MARIE TANO

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EDUCATION

Stanford University, PhD in Linguistics   Expected Jun. 2027
Dissertation: *Language as a Marker of Identity in Policing: Using machine learning
to investigate Racial Bias and Respect in Traffic Stops*

Pomona College, Bachelor of Arts in Cognitive Science   May 2021

Non Degree Programs

African Linguistics School 6 (ALS6)   Jun. - Aug. 2022
Centre Songhai, Porto-Novo, Benin

– Participated in advanced coureses in linguistic theory, and professional development workshops focused on grant writing, conference presentations, and manuscript preparation to enhance skills in academic writing and communication.

Summer Research Opportunity Program (NSF Award #2017716)   Jun. - Aug. 2020
Northwestern University, Department of Linguistics

– Utilized acoustic analysis software to perform vowel formant analyses on Black Chicago residents

MICHHERS: Humanities Emerging Research Scholars Program   Jun. - Jul. 2020
University of Michigan — Ann Arbor, Department of Linguistics

– Conducted independent research through dataset analysis and literature reviews of psycholinguistic literature under the guidance of faculty mentors

RESEARCH INTERESTS

LINGUISTICS	SOCIOPHONETICS, NLP/ML, AFRICAN AMERICAN LANGUAGE
TECHNOLOGY	MACHINE LEARNING, RESPONSIBLE AI, SPEECH PROCESSING

HONORS AND AWARDS

Fellowships and Scholarships

DARE: Diversifying Academia, Recruiting Excellence Doctoral Fellowship   2025
Stanford University
Tech Ethics and Policy Fellowship   2024
Stanford Institute for Human-Centered Artificial Intelligence (HAI)
GRFP: Graduate Research Fellowship Program   2023
National Science Foundation
Predoctoral Fellowship Program – Alternate
Ford Foundation
RAISE: Research, Action, and Impact through Strategic Engagement Doctoral Fellowship
Stanford University
EDGE: Enhancing Diversity in Graduate Education Doctoral Fellowship   2021
Stanford University
MMUF: Mellon Mays Undergraduate Fellowship   2019
Mellon Foundation
Questbridge Match Scholarship   2016

Pomona College

<u>Awards and Grants</u>

Credit, $1000   2025
OpenAI API Researcher Access Program
Travel Award, $800
Linguistics for Justice: Advancing Reforms in the Criminal Legal System Conference
Richard Braddock Award
2025 Conference on College Composition and Communication (CCCC)
Student Travel Award, $1,000   2024
Linguistic Society of America, Committee on Ethnic Diversity in Linguistics (CEDL)
Student Travel Award, $650   2023
Queens College, New Ways of Analyzing Variation (NWAV)
Student Registration Award   2020
Linguistic Society of America, Committee on Ethnic Diversity in Linguistics (CEDL)
Remote Alternative Independent Summer Experience (RAISE) Grant, $2,500
Pomona College

PUBLICATIONS

Tano, M. (2025). *Performing Realness: Challenging Essentialist Models of Black Authenticity* [Manuscript in preparation]. Department of Linguistics, Stanford University.

Tano, M., & Rosenthal, S. (2025) *A Comparison of Biases in Embedding and Generative Models* [Manuscript in preparation]. International Business Corporation (IBM).

Podesva, R., Hernandez, A., Papineau, B., & **Tano, M.**, Velasquez, T., & Zhang, H. (2024). *(DH)ere's more than one way to strengthen a fricative: A social meaning approach to ethnic variation in the phonetic realization of the voiced interdental fricative* [Accepted for publication]. *Journal of English Linguistics*.

Franz, H., Grue, M., Rowell, A., **Tano, M.**, Johnson, S., & Charity Hudley, A. (2024). Black Linguistic Justice from Theory to Practice. *College Composition and Communication*.

Franz, H., Charity Hudley, A., Rowell, A., Johnson, S., **Tano, M.** & Grue, M. (2022). Black Students' Linguistic Agency: An Evidenced-Based Guide for Instructors and Students. *American Speech*.

Holliday, N. & **Tano, M.** (2021). "It's a Whole Vibe": Testing evaluations of grammatical and ungrammatical AAE on Twitter. *Linguistics Vanguard, 7*(1).

PRESENTATIONS

Hoffmann, J., Ahlheim, C., Yu, Z., Walfrand, A., Jin, J., **Tano, M.**, Beirami, A., van Liemt, E., Thain, N., Sidahmed, H., & Dixon, L. (2025). *Improving Neutral Point-of-View Generation with Data- and Parameter-Efficient RL* [Conference presentation]. The 2025 Conference on Empirical Methods in Natural Language Processing (EMNLP). Suzhou, China.

Tano, M. (2025). *Towards an Automatic Dialect Density Measure for African American English* [Poster Presentation]. Linguistics for Justice: Advancing Reforms in the Criminal Legal System. University of Oregon, Eugene, Oregon.

Tano, M. (2024). *Multilingual Authenticity: Navigating Ethnic Identity Through Language* [Conference presentation]. The 55th Annual Conference on African Linguistics. McGill University, Montreal, Canada.

Tano, M. (2024). *The Multiplicity of Authenticity: A Case Study on a Diasporic Speaker* [Conference presentation]. Annual Meeting of the Linguistic Society of America (LSA). New York City, New York.

Tano, M. (2023). *The Multiplicity of Authenticity: A Case Study on a Diasporic Speaker* [Conference presentation]. New Ways of Analyzing Variation (NWAV). Queens College, City University of New York, New York City, New York.

Hernández, A., Papineau, B., **Tano, M.**, Velásquez, A., Zhang, H., & Podesva, R. (2023). *(DH)ere's more than one way to strengthen a fricative: Voiced interdentals in a diverse sample of Californians* [Conference presentation]. New Ways of Analyzing Variation (NWAV). Queens College, City University of New York, New York City, New York.

Tano, M. (2021). *Does Blackness have a Sound?: Raciolinguistic Expectations of a Bidialectal Speaker* [Conference presentation]. 15th Arizona Linguistics Circle. University of Arizona, Virtual.

Franz, H., Charity Hudley, A., Johnson, S., & **Tano, M.** (2021). *Black Students' Linguistic Agency: A Researched Guide for Instructors and Students* [Conference presentation]. Fourth HBCU Symposium on Rhetoric and Composition. Virtual.

Tano, M. & Holliday, N. (2020). *It's a Whole Vibe: Testing Evaluations Of Grammatical and Ungrammatical AAE on Twitter* [Conference presentation]. Advancing African American Linguist(ic)s Symposium. University of California, Santa Barbara, Virtual.

Invited Talks

The Construction of a Diasporic Self 2023
Phonology and Psycholinguistics Forum ("Phorum"), University of Berkeley
Language, Race and Autonomy: African-American English in the Classroom 2022
Vote Rev Speaker Series, Online
African-American English and Social Media 2021
Linguistics 338: African-American English, Reed College

RESEARCH EXPERIENCE

Study of Stanford Writing Committee Jan. 2022 - Present
Office of the Vice Provost for Undergraduate Education, Stanford University

– Synthesized leading pedagogies from accredited peer institutions, leveraging research and analysis skills to identify best practices and inform strategic decision-making.

– Collaborated with external consultants to produce comprehensive reports on the history of rhetorical analysis and the instruction of writing in higher education, resulting in valuable insights and actionable recommendations.

– Designed and implemented machine learning models to automatically assess student writing for critical thinking, evidence use, and discourse quality, aligning NLP methods with educational rubrics and outcomes.

Student's Right to their own Language Sept. 2021 - Aug. 2022
Black Academic Development Lab, Stanford School of Education

– Created engaging and effective online pedagogical materials for both students and faculty, leveraging strong instructional design skills and a deep understanding of best practices in online learning.

– Provided valuable support to authors by offering detailed citations and edits to manuscripts and presentations, ensuring accuracy and clarity in academic writing.

– Led a critical literature review of existing scholarship related to Black student writing, providing essential insights and informing the rationale behind the project.

WORK EXPERIENCE

Multilingual Large Scale Language Models, Research Scientist Intern Jun. - Sept. 2025
International Business Machines Corporation (IBM), *Yorktown Heights, NY*

- Developed and deployed large-scale bias evaluation pipelines using IBM Granite embedding models and Hugging Face datasets (Natural Questions, BBQ), implementing identity-injection, retrieval drift, and cosine similarity experiments across 100k+ QA/context pairs.
- Optimized statistical and computational workflows (t-tests, ANOVA, volatility metrics) on HPC clusters (CCC, RITS), improving reproducibility with modular Python scripts, CLI tools, and unified evaluation functions.
- Communicated research findings to diverse stakeholders by creating technical reports, visualizations (bias plots, retrieval metrics), and GitHub repositories, supporting both academic collaborators and industry mentors.

Research Intern, Graduate Fellow   Jun. - Aug. 2024
Brookings Institution, Governance Studies (Center for Technology Innovation), *Washington, DC*

- Authored articles on responsible AI development and inclusive language technologies, including Moving Toward Truly Responsible AI Development in the Global AI Market" and Closing the Gap: A Call for More Inclusive Language Technologies
- Supported workshops engaging policymakers, scholars, and industry experts to address the ethical challenges of generative AI in public sectors
- Contributed to the design and facilitation of an education policy workshop examining how generative AI can support equitable access, student learning, and institutional accountability in public education systems.

Student Researcher   Jun. 2023 - Jun. 2024
Google Research, *Mountain View, CA*

- Designed and executed research protocols to evaluate and refine large-scale language models, focusing on enhancing interpretability and performance.
- Conducted in-depth analyses of LLM-generated outputs to inform the development of frameworks for assessing key linguistic attributes.
- Collaborated with cross-functional teams to implement survey methodologies, collecting diverse user perspectives to guide iterative improvements

Data Science Intern   Jan. - Apr. 2023
Stanford Law Center for Racial Justice, *Stanford, CA*

- Automated data processing and analysis, resulting in more efficient and accurate reporting in Census details
- Contributed to the development of the Center's neighborhood Vulnerability Index, a database reflecting the social conditions that influence California neighborhoods equitable and inclusive communities through data-driven analyses
- Leveraged computational tools to extract and synthesize Census data on thousands of California Census tracts, regarding social factors such as unemployment rates and median income level

TEACHING EXPERIENCE

Graduate Student Assistantships

Language and Society (LINGUIST 150)   Sep. - Dec. 2024
Stanford University, Department of Linguistics

- Evaluated and graded student essays, written responses, and exams, ensuring clear and constructive feedback.
- Collaborated closely with the course instructor to calibrate grading standards and maintain feedback consistency across assignments.

– Supported a course examining how language varies across time, place, and social groups, and how linguistic practices shape and reflect social identities and relationships.

Phonetics (LINGUIST 105A/205A)   Jan. - Mar. 2023
Stanford University, Department of Linguistics

– Provided guidance to students in conducting quantitative sociophonetic research, demonstrating expertise in research design and methodology.

– Led discussion sections on Praat, an acoustic analysis software, and other quantitative methods in sociophonetics, fostering an engaging and interactive learning environment.

– Facilitated student learning and comprehension by breaking down complex concepts into easily digestible parts, resulting in improved student performance and success in the course.

Building a Successful Academic Career (UAR 56)   Sept. 2022 - Jun. 2023
Stanford University, Black Community Services Center

– Served as a dedicated advocate for students, working closely with them to identify their research goals and supporting them throughout the research process.

– Guided students in finding their voice and developing their ideas, particularly in projects exploring the legacy of black students at Stanford University, using strong mentoring skills and a deep understanding of the subject matter.

– Fostered connections between students and the broader graduate and undergraduate community, facilitating networking opportunities and promoting a sense of fellowship and collaboration among scholars.

Research Supervision

Black Academic Development Lab (NSF Award #1757654)   Jun. - Sept. 2022
Stanford University, School of Education

– Advised undergraduate research projects focused on exploring linguistic racism and bias in grammar-checkers and style tools, demonstrating a commitment to fostering critical thinking and social awareness among students.

– Provided thoughtful and constructive feedback on research reports and graduate school applications, leveraging strong communication skills and attention to detail to support students' academic and professional growth.

– Acted as a liaison between students and professors, streamlining communication, and ensuring a seamless experience for all parties involved.

SERVICE

Committee Service
Outside Reader   Dec. 2024 - Feb. 2025
Admissions Committee, Pomona College
Social Committee   Sept. 2021 - Jun. 2023
Department of Linguistics, Stanford University
New Ways of Analyzing Variation 50 (NWAV50) Conference Planning Committee   Sept. 2021 - Nov. 2022
Department of Linguistics, Stanford University
Committee on Ethnic Diversity in Linguistics (CEDL)   Sept. 2020 - Present
Linguistic Society of America

Panels
Mellon Mays Alumni Panel   2025
Pomona College
CSRMP gStudent Experience Panel   2023

CS Research Mentorship Program, Google
MMUF Life As A Graduate Student Panel
Mellon Mays Undergraduate Fellowship, Stanford University
Smart Start Fellowship Alumni Panel 2022
Pomona College
Mellon Mays Alumni Panel
Pomona College
Spring Perspectives On Pomona (POP) Student Panels 2021
Pomona College

Leadership Positions

Graduate Scholar-in-Residence Sept. 2022 - Present
Black Community Services Center, Stanford University

- Manage and facilitate cross-cultural collaborations with other community centers on campus, developing and maintaining strong partnerships to foster a culture of inclusion and diversity.

- Promote engagement and collaboration between Black undergraduate and graduate students, using strong interpersonal skills and a deep understanding of community building to drive positive outcomes.

- Provide key assistance in creating entry points for current graduate students to engage with the Black Community Services Center, resulting in improved access and increased participation in important programs and initiatives.

PROFESSIONAL AFFILIATIONS

Stanford University Natural Language Processing (NLP) Group 2021 - Present
Stanford Black Academic Development (BAD) Lab 2021 - Present
Linguistic Society of America 2020 - Present

SKILLS

Natural Languages

PROFICIENT FRENCH

BASIC SPANISH

Technology

LANGUAGES PYTHON (PANDAS, NUMPY), R, JAVASCRIPT, C++, R (STUDIO), HTML, SQL, LaTeX

APPLICATIONS PRAAT, JMP, SPACY, GIT, R STUDIO, ELAN