

# EMMA CARENE GARGROETZI

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## EDUCATION

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<b>PhD, Stanford University Graduate School of Education</b> Mathematics Education; Race, Inequality and Language in Education	2020
<b>M.S., City University of New York - Brooklyn College, Teaching Students with Disabilities</b>	2011
<b>M.A., Columbia University Teachers College, International and Transcultural Studies</b>	2008
<b>B.A., Vassar College, Political Science</b>	2005

## FACULTY AND TEACHING POSITIONS

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<b>Assistant Professor</b> Department of Curriculum & Instruction, University of Texas at Austin, TX	2022-Present
<b>Postdoctoral Fellow of STEM Education</b> University of Texas at Austin, Austin, TX	2020-2022
<b>Assistant Professor of Instruction</b> University of Texas at Austin, Department of Curriculum and Instruction, Austin, TX	2020-2022
Knowing and Learning in STEM (UTeach undergraduate teacher preparation)	2022
Elementary Mathematics Methods (Undergraduate course – teacher preparation)	2021
Using Video as Data in the Learning Sciences (Graduate seminar – advanced topics)	2021
Knowing and Learning in STEM Education (Graduate seminar – core requirement)	2020, 2021
<b>Course Instructor</b> Stanford University, Stanford, CA	
Introduction to the Practice of Teaching (Undergraduate)	2020
Quantitative Reasoning in Mathematics in the Elementary Grades I (MA)	2016 (TA), 2018
Quantitative Reasoning in Mathematics in the Elementary Grades II (MA)	2017 (TA), 2018
Quantitative Reasoning in Mathematics in the Elementary Grades III (MA)	2018 (TA), 2019
<b>Teaching Assistant</b> Stanford University, Stanford, CA	
Qualitative Analysis in Education Research (Graduate course)	2019
Adolescent Development (MA)	2019
Equity and Schooling (MA)	2016, 2017, 2018
Teaching Students with Special Needs (MA)	2016, 2017
<b>Mathematics Department Chair</b> Millennium Brooklyn High School, Brooklyn, NY	2014-2015

## Teacher, Special Educator

2009-2015

New York City Department of Education, New York, NY

Professional Teaching License, Multisubject, Teaching Students with Disabilities (New York State)

Millennium Brooklyn High School, *Geometry, Statistics, Humanities, Advisory*

Eagle Academy for Young Men at Ocean Hill, *Algebra, Geometry, Advisory*

Lyons Community School, *Math intervention, grades 6-8, Advisory*

High School for Global Citizenship, *Algebra, Geometry*

## GRANTS AND FELLOWSHIPS

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Quantitative Civic Composing for Imagination, Action and Freedom: A Social Design-Based Experiment in Mathematics and Language Arts, Spencer Postdoctoral Fellow (\$70,000) 2022-2024

“Let’s Talk About Election 2020”: Mapping Quantitative Civic Literacies in Youth Video Composition in an Online Digital Network (co-PI), Spencer Foundation (\$50,000) 2021-2022

Research Communications Plan for ‘Letters to the Next President: Exploring Youth Civic Identity and Classroom Writing Practices in a National Online Network’ (consulting author), Spencer Foundation (\$15,000) 2021

Gerald J. Lieberman Fellowship, Stanford University (\$46,000) 2019-2020

Dissertation Support Grant, Stanford Graduate School of Education (\$6000) 2019

Dean’s Collaborative Learning Fund, Stanford Graduate School of Education (\$2000/year) 2016-2019

Stanford Haas Center Graduate Public Service Fellow (\$3000) 2016-2017

## PUBLICATIONS

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### Journal Articles and Chapters

**Gargroetzi, E.** & Garcia, A. (2022). “I don’t think kids nowadays feel like they have a lot of power”: Exploring Teacher Civic Commitments in a National Online Letter Writing Project. *Journal of Teacher Education*

\*Hendry, I., Huynh, T. & **Gargroetzi, E.** (2022). Exploring equitable pay for work. *Mathematics Lessons to Explore, Understand, and Respond to Social Injustice in Grades 3-5*. Corwin.

**Gargroetzi, E.**, Horn, I., Chavez, R. and Byun, S. (2021). Institution-identities in a neoliberal era: Challenging differential opportunities for mathematics learning. In *Making visible the invisible: The promise and challenges of identity research in mathematics education*. Langer-Osuna, J. M., & Shah, N. (Eds.). [Journal for Research in Mathematics Education Monograph Number 17]. National Council of Teachers of Mathematics.

Crespo, S., **Gargroetzi, E.**, Hand, V. & Herbel-Eisenman, B.<sup>1</sup> (2021). Ethics and identity research in the field of mathematics education: Reflections. In *Making visible the invisible: The promise and challenges of identity research in*

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<sup>1</sup> Authors listed in alphabetical order, equal contribution

\* Co-authors are teachers

*mathematics education*. Langer-Osuna, J. M., & Shah, N. (Eds.). [Journal for Research in Mathematics Education Monograph Number 17]. National Council of Teachers of Mathematics.

\***Gargroetzi, E.**, Hendry, I., Jeffreys, A., Patel, A., Wei, G. and Critical Math Teachers Collaborative (2021). “I have gotten braver”: Growing and sustaining critical mathematics pedagogies through a teacher community of praxis. *Teachers College Record*, 123(13).

\***Gargroetzi, E.**, Garcia, A., Boss, S., Bence, J., Diego, S., Turner, K., Wei, G., Weker, E. and Yu, X. (2021). Quantitative civic reasoning: A guide for centering civic innovation in math and English Language Arts Classrooms. *Read, Write, Think*.

Zummo, L., **Gargroetzi, E.** & Garcia, A. (2021). How youth use scientific argumentation in civic participation on climate change: Polar bears, the Great Barrier Reef, and “your job as president.” *International Journal of Science Education Part B: Communication and Public Engagement*

Langer-Osuna, J., Chavez, R., Kwon, F., Malamut, J. **Gargroetzi, E.**, Lange, K. & Ramirez, J. (2021). “I’m telling!”: Exploring sources of peer authority during K-2 mathematics activity. *Studia Paedagogica*, 26(2), [www.studiapaedagogica.cz, https://doi.org/10.5817/SP2021-2-5](https://doi.org/10.5817/SP2021-2-5)

Langer-Osuna, J., **Gargroetzi, E.**, Chavez, R. and Munson, J. (2020). Examining the role of off-task participation during collaborative problem-solving in elementary mathematics. *Journal of Educational Psychology*, 112(3) 514-532. <https://doi.org/10.1037/edu0000464>

Langer-Osuna, J., Munson, J., **Gargroetzi, E.**, Williams, I. and Chavez, R. (2020). “So what are we working on?” A discursive analysis of shared authority during collaborative mathematics activity in a fourth grade classroom. *Educational Studies in Mathematics*. <https://doi.org/10.1007/s10649-020-09962-3>

Garcia, A., Levinson, A. and **Gargroetzi, E.** (2020). “Dear future President of the United States”: Analyzing youth civic writing within the 2016 Letters to the Next President project. *American Education Research Journal*. <https://doi.org/10.3102/0002831219870129>

Zummo, L., **Gargroetzi, E.** and Garcia, A. (2020). Youth voice on climate change: Using factor analysis to understand the intersection of science, politics, and emotion. *Environmental Education Research*. <https://doi.org/10.1080/13504622.2020.1771288>

**Gargroetzi, E.**, Chavez, R., Munson, J., Langer-Osuna, J. and Lange, K. (2019). Can ‘off-task’ be on track? *Phi Delta Kappan*, 100(8), 62-66. <https://doi.org/10.1177/0031721719846892>

**Groetzinger, E.**<sup>2</sup> (2016). Mathographies for equity: Bringing student stories into the classroom. *New England Mathematics Journal*, 48(1), 17-27.

## Edited Volumes

Garcia, A. & **Gargroetzi, E.** (Eds.) (Under Contract). Multicultural Education [section editors]. In *Routledge Encyclopedia of Education*. New York: Routledge.

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<sup>2</sup> Groetzinger was a previous last name

## Refereed Conference Proceedings

**Gargroetzi, E.**, Zummo, L., Aguilar, A., Bene, E., Garcia, A. & Cantu, E. (2021). *“Let’s talk about election 2020”:* Quantitative reasoning and youth civic composing in an online network. In Olanoff, D., Johnson, K., & Spitzer, S. M. (Eds.). Proceedings of the forty-third annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Philadelphia, PA.

**Gargroetzi E.**, Zummo, L. Garcia, A. & Benne, E. (2021) *“Let’s Talk About Election 2020”:* Quantitative civic literacies of solidarity and critique in an online digital network. 15<sup>th</sup> International Conference of the Learning Sciences Proceedings. Eds. E. de Vries, Y. Hod & J. Ahn., p. 573-576.

Langer-Osuna, J., Chavez, R., Kwon, F., Malmut, J. **Gargroetzi, E.**, Lange, K. & Ramirez, J. (2021). *Who gets to hold the counting cubes?: Exploring authority relations among peers during collaborative struggles in K-2 mathematics.* In Movement, Authority & Knowledge: Examining the Relationships in Embodied and Social Positioning for STEM Learning. 15<sup>th</sup> International Conference of the Learning Sciences Proceedings. Eds. E. de Vries, Y. Hod & J. Ahn., p. 843-850.

**Gargroetzi, E.** (2020). An ethnography of re/humanizing (math) pedagogies at a predominantly Latinx California high school. In Sacristán, A.I., Cortés-Zavala, J.C. & Ruiz-Arias, P.M. (Eds.). *Mathematics Education Across Cultures: Proceedings of the 42nd Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Mexico.* Cinvestav / AMIUTEM / PME-NA. <https://doi.org/10.51272/pmna.42.2020>

**Gargroetzi, E.** (2019). Introducing an ‘Opportunities to Identify’ Framework. In S. Otten, A. G. Candela, Z. de Arujo, C. Haines & C. Munter (Eds.), *Proceedings of the forty-first annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1692-1696). St Louis, MO: University of Missouri.

**Gargroetzi, E.** (2018). Achieving, laboring, and surviving: Positioning through material and ideational identity resources in student autobiography. In T.E. Hodges, G. J. Roy, & A. M. Tyminski, (Eds.), *Proceedings of the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 898-905). Greenville, SC: University of South Carolina & Clemson University.

Langer-Osuna, J. M., **Gargroetzi, E. C.**, Chavez, R., & Munson, J. (2018). Rethinking loafers: Understanding the productive functions of off-task talk during collaborative mathematics problem-solving. In *Proceedings of International Conference of the Learning Sciences, ICLS* (Vol. 2, No. 2018-June, pp. 745-751). International Society of the Learning Sciences.

**Gargroetzi, E.** (2017). Narratives of math, schooling, and identity in the mathographies of Brooklyn youth. In E. Galindo & J. Newton, (Eds.), *Proceedings of the 39th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 1126). Indianapolis, IN: Hoosier Association of Mathematics Teacher Educators.

**Gargroetzi, E.** and Lawler, B. (2017). Sociopolitical mathematics teacher identity: Mathography as window. In Chronaki, A. (Ed.), *Mathematics education and life at times of crisis: Proceedings of the 9<sup>th</sup> International Conference of Mathematics Education and Society* (pp. 222-226). Volos, Greece.

Lawler, B. and **Gargroetzi, E.** (2017). Mathematical autobiography as window into sociopolitical teacher identity. In Smith, W. M., Lawler, B. R., Bowers, J., & Augustyn, L. (Eds.), *Proceedings of the sixth annual Mathematics Teacher Education Partnership conference.* Washington, DC: Association of Public and Land-grant Universities.

Langer-Osuna, J., Munson J. B., **Groetzinger, E.** (2016). Productivity and the Distribution of Authority in Collaborative Mathematics Problem Solving. In M. B. Wood, E. E. Turner, M. Civil, & J. A. Eli (Eds.), *Proceedings of the 38th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 680-683). Tucson, AZ: The University of Arizona.

## INVITED TALKS

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*Panel on Identities in Mathematics Education.* RILE Speaker Series. Stanford University, March 30, 2022.

*"How did I steal the brain?" Identity, agency and positional possibilities in a figured world of mathematical competence with dignity.* Learning Sciences Seminar. University of Utah, December 10, 2020.

*Social and mathematical identities in the classroom: The stakes of being seen and heard.* Pondering Excellence in Teaching series at the Center to Support Excellence in Teaching, Stanford University. Stanford, CA, November 20, 2019.

*Negotiating Academic Identity in a Social World.* Prospect Sierra School, El Cerrito, CA. February, 2018.

## SELECTED PRESENTATIONS<sup>3</sup>

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Zummo, L.M. & **Gargroetzi, E.** *Theorizing science-civic practices: Youth adaptation and remixing of science practices within digital civic participation,* National Association for Research in Science Teaching (NARST), Vancouver, Canada, March 30, 2022.

Bene, E., **Gargroetzi, E.** & Zummo, L. *Re/Mixing Literacies to Dream Possible Futures: Imaginative Rupture in "Let's Talk About Election 2020."* American Educational Research Association Annual Meeting. San Diego, CA, April, 2022.

Zummo, L. & **Gargroetzi, E.** *Remixing the Past and Present: Scientific Civic Literacies to Articulate New Futures in Youth-Produced Media.* American Educational Research Association Annual Meeting. San Diego, CA, April, 2022.

Jones, S., Gomez, C. N., & **Gargroetzi, E.** *Counterstorytelling: An avenue for grappling with racial in/justice in methods courses.* Paper accepted for presentation at 26<sup>th</sup> Annual Conference of the Association of Mathematics Teacher Educators. February, 2022

**Gargroetzi, E.**, Zummo, L., Aguilar, A., Bene, E., Garcia, A. & Cantu, E. *"Let's talk about election 2020": Quantitative reasoning and youth civic composing in an online network.* Poster accepted for presentation at 43<sup>rd</sup> Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA 43). October, 2021

Zummo, L. & **Gargroetzi, E.** *Youth civic participation: Using scientific argumentation to make one's voice heard on climate change.* American Educational Research Association Annual Meeting. Virtual meeting, April 2021.

Chavez, R., Kwon, F., Langer-Osuna, J., Lange, K., Malmut, J. **Gargroetzi, E.** *"I'm telling!": Exploring sources of peer authority during K-2 collaborative mathematics activity.* American Educational Research Association Annual Meeting. Virtual meeting, April 2021.

\*Wei, G. and **Gargroetzi, E.** *'Opportunities to Identify': Teaching for Dignity in Math.* Presented at 62<sup>nd</sup> Annual Conference of California Mathematics Council, Northern Section. Asilomar, CA, December 2019.

Zummo, L.M. **Gargroetzi, E.** (2019). *Youth voice in polarized America: The politics and science of climate change.* European Science Education Research Association (ESERA), Bologna, Italy. August 30, 2019.

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<sup>3</sup> Presentations are not listed for which refereed conference proceedings are already listed above

**Gargroetzi, E.**, Horn, I., Chavez, R. and Byun, S. *Institution-identities in a neoliberal era: Challenging differential opportunities for mathematics learning*. American Educational Research Association Annual Meeting, Toronto, Canada, April 2019.

**Gargroetzi, E.**, Garcia, A. and Levinson, A. *Argumentation, Citation, and Calls to Action: Student Letter Writing Practices at Five Schools*. American Educational Research Association Annual Meeting, Toronto, Canada, April 2019.

Crespo, S., **Gargroetzi, E.**, Hand, V. and Herbel-Eisenman, B. *Ethics and identity research in the field of mathematics education: Reflections*. American Educational Research Association Annual Meeting, Toronto, Canada. April 2019.

Langer-Osuna, J., **Gargroetzi, E.**, Munson, J., Chavez, R. & Williams, I. *Interactional Pathways to Shared Intellectual Authority During Group Work*. National Council of Teachers of Mathematics Research Conference, San Diego, CA, April 2019.

Chavez, R., **Gargroetzi, E.**, Munson, J., Lange, K. & Langer-Osuna, J. *Deciphering Off-Task Talk: When Off-Task is Productive for Group Work*. National Council of Teachers of Mathematics Annual Meeting, San Diego, April 2019.

Langer-Osuna, J., Kwon, F., Trinkle, M., Munson, J., Chavez, R. & **Gargroetzi, E.** *Becoming Collaborative: Examining the Development of Early Collaborative Problem-Solving Capacities*. National Council of Teachers of Mathematics Annual Meeting, San Diego, April 2019.

Zummo, L. and **Gargroetzi, E.** *Youth Voices on Climate Change: Examining Politicized Climate Discourse in a Digital Online Network*. American Educational Research Association Annual Meeting, Toronto, Canada. April 2019.

Levinson, A., Garcia, A., Martin, C. and **Gargroetzi, E.** *What Issues Did Students Nationwide Address in Their Letters? An Analysis of Letter Topics From the National Corpus of 11,035 Student Letters From Diverse School Sites*. American Educational Research Association Annual Meeting, Toronto, Canada, April 2019.

Garcia, A., Levinson, A. and **Gargroetzi, E.** *The Spaces of Civic Identity Within Letters to the Next President*. American Educational Research Association Annual Meeting, Toronto, Canada. April 2019.

Levinson, A., Garcia, A. and **Gargroetzi, E.** *Letters to the Next President: Youth Civic Engagement and Writing Practices in an Online Network*. American Educational Research Association Annual Meeting, Toronto, Canada. April 2019.

**Gargroetzi, E.** with The Critical Math Teachers Collaborative. *Growing and Sustaining Critical Mathematics Pedagogies through a Teacher Community of Praxis*. Poster presented at the Race, Inequality and Language Conference, Stanford, CA. November, 2018.

\***Gargroetzi, E.** and Menard, W. *Lifting Up Student Voice: Mathography Writing and Teacher Moves*. National Council of Teachers of Mathematics Annual Meeting and Exposition, Washington D.C. April, 2018.

Langer-Osuna, J., **Gargroetzi, E.**, Chavez, R. and Munson, J. *The Role of Off-Task Interaction in Supporting Productive Disciplinary Engagement in Elementary Mathematics*. In K. Kumpulainen and Rajala, A. (Chairs), *Understanding the Transformative Power of Teacher and Student Agency in Changing Educational Contexts*. Symposium conducted at the American Educational Research Association Meeting, New York, NY. April, 2018.

\***Gargroetzi, E.**, Chan, R., Hendry, I., Hunyh, T., Jeffreys, A. and Wei, G. *Creating a space for critical pedagogy during and after teacher education programs*. Creating Balance in an Unjust World Conference, San Francisco, CA. January, 2018.

**Gargroetzi, E.** *Narratives of Math, Schooling, and Identity in the Mathographies of Brooklyn Youth*. Poster presentation at PME-NA, Indianapolis, IN. October, 2017.

Langer-Osuna, J. M., Munson, J., and **Gargroetzi, E.** The Relationship Between Productive Disciplinary Engagement and the Construction of Student Authority During Collaborative Mathematics Problem Solving. In S. Nolan (Chair), *A Cross-Disciplinary Conversation About Productive Disciplinary Engagement*. Symposium conducted at the American Educational Research Association Annual Meeting, San Antonio, TX. April, 2017.

Munson, J. B., Langer-Osuna J. and **Gargroetzi, E.** *How Much is a Billion? Engaging Novice Teachers in a First Experience of Open-Ended Mathematics*. Workshop presented at Association of Mathematics Teacher Educators Conference, Orlando, FL. February, 2017.

\*Seher, R., Block, M. and **Groetzinger, E.** *Transformative Praxis*. Presentation by the Critical Educators Network at Left Forum, New York, NY. June, 2012.

## SERVICE

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### Academic Conferences, *Reviewer*

AERA Annual Meeting	
Division C - Learning and Instruction, Section 1c – Mathematics	2021
SIG-Research in Mathematics Education	2021
SIG-Socio-Political Issues in Mathematics and Science Education	2021
International Society of the Learning Sciences (ISLS) Conference	2021
PME-NA Annual Conference	2017-Present

### Peer Reviewed Academic Journals, *Reviewer*

Journal of Research in Mathematics Education	2021-Present
Educational Psychology Review	2021-Present
Journal of Mathematical Behavior	2020-Present
Lighthouse Almanac	2020-Present
Environmental Education Research	2020-Present
Anthropology of Education Quarterly	2018-Present

## MEMBERSHIPS

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### American Education Research Association

- Division B – Curriculum Studies
- Division C – Learning and Instruction
- Division G – Social Context of Education
- Division K – Teaching and Teacher Education
- Special Interest Group - Critical Educators for Social Justice
- Special Interest Group - Research in Mathematics Education
- Special Interest Group - Socio-Political Issues in Math and Science Education

### Association of Mathematics Teacher Educators

### Benjamin Banneker Association

### International Group for the Psychology of Mathematics Education – North American Chapter

### International Society of the Learning Sciences

### National Council of Teachers of English

### National Council of Teachers of Mathematics

### TODOS: Mathematics for All