

MANUEL JOSE MARTE

May 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**[†]
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 **Doctoral Student 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.[^], & 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.**[‡], Carpenter, E.[‡], 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. (*in revision*). 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.**[‡], Russell, M.[‡], Carvalho, N.[‡], & Kiran, S. (*in revision*). 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. (*submitted*). 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. (*submitted*). 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.[‡], **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.

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: Neurophotonics*
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.[‡], Carpenter, E.[‡], **Marte, M.J.[‡]**, & 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.[^], & 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

- 2024 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*.

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*.

Carpenter, E., Grasemann, 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*.

Carpenter, E., Grasemann, 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.[^], 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^AT_EX.

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

[†]anticipated.

[‡]shared first authorship.

[^]student mentee.