

# MANUEL JOSE MARTE

June 2024

Center for Brain Recovery  
Boston University  
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Boston, MA 2215

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## EDUCATION

2026 **Ph.D., Speech, Language & Hearing Sciences<sup>†</sup>**  
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

## RESEARCH EXPERIENCE

*Institute for Technology in Psychiatry, McLean Hospital, Harvard Medical School*

2024–Present **Senior Clinical Research Assistant.**  
The Functional Neuroimaging & Bioinformatics Lab.  
PI: Einat Liebenthal.

*Sargent College, Boston University*

2020–Present **Doctoral Student Research Assistant.**  
Center for Brain Recovery.  
PI: Swathi Kiran.



*State University of New York at New Paltz*

2015–2016 **Graduate Student Research Assistant.**  
Department of Communication Disorders.  
PI: Dana Arthur & Inge Anema.

*University at Buffalo*

2013–2014 **Undergraduate Student Research Assistant.**  
Center for Orofacial Pain Research.  
PI: Richard Ohrbach.

## PEER-REVIEWED PUBLICATIONS

1. **Marte, M. J.**, Addesso, D.<sup>^</sup>, & Kiran, S. (2024). 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
2. **Marte, M. J.**, Peñeloza, C., & Kiran, S. (2023). The cognate effect on lexical access in bilingual aphasia: Evidence from the Boston Naming Test. *Bilingualism: Language and Cognition*. doi: 10.1017/S1366728923000251  
 Open Access
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  
 Open Access

## WORKING PAPERS

4. Cordella, C., **Marte, M. J.**, Liu, H., & Kiran, S. (*resubmitted*). An introduction to machine learning for speech-language pathologists: Concepts, terminology, and emerging applications. *Perspectives of the ASHA Special Interest Groups*.
5. **Marte, M. J.**<sup>‡</sup>, Russell, M.<sup>‡</sup>, Carvalho, N.<sup>‡</sup>, & Kiran, S. (*resubmitted*). Charting the Course of Aphasia Recovery: Factors, Trajectories, and Outcomes. *Annual Review of Linguistics*.
6. Scimeca, M., Peñaloza, C., Carpenter, E., **Marte, M. J.**, Russell, M., & Kiran, S. (*under review*). The evolution of word retrieval errors during semantic feature-based therapy in bilingual aphasia.
7. **Marte, M. J.**, Carpenter, E., Scimeca, M., Russell, M., Peñaloza, C., & Kiran, S. (*under review*). Machine learning predictions of recovery in bilingual post-stroke aphasia: Aligning insights with clinical evidence.
8. Carpenter, E., Scimeca, M., **Marte, M. J.**, Russell, M., Peñaloza, C., & Kiran, S. (*in preparation*). Moving away from parallel and differential language impairments in bilingual aphasia: A machine learning approach to the identification of bilingual aphasia clinical profiles.
9. Peñaloza, C.<sup>‡</sup>, **Marte, M. J.**<sup>‡</sup>, Billot, A., & Kiran, S. (*in preparation*). Cross-language interactions during sequential anomia treatment in three languages: Evidence from a trilingual person with aphasia.

## GRANT SUPPORT

- 2024–2026 *NIH/NIDCD Doctoral Research Fellowship*.  
Research Supplements to Promote Diversity in Health-Related Research.  
3R01DC020965-02S1 (Award: \$111,930)
- 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: Neurophotonic*  
DGE-1633516
- 2014 *Center for Undergraduate Research & Creative Activities Grant*  
University at Buffalo

## PEER-REVIEWED CONFERENCE POSTERS & PRESENTATIONS

### *Oral Presentations*

- 2024 **Marte, M. J.**, Gillis, B., Galvin, C., Rigolo, L., Tie, Y., Kiran, S., Liebenthal, E. (*submitted*). Emotional processing in post-stroke aphasia: Insights from moment-by-moment valence ratings during movie-watching. *American Speech-Language-Hearing Association Convention 2024*, Seattle, WA.
- Scimeca, M.<sup>‡</sup>, Carpenter, E.<sup>‡</sup>, **Marte, M.J.<sup>‡</sup>**, & Kiran, S. (2024, March) Predicting language recovery for bilingual individuals with aphasia. *Brain Injury Association of Massachusetts 2024 Conference*, Marlborough, MA.
- 2023 **Marte, M. J.**, Addesso, D.<sup>^</sup>, & 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.<sup>^</sup>, 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*

- 2024 Russell-Meill, M., Carpenter, E., **Marte, M.J.**, Scimeca, M., Peñaloza, C., & Kiran, S. (*submitted*). Beyond Naming: Promoting Generalization in Bilingual Aphasia with Semantic Feature-Based Treatment. *Academy of Aphasia 62nd Annual Meeting*, Nara, Japan.
- Galvin, C., Rigolo, L., **Marte, M. J.**, Gillis, B., Tie, Y., Kiran, S., Liebenthal, E., Golby, A. (*submitted*). Developing a movie clip database for naturalistic brain mapping. *Society for Neuroscience Conference 2024*, Chicago, IL.
- Marte, M. J.**, Gillis, B., Galvin, C., Rigolo, L., Tie, Y., Kiran, S., Liebenthal, E. (*submitted*). Dynamics of emotion processing in post-stroke aphasia: Insights from continuous valence ratings during naturalistic movie viewing. *Society for Neuroscience Conference 2024*, Chicago, IL.
- Scimeca, M., Carpenter, E., **Marte, M.J.**, Russell-Meill, M., Peñaloza, C., & Kiran, S. (*submitted*). Towards Improved Guidelines for Rehabilitation in Bilingual Aphasia: Using Computational Tools to Inform Clinical Practice. *American Speech-Language-Hearing Association Convention 2024*, Seattle, WA.

Russell-Meill, M., Carpenter, E., **Marte, M.J.**, Scimeca, M., Peñaloza, C., & Kiran, S. (*submitted*). Outcomes of Semantic Feature-Based Therapy in Bilingual Aphasia: Patterns of Generalization Across Languages. *American Speech-Language-Hearing Association Convention 2024*, Seattle, WA.

Scimeca, M., Carpenter, E., **Marte, M. J.**, Russell, M., Peñaloza, C., & Kiran, S. (2024, July) Patterns of language recovery following word retrieval treatment for bilinguals with aphasia. *International Aphasia Rehabilitation Conference 2024*, Brisbane, Australia.

Scimeca, M., Carpenter, E., **Marte, M.J.**, Russell, M., Peñaloza, C., & Kiran, S. (2024, May) Assessing assessment in bilingual aphasia: Towards cultural-linguistic equity in clinical testing. *Clinical Aphasiology Conference 2024*, Big Island of Hawai'i, HI.

Carpenter, E., Grasmann, U., Scimeca, M., **Marte, M.J.**, Russell, M., Peñaloza, C., Miikkulainen, R., & Kiran, S. (2024, May) A randomized controlled trial examining the predictive power of computational simulations on treatment-induced naming outcomes in Spanish-English bilinguals with aphasia. *Clinical Aphasiology Conference 2024*, Big Island of Hawai'i, HI.

Carpenter, E., Grasmann, U., Scimeca, M., **Marte, M. J.**, Russell, M., Peñaloza, C., Miikkulainen, R., & Kiran, S. (2024, May). Simulating therapy-induced recovery in bilingual aphasia via computational modeling and machine learning approaches. *13th World Congress for Neurorehabilitation*, Vancouver, Canada.

- 2023 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.<sup>^</sup>, 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

2024 **Marte, M. J.** Two languages, one brain: Understanding bilingual aphasia; Dos idiomas, un cerebro: Comprensión de la afasia bilingüe. *Charlas Científicas*, University of Arizona, Tucson, AZ.

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, Spring 2024

### *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*

- 2024 *Scientific Reports*
- 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 Neuroscience

## MISCELLANEOUS

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

*Programming:* R, Python, L<sup>A</sup>T<sub>E</sub>X.

*Software:* Continuous Affect Rating and Media Annotation (CARMA), PsychoPy, Qualtrics, Computerized Language ANalysis (CLAN), Adobe Illustrator, Microsoft Office.

<sup>†</sup>anticipated.

<sup>‡</sup>shared first authorship.

<sup>^</sup>student mentee.