



15th Annual Eleanor M. Saffran Conference On Cognitive Neuroscience & Rehabilitation of Communication Disorders

Friday, September 10th & Saturday, September 11th, 2021

Consciousness and Human Communication: Breaking through Barriers to the use of Spoken Language

We invite you to attend the 15th Eleanor M. Saffran Conference on Cognitive Neuroscience and Rehabilitation of Communication Disorders, sponsored by the Department of Communication Sciences and Disorders at Temple University. This annual conference honors Eleanor Saffran's pioneering research contributions to our understanding of disorders of language and cognition as well as approaches to their rehabilitation. This year's conference explores the challenges facing individuals whose capacity to communicate with spoken language is diminished and how clinical researchers and practitioners are meeting the challenge.



Friday's meeting opens with a report on studies of the nature of inner speech in aphasia (Mackenzie Fama). Other talks on this first day focus on the use of augmentative/alternative communication (AAC) when spoken language is not an option. Uses of brain-machine interface (BMI) technology to support communication are presented (Jonathan Brumberg), and the ethical considerations in using BMI technology are discussed (Eran Klein). The afternoon includes talks on AAC options for children (Jennifer Kent Walsh) and adults (Aimee Dietz).

The translational workshop on Saturday includes a morning keynote address (Chris Klein) and an opportunity for the audience to participate in a panel discussion on issues relating to the use of AAC in clinical practice. In the afternoon, conference participants work with researchers for one of two translational workshops on AAC, one focusing on AAC and children (Cathy Binger and Jennifer Kent Walsh) and the other on AAC and adults (Aimee Dietz and Chitrali Mamlekar).

These workshops provide the opportunity for clinical practitioners, faculty, students, and researchers to share knowledge and experience related to the use of AAC in the rehabilitation of communication disorders

Day One
Friday, September 10th, 2021

Morning Session:

9:00–9:15

Nadine Martin, Ph.D., CCC-SLP, Temple University, Philadelphia, PA
Introduction & Welcoming Remarks

9:15-10:15

Mackenzie Fama, Ph.D., CCC-SLP, George Washington University
The Nature of Inner Speech in Aphasia.

At the conclusion of this activity, participants will be able to:

1. Describe the ways in which inner speech is defined across the literature and describe various approaches to studying inner speech.
2. Summarize prior research on inner speech in individuals with aphasia.
3. Explain how inner speech relates to other aspects of language processing in aphasia (e.g. word retrieval, phonological processing).

10:15-11:15

Jonathan Brumberg, Ph.D., University of Kansas

Brain-machine Interfaces for Control of Augmentative and Alternative Communication Devices.

At the conclusion of this activity, participants will be able to:

1. Describe brain signals used for controlling brain-machine interfaces.
2. Explain how brain-machine interfaces fit inside of an augmentative and alternative communication device framework.
3. Summarize factors that may influence successful control of a brain-machine interface.

11:15-11:30

Morning Break

11:30–12:30

Eran Klein, Ph.D., University of Washington

Ethical Considerations in Development of Brain Computer Interface Devices for Communication.

At the conclusion of this activity, participants will be able to:

1. Describe the range of ethical issues raised by the introduction of brain computer interface technology in communication.
2. Summarize how potential users of BCI for communication understand the potential benefits and costs to using a BCI.
3. Explain how researchers and clinicians can address and mitigate ethics concerns and ensure the emerging technology meets users needs.

Afternoon Session:

12:30–1:15

Lunch

1:15-2:45

Student Scholar Poster Session #1

2:45–3:45

Jennifer Kent-Walsh Ph.D., CCC-SLP, University of Central Florida

Word by Word: Supporting Early Language Growth in Children Using Graphic Symbol AAC.

At the conclusion of this activity, participants will be able to:

1. Describe one possible intervention approach for targeting early expressive semantics and grammar skills with children using AAC.
2. Describe three types of errors children make when learning new semantic-syntactic relations.
3. Describe three possible measures of language progress for children who use graphic symbol based AAC to communicate.

3:45–4:00

Afternoon Break

4:00–5:00

Aimee Dietz, Ph.D., CCC-SLP, Georgia State University

AAC for People with Aphasia: Theoretical Constructs for Avoiding Learned Non-Use

At the conclusion of this activity, participants will be able to:

1. Describe how implementing key principles of enuroplasticity can help avoid learned non-use in the application of AAC with people who have aphasia.
2. Summarize key steps of a novel AAC intervention for people with aphasia that relies on intersystemic reorganization as a theoretical construct.
3. Explain and debunk common AAC-related myths related to aphasia.

5:00 – 5:30

Q&A Discussion and Closing Remarks

Day Two
Saturday, September 11th, 2021

Translational Workshop:

The panel discussion will include officially, but all speakers who attend the Saturday workshop are invited to join in the panel or the general Q&A with audience. The morning part of the workshop is intended to provide an opportunity for the researchers and clinicians to engage in a discussion about issues raised in the keynote address and issues relating to the overall theme of the conference- breaking through the barriers of spoken language. This can be one of the highlights of the conference, as the discussions can be quite lively! The afternoon part of the workshop allows researchers and clinicians to engage in meaningful exercises that bridge the topics of the talks to the clinic.

Morning Session: Nadine Martin, Ph.D., CCC-SLP, Temple University, Philadelphia, PA, USA

- 9:00–9:10** *Introduction & Welcoming Remarks*
- 9:10-10:10** **Keynote Address-Chris Klein, M. Div., Hope College, nobarriersusa.org**
The Importance of Social Relationships in Developing Language
At the conclusion of this activity, participants will be able to:
1. Describe how social relationships enhance language development.
 2. Summarize how a team can help promote activities to increase social interaction.
 3. Explain how social interaction enhances the opportunities of being involved in the community.
- 10:10-10:40** **Panel Discussion**
- 10:40-11:00** **Q & A with Audience**
- 11:00-12:00** **Break and virtual lunch for student scholars with Judith Cooper**
- 12:00-1:30** **Student Scholar Poster Session #2**

Afternoon Breakout Sessions:

- 1:30–3:30** **Cathy Binger, Ph.D., CCC-SLP and Jennifer Kent-Walsh, Ph.D., CCC-SLP**
Workshop on Child Populations: Better Together: Working with Families and Educators to Improve Communication Outcomes for Children who Use AAC.
At the conclusion of this activity, participants will be able to:
1. Describe at least two key features of successful approaches to communication partners of children who use AAC.
 2. Describe the difference between teaching skills vs. strategies to communication partners of children who use AAC.
 3. Summarize the key features of the ImPAACT Program.
- 1:30–3:30** **Aimee Dietz, Ph.D., CCC-SLP and Chitrali R. Mamlekar, Ph.D., CF-SLP**
Workshop on Adult Populations: Using AAC as a Dual-Purpose Tool to Support Communication & Spoken Language for People with Aphasia: Breaking Down a Novel Intervention
At the conclusion of this activity, participants will be able to:
1. Describe a novel, 5-step AAC treatment for people with aphasia designed to support communication and elicit spoken language.
 2. Identify key elements of each step that are essential to successful intersystemic reorganization, thus supporting language recovery rather than learned non-use.
 3. Explain how to personalize treatment based on a person's aphasia profile (i.e., fluent vs. nonfluent; severe vs. mild, etc.)
- 3:30–3:40** **Reconvene as single group for final discussion**
- 3:40** **Adjourn**

Continuing Education

American Speech-Language and Hearing Association (ASHA)



ASHA CE
APPROVED PROVIDER

Temple University

Advanced Level, Professional Area

Up to 1.25 ASHA CEUs

Note: To obtain continuing education units for poster sessions on day one and day two, participants must attend six poster presentations for each day that CEUs are requested.

Sponsorship & Support

This Conference is sponsored by:

**Eleanor M. Saffran Center
Department of Communication Sciences & Disorders
College of Public Health, Temple University**

This conference is supported by:

Eleanor M. Saffran Cognitive Neuroscience Conference Endowment

National Institute on Deafness & Other Communication Disorders (NIDCD)

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Speaker Disclosures:

Cathy Binger is receiving a speaking fee for this presentation; she is receiving grants supported by NIH.

Jonathan Brumberg is receiving a speaking fee for this presentation; he is employed and received a salary from the University of Kansas. He has no nonfinancial relationships to disclose.

Aimee Dietz is receiving a speaking fee for this presentation. She was employed by and had received a salary from The University of Cincinnati; She is employed by and receives a salary from Georgia State University. She also received software support for her NIH grants through Tobii Dynavox.

Mackenzie Fama is receiving a speaking fee for this presentation. She has no nonfinancial relationships to disclose.

Jennifer Kent-Walsh is receiving a speaking fee for this presentation; she is receiving grants through NIDCD. She has no nonfinancial relationships to disclose.

Chris Klein is receiving a speaking fee for this presentation. He has no nonfinancial relationships to disclose.

Eran Klein is receiving a speaking fee for this presentation. He has no nonfinancial relationships to disclose.

Chitrali R. Mamlekar received a salary from the University of Cincinnati and Misericordia University. She also served as an RA during her doctoral studies.

Student Scholar Presenter Disclosures:

Kristen Ackley has no financial or non-financial relationships to disclose.

Guillem Cadena received pre-doctoral scholarship from Ministry of Education-Andorra and has non non-financial relationships to disclose

Sharice Clough has no financial or non-financial relationships to disclose.

Victoria Diedrichs receives a salary from Ohio State University and has non non-financial relationships to disclose.

Anne Marie Finley has no financial or non-financial relationships to disclose.

Gerald Imaezue receives a salary from the Graduate Center City University of New York and has non-financial relationships to disclose.

Emily Morrow has no financial or non-financial relationships to disclose.

Kyriaki Neophytou has no financial or non-financial relationships to disclose.

Matthew Sayers has no financial or non-financial relationships to disclose.

Rajath Shenoy has grants and intellectual property through the Manipal College of Health Professions and has no non-financial relationships to disclose.

Dawn Sowers has no financial or non-financial relationships to disclose.

Brittany Stoker received a stipend from the University of Delaware and has no non-financial relationships to disclose.

Meredith Suhr has no financial or non-financial relationships to disclose.

Farzaneh Vahabi receives a salary from Ohio University and has no non-financial relationships to disclose.

Friday Student Scholar Poster Session:

Farzaneh Vahabi

At the conclusion of this activity, participants will be able to:

1. Describe the concept of verbal chunking ability as a general function of verbal working memory ability.
2. Summarize details related to two specific measures developed to examine verbal chunking ability and sentence comprehension ability.
3. Explain the general study findings.

Gerald Imaezue

At the conclusion of this activity, participants will be able to:

1. Describe the relative clinical benefits of applying machine learning compared to the traditional statistical approach to posttreatment follow-up in aphasia rehabilitation.
2. Summarize our methodological approach to applying machine learning to posttreatment follow-up in aphasia rehabilitation.
3. Understand and explain the results of our study.

Kristen Ackley

At the conclusion of this activity, participants will be able to:

1. Describe current recommendations for AAC vocabulary organization.
2. Summarize currently available AAC display arrangement options to clinicians and individuals who use AAC.
3. Explain the clinical importance of consistency in vocabulary organization and arrangement.

Kyriaki Neophytou

At the conclusion of this activity, participants will be able to:

1. Describe what white matter is and how it is implicated in neuromodulation treatments.
2. Summarize how white matter is affected in Primary Progressive Aphasia and how it relates to language processing.
3. Explain the need for having research aiming at better understanding the neural changes in Primary Progressive Aphasia and the implications for neuromodulation therapies.

Matthew Sayers

At the conclusion of this activity, participants will be able to:

1. Describe the relationship between serial position effects in repetition and semantic and phonological processing under the Interactive Activation model.
2. Summarize the methods used for calculating serial position effects and working memory load effects.
3. Explain the clinical significance of our finding that semantic working memory load effects were associated with loss of primacy in sentence repetition.

Sharice Clough

At the conclusion of this activity, participants will be able to:

1. Describe the social and pragmatic functions of emoji in computer-mediated communication.
2. Summarize how multiple interpretations of emoji create rich, flexible multimodal communication contexts between sender and receiver.
3. Explain ways in which emoji perception may be disrupted after brain injury and possible implications for social media use and participation.

Victoria Diedrichs

At the conclusion of this activity, participants will be able to:

1. Describe the evidence in support of compensatory cortical mechanisms for semantic and phonological processing.
2. Summarize the preliminary findings from a resting state functional connectivity analysis in people with post-stroke aphasia.
3. Explain the rationale for identifying sites of cortical compensation and implications for future treatment studies.

Saturday Student Scholar Poster Session:

Ann Marie Finley

At the conclusion of this activity, participants will be able to:

1. Describe the long-standing debate in cognitive neuroscience regarding the relationship between direct sensorimotor experience and representation of sensorimotor-salient concepts
2. Summarize the representation and use of sensorimotor-salient concepts in the absence of direct experience
3. Explain possible compensatory mechanisms used in acquiring and maintaining sensorimotor-salient concepts in the absence of direct experience

Brittany Stroker

At the conclusion of this activity, participants will be able to:

1. Describe the range of communicative participation perceptions provided by people with aphasia before and during COVID-19
2. Summarize the differences in current vs. memory-based/pre-COVID-19 appraisal of participants' communicative participation
3. Explain possible interpretations for differences in memory-based appraisal compared to past self-report of communicative participation

Dawn Sowers

At the conclusion of this activity, participants will be able to:

1. Describe key features on the device SLPs use to try to optimize access
2. Summarize SLPs decision-making process with regard to access and AAC
3. Explain at least three important factors in access assessment for children with motor impairments

Emily Morrow

At the conclusion of this activity, participants will be able to:

1. Describe a novel approach to studying memory for conversation, as well as partners' ability to predict each other's learning, in individuals with traumatic brain injury and their familiar conversation partners.
2. Summarize what we know about memory for conversation in neurotypical individuals and describe preliminary findings regarding memory for conversation following traumatic brain injury
3. Explain the importance of using ecologically valid tasks to investigate the role of memory in communication for clinical populations

Guillem Olive

At the conclusion of this activity, participants will be able to:

1. Describe the language-related structural connectome of participants with aphasia
2. Summarize the importance of verbal short-term memory integrity in word learning and therapy gains in aphasia
3. Explain the possible neural reorganization of white-matter tracts supporting verbal short-term memory after brain insult

Meredith Suhr

At the conclusion of this activity, participants will be able to:

1. Describe the contexts in which the Speech Generating Devices are present and accessible during the day
2. Summarize the relationship between device access, use, and context
3. Explain how these relationships can inform how professionals can support language use throughout the school day for children with Autism who use AAC

Rajath Shenoy

At the conclusion of this activity, participants will be able to:

1. Describe the cue distribution of persons with aphasia who underwent a mobile based program that implemented the modified phonological component analysis (PCA-based) training in an Indian language
2. Summarize intra-subject that is reported across aphasia literature
3. Explain the cueing hierarchy pattern showed intra-subject variability both across sessions and within sessions