# MANUEL JOSE MARTE

December 2023

Center for Brain Recovery Boston University 635 Commonwealth Avenue Boston, MA 2215 Personal Website
Google Scholar
Twitter

✓ Email

## **EDUCATION**

2025 **Ph.D., Speech, Language & Hearing Sciences**† Boston University

2016 **M.S., Communication Disorders**State University of New York at New Paltz

2014 **B.A., Speech & Hearing Science** University at Buffalo

### RESEARCH INTERESTS

Aphasia, Bilingualism, Health disparities, Machine learning

## PEER-REVIEWED PUBLICATIONS

- 1. **Marte, M. J.**, Addesso, D.^, & Kiran, S. (2023). Association Between Social Determinants of Health and Communication Difficulties in Poststroke U.S. Hispanic and Non-Hispanic White Populations. *American Journal of Speech-Language Pathology*. doi: 10.1044/2023\_AJSLP-23-00232
- 3. **Marte M. J.**<sup>‡</sup>, Carpenter, E.<sup>‡</sup>, Falconer, I., Scimeca. M., Abdollahi, F., Peñaloza, C. & Kiran, S. (2022). LEX-BADAT: Language EXperience in Bilinguals With and Without Aphasia DATaset. *Frontiers in Psychology*. 13:875928. doi: 10.3389/fpsyg.2022.875928

  3 Open Access

### **WORKING PAPERS**

- 4. Peñaloza, C.‡, **Marte, M. J.**‡, Billot, A., & Kiran, S. (*in preparation*). Cross-language interactions during sequential anomia treatment in three languages: Evidence from a trilingual person with aphasia.
- 5. Cordella, C., **Marte, M. J.**, Liu, A., & Kiran, S. (*in preparation*). An Introduction to Machine Learning (ML) for Speech-Language Pathologists: Concepts, Terminology, and Emerging Applications.
- 6. **Marte, M. J.**, Carpenter, E., Scimeca, M., Russell, M., Falconer, I., Peñaloza, C., & Kiran, S. (*in preparation*). Machine learning predictions of language recovery in bilingual aphasia: Aligning model insights with clinical evidence.

7. Russell, M., Carvalho, N., **Marte, M. J.**, & Kiran, S. (*in preparation*). Aphasia recovery. *Annual Review of Linguistics*.

#### **GRANT SUPPORT**

2020–2022 NIH/NIDCD Ruth L. Kirschstein Institutional National Research Service Award.
Advanced Research Training in Communication Sciences and Disorders.
5T32DC013017-05

### **HONORS & AWARDS**

- 2023 NIH/NIDCD Young Investigator Travel Fellowship Award 2023 Academy of Aphasia
- 2023 NIH/NIDCD RSCA Student Fellowship Award 2023 Clinical Aphasiology Conference
- 2022 NIH/NIDCD Student Scholar Award
  16th Annual Eleanor M. Saffran Conference on Cognitive Neuroscience and Rehabilitation of Communication Disorders
- 2021 NSF Research Traineeship Program–Understanding the Brain: Neurophotonics DGE-1633516
- 2014 Center for Undergraduate Research & Creative Activities Grant University at Buffalo

### PEER-REVIEWED CONFERENCE POSTERS & PRESENTATIONS

Oral Presentations

- 2023 **Marte, M. J.**, Addesso, D.^, & Kiran, S. (*2023, May*). Social determinants of health and poststroke communication difficulties in Hispanic and non-Hispanic white adults. *Clinical Aphasiology Conference 2023*, Atlantic City, NJ.
- 2022 **Marte, M. J.**, Scimeca, M., Addesso, D., Abdollahi, F., & Kiran, S. (2022, November). Hispanic Stroke Care in the United States: Insights from Epidemiology, Health Disparity, and Clinical Practice. American Speech-Language-Hearing Association Convention 2022, New Orleans, LA.

Poster Presentations

- 2023 Carpenter, E., Grasemann, U., Scimeca, M., **Marte, M. J.**, Russell, M., Peñaloza, C., Miikkulainen, R., & Kiran, S. (*submitted*). Simulating therapy-induced recovery in bilingual aphasia via computational modeling and machine learning approaches. *13th World Congress for Neurorehabilition*, Vancouver, Canada.
  - Carpenter, E., Braun, E. J., **Marte, M. J.**, Yücel, M. A., Boas, D. A., & Kiran, S. (2023, October). fNIRS Functional Connectivity in Chronic Post-Stroke Aphasia: A Pilot Study. 15th Annual Meeting of the Society for the Neurobiology of Language, Marseille, France.

- **Marte, M. J.**, Carpenter, E., Scimeca, M., Russell, M., Falconer, I., Peñaloza, C., & Kiran, S. (2023, October). Predicting treatment responsiveness in bilingual aphasia: The role of dual language information. *Academy of Aphasia 61st Annual Meeting*, Reading, England.
- Carpenter, E., **Marte, M. J.**, Scimeca, M., Russell, M., Falconer, I., Peñaloza, C., & Kiran, S. (2023, October). Factors influencing language impairment in bilingual aphasia. *Academy of Aphasia 61st Annual Meeting*, Reading, England.
- Braun, E. J., Carpenter, E., Gao, Y., **Marte, M. J.**, Yücel, M. A., Boas, D. A., & Kiran, S. (*2023, May*). Cortical activity patterns for narrative production in individuals with and without aphasia via functional near-infrared spectroscopy (fNIRS). *Clinical Aphasiology Conference 2023*, Atlantic City, NJ.
- 2022 Scimeca, M., Peñaloza, C., Carpenter, E., **Marte, M. J.**, Falconer, I., Combs, A., Gray, T., Shamapant, S., & Kiran, S. (*2022, December*). Telerehabilitation for language deficits in Spanish-English individuals with post-stroke aphasia. *12th World Congress for Neurorehabilitation*, Vienna, Austria.
  - Carpenter, E., Braun, E. J., **Marte, M. J.**, Scimeca, M., Yücel, M. A., Boas, D. A., & Kiran, S. (2022, October). Neuroscience in the Everyday World: Cortical Activation during Computer-Based Conversation Tasks Using Integrated fNIRS-EEG. 14th Annual Meeting of the Society for the Neurobiology of Language, Philadelphia, PA.
  - Addesso, D.^, **Marte, M. J.**, Abdollahi, F., & Kiran, S. (2022, September). Social determinants of health contributing to disparities in stroke-associated variables in Hispanic populations. 16th Annual Eleanor M. Saffran Conference on Cognitive Neuroscience and Rehabilitation of Communication Disorders, Philadelphia, PA.
  - **Marte, M. J.**, Addesso, D.^, Abdollahi, F., & Kiran, S. (*2022, September*). U.S. Hispanic ethnicity and stroke- and neurorehabilitation-associated outcomes: Disparity-driven heterogeneity. *16th Annual Eleanor M. Saffran Conference on Cognitive Neuroscience and Rehabilitation of Communication Disorders*, Philadelphia, PA.
  - Scimeca, M., Carpenter, E., **Marte, M. J.**, Combs, A., & Kiran, S. (2022, September). Enabling access to post-stroke rehabilitation in Hispanic bilinguals with aphasia: Lessons learned and challenges ahead. 16th Annual Eleanor M. Saffran Cognitive Neuroscience Conference, Philadelphia, PA.
  - **Marte, M. J.**, Billot, A., Peñaloza, C., & Kiran, S. (2022, June). Cross-linguistic effects of a semantic treatment for anomia provided in three languages: Evidence from multilingual aphasia. *International Aphasia Rehabilitation Conference 2022*, Philadelphia, PA.
- 2021 Braun, E. J., Gao, Y., Carpenter, E., **Marte, M. J.**, Scimeca, M., Abdollahi, F., Yücel, M. A., Boas, D. A., & Kiran, S. (2021, October). Use of fNIRS to investigate cortical activation for conversational responses and narrative discourse. *Society for functional Near-Infrared Spectroscopy 2021*, virtual conference.
  - **Marte, M. J.** & Kiran, S. (2021, October). Influences on cognate facilitation in healthy bilinguals and bilinguals with aphasia. *13th Annual Meeting of the Society for the Neurobiology of Language*, virtual conference.
- 2015 **Marte, M. J.** & Anema, I. (2015, May). Training Effects on Suprasegmental Features in Oral Reading of Non-Native English Speakers. *10th International Symposium on Bilingualism*, New Brunswick, NJ.

2014 Oldani, P., Hogan, C., Sauvageau, A., **Marte, M. J.**, Rudz, D., Agulia, B., Hanley, S., Quinn, T., Sharma, S., & Scerra, N. (Mentor: Ohrbach, R.) (2014, November). The effects of varying levels of repeated anodal transcranial direct current stimulation (tDCS) of the motor cortex on visuo-motor task performance. *Biomedical Engineering Society 2014 Annual Meeting*, San Antonio, TX.

## **INVITED TALKS**

- 2023 **Marte, M. J.** Predicting treatment response in bilingual aphasia: An exploratory machine learning approach. *T32 Site Visit*, Boston University, Boston, MA.
- 2022 **Marte, M. J.**, Carpenter, E., Scimeca, M., Kiran, S. Insights into bilingual aphasia from the PROCoM clinical trial. *T32 Clinical Connections Seminar*, University of Connecticut, Storrs, CT.
- 2017 **Marte, M. J.** Augmentative Communication. New York State Occupational Therapy Association Conference, Albany, NY.

### **TEACHING**

Workshops

- 2023 Machine Learning Approaches to Analyzing Brain and Health Data. Hariri Institute, Boston University.
- 2021 Principal Component Analysis in Aphasia Research.
  Aphasia Research Laboratory, Boston University.

#### Guest Lectures

# Boston University

Introduction to bilingual aphasia.

SAR SH 548 Introduction to Language Disorders Across the Lifespan Fall 2022

Assessment and intervention in bilingual adults with aphasia. SAR SH725 Bilingual Considerations in Language Assessment and Intervention Spring 2023

## Emerson College

Topics in bilingual aphasia. CD 690 Aphasia Summer 2021, Spring 2022, Summer 2022, Spring 2023

# San Francisco State University

Navigating clinical and scientific training in speech-language pathology. SLHS 756 Right Hemisphere Syndrome, TBI, Dementia in Communicative Disabilities Spring 2023

## Teaching Assistant

State University of New York at New Paltz

CMD 301 Speech Science Spring 2015, Spring 2016

CMD 305 Hearing Science

Fall 2014, Fall 2015

CMD 310 Anatomy & Physiology of the Speech and Hearing Mechanism Fall 2014, Fall 2015

## ACADEMIC MENTORSHIP & SUPERVISION

- 2023 Conversation, Health, Art, Technology Group Supervisor
- 2022–2023 Sofia Garcia Martinez (University of Illinois at Chicago '23) M.S. in Biomedical Visualization, Master's Thesis Deliverable
- 2021–2023 David Addesso (Boston University '22)

  Undergraduate Research Opportunities Program (UROP) Mentee
- 2021 Hongli Zheng (Boston University '22) *UROP Mentee*
- 2021 Emily Benson-Tyler (Port Washington High School '22)

  Research in Science & Engineering Program Mentee; Regeneron Science Talent Search

### **SERVICE**

**Events** 

- 2022 Massachusetts High School Science & Engineering Fair Judge
- 2022 BIG BRAIN WORKSHOP 2022 Session Chair
- 2021 46th Annual Boston University Conference on Language Development Talk and Poster Moderator

Ad-hoc Reviewer

- 2023 Neurorehabilitation and Neural Repair, BioMedical Engineering OnLine
- 2021 Brain Communications

## **DEVELOPMENT ACTIVITIES**

- 2023 ASHA Mentoring Academic-Research Careers (MARC)
- 2022 ASHA Minority Student Leadership Program (MSLP)
- 2022 ASHA Student to Empowered Professional (S.T.E.P.)

2021 National Science Foundation Research Traineeship Program Understanding the Brain: Neurophotonics

#### SELECTED CLINICAL EXPERIENCE

2016-2020 Northeast Center for Rehabilitation and Brain Injury, NY.

**Speech–Language Pathologist and Practicum Supervisor**. Evaluation and treatment services for adults with augmentative and alternative communication needs, ventilator dependency, executive dysfunction, pragmatic deficits, short- and long-term memory deficits, disorders of consciousness, voice, language, motor speech, auditory processing, neurogenic fluency, cognitive communication, and feeding and swallowing disorders. Mentoring and oversight of graduate-level student clinicians in this setting.

2018-2020 Ghent Rehabilitation and Nursing Center, NY

**Speech–Language Pathologist**. Evaluation and treatment services for older adults with dementia, short- and long-term memory deficits, language, cognitive communication, and feeding and swallowing disorders.

## PROFESSIONAL LICENSES AND CERTIFICATIONS

Certificate of Clinical Competence from the American Speech-Language-Hearing Association

Massachusetts Professional Licensure in Speech-Language Pathology

New York Professional Licensure in Speech-Language Pathology

### PROFESSIONAL MEMBERSHIPS

ASHA SIG 2: Neurogenic Communication Disorders

ASHA SIG 14: Cultural and Linguistic Diversity

Society for the Neurobiology of Language

### **MISCELLANEOUS**

Languages: English (native), Spanish (native), Italian (~A1).

*Programming:* R/RStudio, Python, LATEX.

Software: Qualtrics, Computerized Language ANalysis (CLAN), Adobe Illustrator, Microsoft Office.

<sup>†</sup>anticipated.

<sup>&</sup>lt;sup>‡</sup>shared first authorship.

<sup>&</sup>lt;sup>^</sup>student mentee.