONORS AND AWARDS**

2020	Participant in the Clinical Practice Research Institute (ASHA).
2019	Best Student Presentation Award, The Voice Foundation
2019	New Investigators Research Forum Recipient, The Voice Foundation

- 2019 Boston Speech Motor Control Symposium Travel Fellowship Awardee
- 2019 The Graduate School Conference Travel Grant, Northwestern University
- 2018 Cognitive Science Travel Grant, Northwestern University
- 2017 The Graduate School Conference Travel Grant, Northwestern University
- 2015 Weinberg-Derivative Fund for Conference Research Travel Grant, Purdue University
- 2013 High Honors, University of Illinois
- 2013 Departmental Distinction, University of Illinois
- 2013 Applied Health Sciences Career Development and Leadership Award, University of Illinois
- 2013 Undergraduate Research Travel Grant, University of Illinois
- 2013 Deans List, University of Illinois

**MENTORSHIP**

**PhD Dissertation**

Abhishek Kumar, Dissertation Committee Member

**Master's Thesis**

Mandy Sebestyen, Thesis Advisor  
 Melanie Esver, Thesis Advisor  
 Jacqueline McCurdy, Thesis Advisor  
 Collin Eagen, Thesis Committee Member

**Undergraduate Honors Thesis**

Kaily Georgen-Schwartz

**TEACHING EXPERIENCES**

<b>University of Colorado Boulder</b>			
<b>Course Number &amp; Title (* = graduate; ** = undergraduate)</b>	<b>Year (Term)</b>	<b>Average Enrollment</b>	<b>Teaching Role</b>
SLHS 3116: Speech Science**	2021 (Fall); 2020 (Fall)	44	Instructor of Record
SLHS 5292: Neurogenic Speech Disorders in Adults*	2021 (Fall); 2020 (Fall)	35	
<b>Northwestern University</b>			
<b>Course Number &amp; Title (* = graduate; ** = undergraduate)</b>	<b>Year (Term)</b>	<b>Average Enrollment</b>	<b>Teaching Role</b>
LING 480: American Academic Culture for Non-Native speakers of English*	2019 (Summer)	17	Co-Instructor
TGS 508: Foundations of American English and Academic Culture*	2019 (Summer)	41	Teaching Assistant



CSD 490: Adult Neuromotor Speech Disorders*	2019 (Spring); 2019 (Winter)	30	
CSD 301: Anatomy and Physiology of the Vocal Mechanism **	2018 (Fall)	12	Laboratory instructor
CSD 474: Clinical Methods: Adult Populations *	2018 (Spring)	30	Teaching Assistant
CSD 494: Fluency and Fluency Disorders *	2018 (Winter); 2017 (Winter)	70	
CSD 455: Clinical Speech Anatomy, Physiology, and Motor Control *	2017 (Fall)	70	
CSD 463: The Field of Special Education *	2016 (Fall)	70	

## GUEST LECTURES

### University of Colorado Boulder

*SLHS 4100: Special Topics in Speech, Language, and Hearing Sciences* 2021  
 Course Director: Kathy Aerhart, PhD, CCC-AUD  
 "Research Experiences and Discussion of Dysarthria Article"

### University of Cincinnati

*CSD 7034: Neurogenic Speech Disorders* 2020  
 Course Director: Caroline Spencer, PhD  
 "Prosody"

### Northwestern University

*CSD 490: Adult Neuromotor Speech Disorders* 2019  
 Course Directors: Sarah Love Penzell, MA, CCC-SLP & Karen Kinderman, MS, CCC-SLP  
 "Ataxic Dysarthria"

*CSD 332: Clinical Assisting* 2019  
 Course Director: Aaron Wilkins, MS, CCC-SLP  
 "Treating speech and language disorders in individuals 1-101 years of age"

*CSD 492: Vocal Physiology and Pathology* 2019  
 Course Director: Nathan Waller, MS, CCC-SLP  
 "Introduction to Voice and Communication Therapy for Patients with Parkinson's Disease"

*CSD 475: Advanced Clinical Methods* 2017

*Course Director: Stacy Kaplan, PhD, CCC-SLP*  
“The Clinical Fellowship Experience”

*CSD 463: Special Education* 2017  
*Course Director: Frances Block, MS, CCC-SLP*  
“My experiences working in special education”

## **CLINICAL EXPERIENCE**

2018-2020            Speech Language Pathologist, CCC, Independent Contractor for the  
State of Illinois Disability Determination Services, Chicago, IL

2016-2017            Speech Language Pathologist, CCC, Ayuda Rehab and Wellness Home  
Health, Chicago, IL

2015-2016            Speech Language Pathologist, CF, Proviso Area for Exceptional  
Children, Maywood, IL

2015-2016            Speech Language Pathologist, CF, Grow with M.E. Early Intervention,  
Chicago, IL

## **ACADEMIC AND PROFESSIONAL PARTICIPATION**

2021                    Ad-hoc Reviewer, Clinical Linguistics & Phonetics

2021                    Ad-hoc Reviewer, Journal of Voice

2020                    Ad-hoc Reviewer, Cerebral Cortex

2021, 2020            Ad-hoc Reviewer, Journal of Speech, Language, and Hearing Science

2020                    Ad-hoc Reviewer, Journal of the Cerebellum

2017, 2019            Volunteer, PhD Recruitment Weekend, Dept. of Communication  
Disorders and Sciences, Northwestern University

2019                    Participant, Academic Job Market Working Group

2018                    Ad-hoc Reviewer, Journal of Communication Disorders

2018, 2019            Mentee, The Mentoring Academic Research Careers (MARC), Program,  
American Speech-Language-Hearing Association

2018                    Volunteer, MidPhon Conference, Northwestern University

2016-present        Co-organizer, Motor Control, Cognition, and Learning of Speech and  
Swallowing Journal Club (MCCLSS), Northwestern University

2016-present        Member, Phonatics Journal Club, Northwestern University

2016-2018            Member, Soundlabz Journal Club, Northwestern University

## **PROFESSIONAL MEMBERSHIP**

2021-present        Member, Laboratory Phonology

2019-present        Member, National Ataxia Foundation

2019-present	Member, Acoustical Society of America
2016-present	Member, American Speech-Language-Hearing Association
2013-2015	Member, Sign Language Linguistics Society

**LANGUAGE PROFICIENCY**

English – Native proficiency

Spanish – Conversational proficiency

American Sign Language – Novice proficiency

Coding languages: Praat (scripting), Python, Matlab, Javascript, MaxMSP, R