

## **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

### **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)

Coretta, S., Casillas, J., ... **Hilger, A.**, & Roettger, T. (2023) Multidimensional signals and analytic flexibility: Estimating degrees of freedom in human speech analyses. *Advances in Methods and Practices in Psychological Sciences*.

**Hilger, A.** & Dunne-Platero, K.\* (2022) Speech therapy referral and communicative participation in cerebellar ataxia: a survey study in the United States. *International Journal of Speech Language Pathology*, 1-12.

**Hilger, A.**, Levant, S., Kim, J., Lester-Smith, R., Larson, C. (2022) Task-Dependent Modulation of Auditory Feedback Control of Vocal Intensity. *Journal of Voice*.

**Hilger A.**, Cloud C\*, Fahey T\*. (2022) Speech Impairment in Cerebellar Ataxia Affects Naturalness More Than Intelligibility. *The Cerebellum*, 1-12.

**Hilger, A.,** Cole, J., & Larson, C. (2022) Semantic focus mediates pitch auditory feedback control in phrasal prosody. *Language, Cognition, and Neuroscience*, 1-18.

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, S., Kim, J., 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

**Hilger, A.** (In Preparation) Dysarthria in Cerebellar Ataxia. In the **Oxford Handbook of Communication Disorders in Neurodegenerative Diseases**.

Cole, J., **Hilger, A.,** & Patel, S. (2022) 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)

\*Murphey, C., **Hilger, A.,** & Bradley, L. (2023). A dynamics-inspired model for phonation-induced atomization. Dynamics Days. Virtual Platform.

- Dunne-Platero, K., \*Cloud, C., & **Hilger, A.** (2022) Maximizing the Motor Speech Evaluation: A Crash Course for the Acute Care Speech-Language Pathologist. Oral Seminar at the American Speech Language Hearing Association Conference. New Orleans, LA.
- 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**

**Hilger, A.** (2022) Maximizing the Motor Speech Evaluation: A Crash Course for the Acute Care Speech-Language Pathologist. Colorado Speech Language Hearing Association. Virtual Platform.

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  
Corey Murphey, Dissertation Committee Member

### **Master's Thesis**

Carissa Fain, Thesis Advisor  
Mandy Sebestyen, Thesis Advisor  
Melanie Esver, Thesis Advisor  
Jacqueline McCurdy, Thesis Advisor  
Collin Eagen, Thesis Committee Member  
Evi Judge, Thesis Committee Member

### **Undergraduate Honors Thesis**

Kaily Georgen-Schwartz, Thesis Advisor



**TEACHING EXPERIENCES**

<b>University of Colorado Boulder</b>			
<b>Course Number &amp; Title</b> (* = graduate; ** = undergraduate)	<b>Year (Term)</b>	<b>Average Enrollment</b>	<b>Teaching Role</b>
SLHS 3116: Speech Science**	2023 (Spring); 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</b> (* = graduate; ** = undergraduate)	<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**

2023	ASHA Conference Planning Committee
2022	Ad-hoc Reviewer, Scientific Reports
2022	Ad-hoc Reviewer, PLOS ONE
2021	Ad-hoc Reviewer, Clinical Linguistics & Phonetics
2022, 2021	Ad-hoc Reviewer, Journal of Voice

2020	Ad-hoc Reviewer, Cerebral Cortex
2022, 2021, 2020	Ad-hoc Reviewer, Journal of Speech, Language, and Hearing Science
2022, 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