## Twenty-second Biennial Conference on Motor Speech: Motor Speech Disorders &

Speech Motor Control

Feb 25 – 28, 2026 Tempe, AZ

### Motor Speech Disorders/Speech Motor Control

Co-Conference Chair: Heather Clark, Ph.D.
Co-Conference Chair: Jordan Green, Ph.D.
Yana Yunusova, Ph.D.
Program Chair: Rene Utianski, Ph.D.
Ayoub Daliri, Ph.D.

Signal Analytics Workshop

Co-Conference Chair: Visar Berisha, Ph.D.
Co-Conference Chair: Julie Liss, Ph.D.
Program Char: Alan Wisler, Ph.D.

Publications: Christopher Dromey, Ph.D.

Conference Management: Mark Hakel, Ph. D.

**Acknowledgment:** This conference has been sponsored in part by the Department of Neurology, Mayo Clinic, Rochester, MN, the Division of Medical Sciences Communication Sciences and Disorders, Harvard, and the Institute for Rehabilitation Science and Engineering at Madonna Rehabilitation Hospital, Lincoln, NE.

# **WEDNESDAY, FEBRUARY 25, 2026**

### **Signal Analytics Workshop**

8:00 AM Welcome

#### 8:15 AM SAMS Session 1: Computational & Neural Foundations of Disordered Speech

- Speech inversion neural networks can quantify articulatory proximity of errored phones to correct productions
  - o N. Benway, S. Tabatabaee, D. Wang, B. Munson, J. Preston, C. Espy-Wilson
- Speech Acoustics Detect Preclinical Alzheimer's Risk Confirmed by Plasma p-Tau217 and APOE-ε4
  - o M. Eshghi
- Dorsal and Ventral LMC: A Tale of Two Laryngeal Motor Cortices
  - N. Kshatriya, G. Battistella, L. O'Flynn, R. Belisle, S. Frankford, K. Simonyan

### 9:15 AM Keynote Speaker: Dr. Kristina Simonyan

10:45 AM Break

### 11:00 AM SAMS Session 2: AI Modeling of Speech Production

- Identifying clinically relevant articulatory patterns within perceptually inaccurate rhotic productions using self supervised learning on lingual ultrasound data
  - o A. Eads, T. Kim, R. Lazarus, M. Leece, E. Hitchcock, J. Preston, B. McFee, H. Shu, T. McAllister
- A Clinically Informed Machine Learning Framework for Objective Prediction of Speech Intelligibility in Dysarthria
  - o K. Kothadia, V. Berisha, J. Liss

## 11:40-1:10 PM SAMS Poster Session

B. Story, K. Bunton	The relation of vowel identification to vocal tract resonance deflection patterns
	Electromyographic Analysis of Lip Muscle Activity During Speech and
R. Kaipa, E. Landis	Nonspeech Oral-Motor Tasks
W Dald	Controlling for natural variation in fundamental frequency is unnecessary to
K. Dahl	measure vocal motor learning
J. Choi, K. Hwang, G. Moya-Galé, E.	Automatic Speech Recognition for Differentiating Childhood Dysarthria from
Levy	Typical Speech
H. Rowe, E. DiStefano-Forti, T. Latham,	
G. Shinde, K. Stipancic, E. Martin, L.	Slow and Steady Wins The Race: The Influence of Speaking Rate on Outcomes
Roberts, K. Allison	of SPEAK OUT!® Therapy Program for Individuals with Parkinson's Disease
	Automatically-extracted rhythm metrics can distinguish the presence, subtype,
B. Parrell, E. San Segundo	and severity of ataxic dysarthria
A. Thompson, A. Wisler, C. Wynn, K.	Segmental Variability as a Predictor of Perceptual Learning of Children's
Tetzloff, S. Yoho, S. Borrie	Speech
M. Kadyrova, J. Wang, E. Sejdic, Y.	Deep learning-based tongue segmentation and motion quantification from in-
Yunusova	the-wild videos for motor neuron disease assessment
A W' 1 W T 1 CC C D	Intra-speaker variability inhibits speaker adaptation in automatic speech
A. Wisler, K. Tetzloff, S. Borrie	recognition
D I I - I I D M	Vowel Space Area and Vowel Articulation Index Increase After SPEAK
R. deJesus, J. Lee, B. Myers	OUT!® Therapy  Acoustic Analysis of Hypernasality in Dysarthria: An Evaluation of Automated
A El 4 1 A W' 1 C D '	
A. Fletcher, A. Wisler, S. Borrie	Approaches  Comparative Analysis of Articulatory Movements in Normal, Whispered, and
K. Teplansky, E. Rangel, J. Wang	Silent Vowel Production
E. Yeo, J. Liss, V. Berisha, D.	Universal Articulation Entropy: A Multilingual Phoneme Production Metric in
Mortensen	Dysarthria
T. Knowles, M. Philippone, M. Cuervo	Leveraging automatic forced alignment for acoustic segmentation of speech in
Cano, H. Cheng, J. Berry, A. Buchwald	Parkinson's disease
M. Cuervo Cano, H. Cheng, M.	Using the Montreal Forced Aligner to transcribe English speakers producing
Philippone, T. Knowles, A. Buchwald	non-native speech sequences
D. Rodriguez-Orozco, K. Teplansky, A.	Cross-Linguistic Articulatory Working Space and Phoneme Distinctiveness in
Narasimha, E. Rangel, J. Kwon, J. Wang	Spanish and English
A. Thompson, Y. Kim	Clear Speech Across Passage Reading in Parkinson's Disease
Z. Kriegel, S. Bolouri, D. Shukla, A.	Machine Learning Precision in Quantifying Speech Kinematics Across Fast
Gregory, A. Fullenkamp	Speech Rates
	Noise Robustness of Automated Goodness of Pronunciation (GOP) in Child
P. Kadambi, T. Mahr, K. Hustad	Speech
. ,	Listener Perceptions of Primary Progressive Apraxia of Speech: Intelligibility
Z. Kriegel, V. Davydzenka	with Progression and Training
H. Valentine, J. MacAuslan, M. Grigos,	Comparing Automated Formant Measurement Tools with Diverse Pediatric
M. Speights	Samples

1:10-2:30 PM Lunch and MSC Registration

### 2:30 PM MSC Session 1: Therapeutic Advances for Treating Motor Speech Disorders

- Treating acquired apraxia of speech: An ANDCS systematic review of research spanning seven decades
  - o K. Haley, L. Bislick, R. Johnson, C. King, K. Nealon, R. Utianski, J. Wambaugh
- Visual Biofeedback Accelerates Motor Learning for /ı/: Primary Outcome of a Preregistered Randomized Controlled Trial
  - o T. McAllister, E. Hitchcock, N. Benway, M. Lara, M. Leece, W. Liang, J. Preston
- Room to breathe: The effects of combined SpeechVive and EMST treatment for hypokinetic dysarthria
  - o E. Schieltz, K. Richardson, B. Kiefer, K. Stipancic, M. Troche, L. Roberts, J. Huber

3:30 PM Break

# 3:45 PM MSC Session 2: Cognition, Language, and Communication Participation

Working Memory and Its Role in Speech Production

- o Y. Merrikhi, A. Daliri
- Applying Systemic Functional Linguistics to Examine the Effects of Concurrent Task Demands on Linguistic Structure in Parkinson Disease
  - o M. Pourmohammadi, B. Archer, J. Whitfield
- Communicative Self-Efficacy in Adolescents with Down Syndrome
  - o M. Darling-White, T. Oglivie, K. Saunders, C. Baylor
- Turn-taking in conversations with people with Parkinson's Disease
  - o L. Eijk, A. Fletcher, T. Barrett, S. Meekings, S. Borrie

# 5:05 - 7:00 PM Reception and MSC Poster Session 1

M. Masapollo, M. Mims, V. Ramjee,	
S. Nittrouer	Sensorimotor control of speech movements by cochlear implant recipients
E. Levy, K. Hwang, J. Choi, G. Moya-	
Gale, K. Tetteh, J. Svec	Tutorial: How to audio-record and play back speech to include its intensity
	Validating automated speech timing methods across sentence, paragraph, and
L. Arzbecker, N. Cline, K. Tjaden	monologue tasks
H. Miller, M. Brickhouse, D. Hochberg,	
A. Nieto-Castanon, J. Tourville, B.	Neural Correlates of Speech Motor Sequence Learning in Primary Progressive
Dickerson, F. Guenther	Aphasia
J. Lee, S. Wolf, K. Sturges, K. Wilkinson	Relationship between tongue and jaw range of motion and acoustic vowel space in individuals with Down syndrome
A. Hilger, C. Cloud, K. Dunne-Platero	Improving Diagnostic Agreement in Dysarthria: Evidence from the Colorado Motor Speech Framework
M. Maffei	Early Motor and Language Predictors of Speech Motor Development in Late Talkers
K. Richardson, J. Huber	Respiratory Coordination Patterns During Metabolic and Speech-Related Breathing in Parkinson's Disease
J. Hunter, A. Goudarzi, E. Maas, B.	5
Keller, L. Escalada-Cebadero, G. Moya-	User Experience and Acceptability of a Web-based Application to Improve
Gale	Intelligibility in Parkinson's Disease
K. Stipancic, K. Gates, A. Mefferd	Speaker and listener contributions to the minimally detectable change of intelligibility
	Speech Perception in Developmental Speech Sound Disorders: An Updated
T. Munasinghe, B. Bhat, H. Terband	Systematic Review
G. Meade, H. Clark, J. Duffy, R.	Communication preferences and AAC support among individuals with
Utianski	progressive apraxia of speech
A. Nielsen, D. Boeg Thomsen	Preoperative Speech Characteristics in Children with Posterior Fossa Tumours: Results from the Danish Subgroup of the European CMS Study
D. Toglia, J. Vojtech, M. Díaz Cádiz,	
D. Dragicevic, K. Siedman, J. Rojas, A.	
Estrada, A. Haubrich, C. Stepp	Respiratory Kinematics during clear speech instruction in Parkinson's disease
M. Darling-White, A. Salazar Contreras,	"Sopa de Pescado": A Culturally and Linguistically Responsive Spanish
F. Murray, A. LaCross, T. Oglivie	Language Reading Passage for the Assessment of Motor Speech Disorders  An ERP study exploring Pre-Speech Auditory Modulation in response to
A. Sreedhar, A. Basciano, A. Daliri	Congruent and Incongruent Stimuli
K. Haley, A. Jacks	Defining the quality of distortion errors in acquired apraxia of speech
IX. Haley, A. Jacks	Are parents' better judges of their child's speech? Quantifying the parental
E. Wang, T. Mahr, K. Hustad	advantage in speech intelligibility
S. Kim, C. Daughtridge, M. Hirsch, A.	
Jacks, L. Johnson, M. Rodriguez, K.	How do distortion errors and phonemic errors differentiate among stroke
Haley	survivors with aphasia, apraxia of speech, and dysarthria?
B. Bhat, T. Munasinghe, E. Mueller, H.	Development and Validation of a Novel Nonword Task to Assess Speech
Terband	Accuracy in Children with SSD
K. Tetzloff, A. Wisler, S. Leopold, T.	
Barrett, S. Borrie	Perceptual learning of children's speech by naïve versus parent listeners

	Evaluation of prototype MagTrack articulograph and its effects on speech
C. Geissler, M. Jaye	production
A. Shapira, A. Schiff, V. Livneh, S.	production
Hassin-Baer, A. Ezra, A. Saar, T.	Smartphone-Based Speech Analysis for AI-Driven Dysphagia Detection in
Gurevich, Y. Manor	Parkinson's Disease
J. Koroschetz, K. Stipancic, J.	Turkiison s Discuse
Higginbotham, J. Huber	Comparing pause types to uncover pausing mechanisms in Parkinson's disease
J. Campbell, D. Byrd, L. Goldstein	Spectral and articulatory temporal properties of dysarthric speech
S. Ramani, T. Knowles, E. Hunter	Self-Perceptions of Vocal Effort and Fatigue in Parkinson's Disease: Exploring Communication Scenarios in Conversational Speech Task
S. Caspari, M. Beiting, T. Niculae-Caxi, E. Maas	A tale of two scoring systems: Speech accuracy as outcome measure in treatment studies for childhood apraxia of speech (CAS).
M. Lara, A. Eads, D. Shiller, J.	Does Speech Treatment Affect Perception? Evidence From a
Preston, E. Hitchcock, T. McAllister	Randomized Trial in Children With RSSD
L. Roberts, M. Cannito, K. Millard	Acoustic Markings of Lexical Stress in Oral Reading by Individuals with
	Parkinson's Disease Before and After Lee Silverman Voice Treatment
L. Bislick (Wilson), K. Haley, K.	Candidacy in apraxia of speech treatment: An ANCDS systematic review
Nealon, C. Purcell, R. Johnson, R.	of research spanning seven decades
Utianski, J. Wambaugh	
P. Rong, L. Heidrick	An interpretable acoustic-based approach for automated objective
	assessment and phenotyping of progressive communication disorders
D. Kung, P. McCabe, E. Bourne, P.	A pilot study of Rapid Syllable Transition Treatment (ReST) for adults
Avramovic, S. Brassel, D. Thomas	with Apraxia of Speech
J. Korkalainen, P. McCabe, R.	Effectiveness of Dynamic Tactile Temporal Cueing in improving speech
Shehata, S. Reedman, A. Webb, Y.	and communicative participation in children with cerebral palsy: A
Pollock, S. Markoff	qualitative study of parents' and clinicians' experience
B. Kim, M. Carl	Acoustic Properties of Diphthong and Speech Intelligibility in Down Syndrome
L. Eijk, S. Meekings	Interactional dynamics in online conversations with people who do and do not stutter

THURSDAY, FEBRUARY 26, 2026	
Motor Speech Conference	

### 8:00 AM: MSC Session 3: Data-Driven Diagnosis in Motor Speech Disorders

- Speaking Rate and Pause Ratio as Disease-Specific Markers of Communicative Participation and Depression in Spinocerebellar Ataxia and Parkinson's Disease
  - o H. Rowe, G. Shinde, K. Connaghan, A. Gupta
- The Power of Articulatory Priors: A Compact Model for Robust Motor Speech Disorder Classification
  - o F. Wang, R. Utianski, J. Duffy, L. Barnard, H. Botha
- A Temporal Analysis of Multimodal Oral Diadochokinetic Performance For Differential Assessment of Motor Speech Impairments in Neurodegenerative Diseases
  - o P. Rong, K. Marx

### 9:00 AM MSC Keynote 1: Dr. Hugo Botha

10:30 Break

10:45 - 11:45 AM: MSC Session 4: Dynamic Temporal and Tactile Cueing in Childhood Apraxia of Speech

- Cross-Linguistic Generalization of Segmental and Suprasegmental Gains from Dynamic Temporal and Tactile Cueing in Cantonese-English Bilingual Children with Childhood Apraxia of Speech
  - o E. Wong, M. Wong, S. Velleman
- A Randomized-Controlled Trial Examining the Effect of Dose Frequency on DTTC Treatment Outcomes for Children with CAS
  - o J. Case, M. Grigos, S. Velleman, E. Murray, D. Thomas, R. Cavanaugh, S. Anumandla, J. Iuzzini-Seigel
- Comparing Dynamic Temporal and Tactile Cueing (DTTC) with usual care: A randomized control trial
  - o P. McCabe, J. Preston, E. Maas, R. Heard, D. Thomas, E. Murray, A. Purcell, M. Gomez, M. Leece, S. Arora, T. Staples, J. Choo

#### 11:45 – 12:15 PM: MSC KEYNOTE SESSION 1 DISCUSSION

12:15 – 1:00 PM: Discussion about the future of CMS and ANCDS partnership

1:00 Adjourn for the day. Afternoon free.

### FRIDAY, FEBRUARY 27, 2026

### 8:00 AM: MSC Session 5: Targeting Neural Circuits for Speech Rehabilitation

- Cortical areas causally involved in speech motor memory retention
  - o N. Rao, R. Gendron, T. Manning, D. Ostry
- Systematic Individualized Motor Planning Learning Enhancement (SIMPLE) treatment with tDCS for Apraxia of Speech
  - A. Buchwald
- Targeted Deep Brain Stimulation of Motor Thalamus Improves Speech After Cerebral Lesions
  - o J. Ting, L. Tang, S. Nouduri, A. Damiani, N. Macellari, K. Stipancic, J. Gonzalez-Martinez, E. Pirondini

### 9:00 AM: MSC Keynote Session 2: Dr. Jeremy Greenlee

10:30 AM BREAK

## 10:45 AM MSC Session 6: Neural processes of Sensorimotor Integration

- Older adults who modulate during speech planning exhibit better speech error correction abilities
  - o A. Basciano
- Speech motor precision via inhibitory control in stuttering and non-stuttering adults
  - T. Saltuklaroglu, K. Reilly, A. Bowers, E. Brown, B. Rafferty, D. Casenhiser, A. Harkrider
- Age-related changes in neural responses to auditory feedback during speech production
  - o R. Rangwala, K. Brent, K. Ranasinghe, J. Houde, S. Nagarajan

#### 11:15 AM: MSC KEYNOTE SESSION 2 DISCUSSION

12:15 – 2:00 PM Lunch

# 2:00 - 4:00 MSC Poster Session 2

C. Dromey, N. Wynn	Task Priority in Divided Attention
H. Miller, D. Hochberg, A. Nieto-Castañon, B.	Clinical Predictors of Speech Motor Sequence Learning in
Dickerson, F. Guenther	Primary Progressive Aphasia
G. Moya-Gale, A. Goudarzi, E. Maas, X. Chen, L.	Using Noise-Augmented Feedback and Automatic Speech
Liu, B. Keller	Recognition to Improve Intelligibility, Ease of
	Understanding and Naturalness in Parkinson's Disease: A
	Phase 1a Study

R. Kaipa, K. Redman	Sleep and Speech Motor Learning: Effects on Retention of Novel Utterances
M. Hirsch, D. Dragicevic, D. Toglia, C. Stepp	Stop Releases during Atypical Bilabial Stop Productions in Parkinson's disease: An Articulatory Kinematic Approach
H. Rowe, A. Meier	First Report of Acquired Stuttering Following Androgen-
	Deprivation Therapy: Clinical, Psychosocial, and
	Neuroimaging Findings from a Single Case
Y. Zhang, R. Behroozmand	Effects of Attentional Instructions on Vocal Auditory
<b>G</b>	Feedback Control in Post-Stroke Aphasia
S. Honda, L. Max, A. Daliri	Delayed Auditory Feedback Differentially Influences Speech
	Production Variability in Stuttering and Typically Fluent
	Adults
H. Cheng, T. Murphy, B. Parrell, C. Niziolek	Production variability but not sensory acuity predicts
	speech sensorimotor adaptation
K. Allison, E. Heller Murray, K. Radville, A.	Development of speech timing control in the second year
Rutherford, A. Martens, A. Hong, N. Peterman,	of life
E. Zimmerman	
E. Wang, E. DiStefano-Forti, M. Grigos	First Time's the Charm: Lexical Stress Productions by
	Children with CAS
M. Ghasemi, Y. Ahmed, A. Coy, D. Mehta, J.	Effects of speaking task and style on Articulatory–Acoustic
Whitfield	Vowel Space (AAVS) estimation in Parkinson disease
H. Shin, A. Haenssler, Z. Scheier, J-P. Onnela, K.	From Clinician Ratings to Daily Life: Dysarthria and
Burke, J. Berry, J. Green, K. Connaghan	Communicative Participation in ALS
S. Frankford, A. Aaron, K. Siedman, C. Stepp	Factors Impacting the Reliability of Sensorimotor
	Adaptation of Voice Fundamental Frequency
T. Murphy, B. Parrell, C. Niziolek	Retention of Sensorimotor Adaptation to a Nonuniform
	Feedback Perturbation Field: A Preliminary Report
R. Hoyer, G. Welling, T. Maliakal, K. Bopoarai, S. Frankford	Motor_Speech_Perception_Production_Timing
S. Bruneaux, C. Spencer	Comparing early vs late learners of /』/
L. Bislick (Wilson), S. Eaton	Motor Imagery for Treatment Enhancement and Efficacy in
	Apraxia of Speech: Preliminary Findings
E. Tesch, A. Daliri, J. Liss	Auditory feedback relevance and error memory shape
	adaptive speech motor responses
T. Schnoor, B. Tucker, B. Story	A web interface for tube acoustic speech simulation
S. Ramani, T. Knowles, C. Glabach	The Influence of Task, Environmental, and Cognitive
	Demands on Self-Perceived Vocal Effort and Fatigue in
	Parkinson's Disease: A Qualitative Study
R. Karlin	Speakers do not learn word-specific auditory-motor delays
	in speech
D. Crasta, M. Kuruvilla-Dugdale	The Limits of Anchoring Perceptual Judgments in Dysarthria Assessment
A. Jacks, S. Kim, M. Rodriguez, L. Johnson, C. Daughtridge, M. Hirsch, K. Haley	Voice Onset Time in Left-Hemisphere Stroke Survivors
C. Geissler, J. Nellakra	Critically-damped oscillators and General Tau Theory
	exhibit similar error across speakers with different vocal
	tract dimensions

Atypical Vocal Responses to Pitch Feedback Perturbations
in Laryngeal Dystonia
Effectiveness of Dynamic Tactile Temporal Cueing in
improving speech and communicative participation in
children with cerebral palsy: A single case experimental
design
Impact of Radiation Therapy and Tumor Burden on Speech
Movements in Patients with Oropharyngeal Cancer
Speech Auditory–Motor Adaptation and Syllable Sequence
Learning Are Differentially Affected in Parkinson's Disease
and Essential Tremor but Independent of Deep Brain
Stimulation
In search of the factors that limit formant-shift adaptation:
studies of feedback frequency response and task
instructions
Sensorimotor adaptation can improve both production and
perception of a non-native vowel contrast
Validity of transitional and variability acoustic measures in
childhood apraxia of speech
Modelling speech rate in healthy speakers and speakers
with Parkinson's disease
Vowel production in children with Speech Sound Disorders:
Intrinsic fundamental frequency and acoustic correlates of
articulation of corner vowels in American English

### 4:00 PM MSC Session 7: Behavioral bases of Sensorimotor Integration

- Speech motor control and learning in young children who do and do not stutter
  - O V. Tumanova, S. Fiorante
- Assessing ecologically valid measures of auditory feedback control in older adults with and without Parkinson's disease
  - o N. Tomassi, H. Weerathunge, C. Dunsmuir, J. Bohland, F. Guenther, E. Stephen, C. Stepp
- Observation Alone Does Not Drive Speech Adaptation: Supporting a Role for Motor Planning
  - o B. Parrell, M. Bae, C. Naber, O. Ki, C. Niziolek, S. McDougle

# 5:00 PM MSC Session 8: Computational Models of Speech Production

- Random variation due to controller noise can account for both compensatory and following responses in a computational model of auditory feedback perturbations of vocal pitch
  - o J. Gaines, K. Brent, R. Rangwala, A. Pongos, V. Ramanarayanan, B. Parrell, K. Kim, J. Houde, S. Nagarajan
- Estimating uncertainty in subject-specific parameters: Physiologically constrained bootstrapping for sensorimotor adaptation experiments
  - o N. Quinteros, J. Parra, L. Severino, J. Cortes, G. Alzamendi, C. Stepp, F. Guenther, M. Zanartu
- Disentangling cerebellar computational mechanisms for speech compensation using simulation based inference
  - O A. Pongos, K. Kim, B. Parrell, V. Ramanarayanan, J. Gaines, S. Nagarajan, J. Houde

6:00 PM Adjourn for the day

### SATURDAY, FEBRUARY 28, 2026

### 8:00 AM MSC Session 9: Objective measures of pediatric motor speech disorders

• Towards a Data-Driven Motor Speech Evaluation: Acoustic Predictors of Intelligibility in Pediatric Acquired Brain Injury (ABI)

- o A. Mancini, A. Hilger
- Measuring Formants in Children with Variable Voices
  - o E. Heller Murray, K. Allison, B. Story
- Longitudinal differences in speaking rate and speech efficiency in children with cerebral palsy and their neurotypical age-mates
  - o T. Mahr, J. Soriano, K. Hustad

# 9:00 AM MSC Poster Session 3

S. Yoho Leopold, K. Tetzloff, S. Borrie	Enhancing Speech Understanding in Childhood Apraxia of
	Speech: A Perceptual Learning Approach for Clinicians
M. Masapollo, A. Stewart, A. Ludwig, F.	Inter-articulator speech motor timing and coordination
Dotsenko, S. Nittrouer	
A. Page, C. Mancinelli, J. Theurer, M. Jog, S.	Exploring the stability of self-rated communicative
Adams	effectiveness among individuals with hypophonia and
	Parkinson's disease
S. Adams, L. Wang, D. Cushnie-Sparrow, M.	A speech-to-noise feedback device for individuals with
Jog, V. Parsa	hypophonia and Parkinson's disease
J. Lee, N. Viswanathan, A. Olmstead, J. Chen, E.	Task-specific vowel acoustic changes in individuals with
Krajewski, L. Ghayedlou	dysarthria secondary to amyotrophic lateral sclerosis
J. Vuolo, C. Evans	Voice Onset Time Accuracy and Variability in CAS, DLD, SSD,
	and TD
N. Cline, J. Huber, K. Richardson, K. Stipancic,	Speech task and severity effects on acoustic measures in
K. Tjaden	hypokinetic dysarthria
B. Myers, R. deJesus	Long-term benefits of SPEAK OUT! therapy on dysarthria
	secondary to Parkinson's disease
J. Case, K. Sullivan, H. Deschaine, Y. Lu, M.	Effects of Caregiver Training on DTTC Treatment Outcomes in
Grigos	Childhood Apraxia of Speech: A Randomized Control Trial
L. Williams, M. Pourmohammadi, M. Ghasemi,	Perceptual Changes in Clear Speech Across a Passage in
J. Whitfield	Parkinson Disease: Acoustic Correlates and Talker Variability
E. Wong, A. Karamete, A. Noyan Erbaş	Review of Assessment and Diagnostic Standards of Childhood
	Apraxia of Speech in Turkish-Speaking Children
K. Haley, S. Kim, C. Daughtridge, L. Johnson, M.	How often are apraxia of speech and dysarthria diagnosed
Rodriguez, M. Hirsch, A. Jacks	after left hemisphere stroke?
E. Wang, K. Hustad	Content, modifiers, and functors, oh my! How linguistic
	classes impact intelligibility of habitual and slow speech in
	children with cerebral palsy
S. Hayes, J. Munday, K. Hustad	How do Viking Speech Scale levels relate to speech
	intelligibility scores?
J. Wang, C. Barnett Tapia, Y. Yunusova	Speech language pathology services for management of
	bulbar symptoms in myasthenia gravis: A scoping review
A. White, J. Munday, K. Hustad	Mapping Subjective Speech Severity Ratings to Objective
	Speech Measures in Adolescents with Cerebral Palsy
D. Ng, E. Wong	Assessment and management of multilingual children with
	Childhood Apraxia of Speech: A scoping review
Y. Chang	Gamified intervention for children with cerebral palsy:
	Integrating speech and upper extremity motor therapies
K. Connaghan, K. Burke, M. Demello, S.	Exploring Links Between Motor Speech Impairment and Social
Mandepudi, K. Furney, H. Shin, N. Barnett, B.	Connectedness in ALS
	•

Richburg, K. Carney, J-P Onnela, G. Usmanov,	
A. Dhand, J. Berry, J. Green	
D. Ng, J. Wu, P. McCabe	Speech characteristics of multilingual children with CAS:
	Clinical and cross-linguistic considerations
B. Bhat, E. Mueller, T. Munasinghe , H. Terband	The role of somatosensory perception in speech sound
	production in children with CAS
M. Tellingen, J. Hurkmans, A.M. van de Zande,	Speech-Music Therapy in the treatment of childhood apraxia
H. Terband, B. Maassen, R. Jonkers	of speech: a multiple single-subject treatment study.
M. van Tellingen, H. Terband, J. Hurkmans, B.	Working mechanisms of music in the treatment of childhood
Maassen, R. Jonkers	apraxia of speech: using music to cue gestural timing.
D. Knežević, E. Wang, E. Wong	Childhood Apraxia of Speech Worldwide: A Cross-Linguistic
	Review and Global Survey
J. Preston, E. Hitchcock, N. Benway, M. Leece,	Rhotic Generalization is More Rapid in Biofeedback than
T. McAllister	Motor-Based Treatment for Residual Speech Sound Disorder:
	Secondary Outcomes of a Randomized Controlled Trial
S. James, J. Huber, M. Redford	Predicting Inhalations at Pauses in Speech Produced by Older
	Adults with and without Parkinson's Disease
J. Anderson, R. Utianski, K. Grammatica, A.	Candidacy, Recommendation, and Pursuit of SpeechVive in
Brandimore, J. Gaziano	Patients in Neurodegenerative Diseases
S. Cook, E. Heller Murray, E. Maas	Defining Frustration in Intensive Speech Therapy for
	Childhood Apraxia of Speech: A Qualitative Approach
Y-F. Chiu, J. Longhurst, A. Fletcher, T. Loux	Dual task effect on speech pausing in Parkinson's Disease
C. Anderson, M. Clayards, D. Shiller	Optimizing Visual Acoustic Biofeedback: Effects of Feedback
	Frequency on Speech Motor Learning and Retention
T. Munasinghe, B. Bhat, H. Terband	Lexical stress contrast and variability in children with speech
	sound disorders
D. Crasta, M. Linneweh, D. Cukierkorn, E.	Linguistic Diversity in Dysarthria Assessment: Comparing
Kutlu, M. Kuruvilla-Dugdale	Perceptions of Native and Non-Native English Listeners

# 11:00 AM MSC Session 10: Objective measures of progressive motor speech disorders

- Articulator- and Direction-Specific Amplitude Distribution Characteristics of Talkers with Dysarthria due to Various Disease Types
  - o C. Raines, J. Lee, K. Tjaden, R. Callen, A. Mefferd
- Leveraging Multimodal Data for Estimating Severity of Bulbar ALS
  - V. Akundi, E. Sejdic, Y. Yunusova
- Speech timing and rhythm differences between Parkinson's disease phenotypes
  - o J. Vojtech, K. Smith, C. Stepp
- Translation of craniofacial surface electromyography into a clinically applicable objective assessment tool for bulbar involvement in amyotrophic lateral sclerosis
  - o P. Rong, L. Heidrick, G. Pattee

### 12:20 PM: Conference Ends