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EDUCATION

- 2021 **Ph.D., Mathematics Education**, University of Georgia, Athens, GA
Dissertation: *Developing Middle School Students' Meanings for Constructing Graphs Through Reasoning Quantitatively*
Committee members: Kevin C. Moore (chair), Amy Ellis, Sybilla Beckmann, and Cameron Byerley
- Certificate in Diversity and Inclusion.
 - Completion of 24 hours of graduate level Math course work.
- 2011 **M.S., Mathematics Education**, Marmara University, Istanbul, Turkey
Thesis: *Investigating thinking and visualization skills of pre-service mathematics teachers in modeling activities and performance*
Committee members: Ali Delice (chair), Emin Aydin, Esra Bukova-Guzel
- 2008 **Joint B.S. and M.Ed., Secondary Mathematics Education**, Marmara University, Istanbul, Turkey
- Teaching certification for secondary school mathematics.
 - Completion of 69 hours of Math course work.

RESEARCH INTEREST

STEM Education, Quantitative and covariational reasoning; Students' interpretation and construction of graphs; Teaching experiment methodology; Learning theories; Curriculum development and analysis.

PROFESSIONAL POSITIONS

- 2021–present Assistant Professor of Mathematics Education,
California State University San Bernardino, CA
- 2015–2021 Graduate Research and Teaching Assistant, University of Georgia, Athens, GA
- 2013–2014 Project Member, The Scientific and Technological Research Council of Turkey
(TUBITAK), Ankara, Turkey
- 2008–2013 High School Mathematics Teacher, Istanbul, Turkey
- 2004–2008 Student Assistant (part-time), Marmara University, Istanbul, Turkey

RESEARCH EXPERIENCE

- 2021–present Research Team Member [[website](#)]
Generalization Across Multiple Mathematical Areas - Classrooms and Teaching (GAMMA-CAT), National Science Foundation funded project.

PIs: Amy Ellis (University of Georgia), Kevin C. Moore (University of Georgia), Elise Lockwood (Oregon State University), Erik Tillema (Indiana University).
University of Georgia, Athens, GA.

- 2019–2021 Graduate Research Assistant [[website](#)]
Generalization Across Multiple Mathematical Areas - Classrooms and Teaching (GAMMA-CAT), National Science Foundation funded project.
PIs: Amy Ellis (University of Georgia), Kevin C. Moore (University of Georgia), Elise Lockwood (Oregon State University), Erik Tillema (Indiana University).
University of Georgia, Athens, GA.
- 2020–2021 Research Team Member [[website](#)]
Creating Opportunities for the Visualization of Data: The Application of STEM Education Research (COVID-TASER), National Science Foundation RAPID grant.
PI: Cameron Byerley (University of Georgia) Co-PI: Kevin C. Moore (University of Georgia)
- 2016–2020 Graduate Research Assistant [[website](#)]
Advancing Secondary Mathematics Teachers' Quantitative Reasoning, National Science Foundation funded CAREER project. PI: Kevin C. Moore
University of Georgia, Athens, GA
- 2017–2018 Graduate Research Assistant [[website](#)]
Generalization Across Multiple Mathematical Areas (GAMMA), National Science Foundation funded project.
PIs: Amy Ellis (University of Georgia), Elise Lockwood (Oregon State University), Erik Tillema (Indiana University /IUPUI), Kevin C. Moore (University of Georgia).
University of Georgia, Athens, GA
- 2015–2016 Research Team Member [[website](#)]
Investigating Proportional Relationships from Two Perspectives (InPREP2), National Science Foundation funded project
PIs: Andrew G. Izsák, Sybilla Beckmann, and Laine Bradshaw,
University of Georgia, Athens, GA
- 2010–2011 Principal Investigator
Investigating thinking structures and visualization skills of pre-service mathematics teachers in modeling activities and performance, Marmara University Science and Research Council funded graduate project (6000 Turkish Lira)
Marmara University, Istanbul, Turkey

PUBLICATIONS

Peer Reviewed Journal Articles

1. Moore, K. C., Wood, E., Welji, S., Waswa, A., Hamilton, M., Ellis, A. B., & **Tasova, H. I.** (accepted for publication). Using Abstraction to Analyze Curricular Materials and Their Implementation. *The Journal of Mathematical Behavior*.
2. Ellis, A. B., Waswa, A., **Tasova, H. I.**, Hamilton, M., Moore, K. C., & Çelik, A. (2024). Classroom Supports for Generalizing. *Journal for Research in Mathematics Education*, 55(1), 7-30. <https://doi.org/10.5951/jresmetheduc-2022-0140>
3. Ellis, A. B., Ely, R., Singleton, B., & **Tasova, H. I.** (2020). Scaling-continuous variation: supporting students' algebraic reasoning. *Educational Studies in Mathematics*, 104, 87–103. <https://doi.org/10.1007/s10649-020-09951-6>
4. Lee, H., Moore, K. C., & **Tasova, H. I.** (2019). Reasoning within quantitative frames of reference: The case of Lydia. *The Journal of Mathematical Behavior*, 53, 81–95. <https://doi.org/10.1016/j.jmathb.2018.06.001>
5. **Tasova, H. I.**, & Delice, A. (2012). An analysis of pre-service mathematics teachers' performance in modelling tasks in terms of spatial visualisation ability. *Research In Mathematics Education*, 14(3), 297–298. <https://doi.org/10.1080/14794802.2012.734994>
6. Delice, A., & **Tasova, H. I.** (2012). An investigation of mathematics teacher trainees' modelling skills based on their thinking structures. *The Journal of SAU Education Faculty*, 24, 67–88.
7. Delice A., & **Tasova, H. I.** (2011). Influence of individual and group work on the process and the performance of modeling activities. *Marmara University Atatürk Education Faculty Journal of Educational Sciences*, 34(34), 71–97.

Book Chapters

8. Moore, K.C., Stevens, I.E., **Tasova, H.I.**, Liang, B. (2024). Operationalizing Figurative and Operative Framings of Thought. In: Dawkins, P.C., Hackenberg, A.J., Norton, A. (eds) *Piaget's Genetic Epistemology for Mathematics Education Research*. Research in Mathematics Education. Springer, Cham. https://doi.org/10.1007/978-3-031-47386-9_4
9. Moore, K.C., Liang, B., Stevens, I.E., **Tasova, H.I.**, Paoletti, T. (2022). Abstracted Quantitative Structures: Using Quantitative Reasoning to Define Concept Construction. In Karagöz Akar, G., Zembat, İ.Ö., Arslan, S., Thompson, P.W. (eds) *Quantitative Reasoning in Mathematics and Science Education. Mathematics Education in the Digital Era*, vol 21. Springer, Cham. https://doi.org/10.1007/978-3-031-14553-7_3

Manuscripts Under Review

10. Moore, K. C., Stevens, I. E., Liang, B., **Tasova, H. I.** , & Castillo-Garsow, C. (submitted). When graphs contain everything: Two undergraduate students' graphing activity. *The Journal of Mathematical Behavior*.
11. **Tasova, H. I.** & Moore, K.C. (submitted). Framework for the meanings of points from quantitative and covariational reasoning perspective. *Journal for Research in Mathematics Education*

Manuscripts in Preparation

12. **Tasova, H. I.**, Ellis, A. B., Moore, K. C., Welji, S., Wood, E., & Hamilton, M., (in preparation). A serendipitous mistake: How one teacher's beliefs and knowledge mediated her in-the-moment instruction (based on my PMENA 2021 paper)
13. **Tasova, H. I.** (in preparation). Different conceptions of lines and points in the context of graphing (based on my RUME 2020 paper and NCTM 2022 Presentation).
14. **Tasova, H. I.** (in preparation). Developmental Shift in a Student's Meanings of Graphs (based on my AERA 2021, PMENA 2021, PMENA 2022, NCTM 2022 papers)
15. **Tasova, H. I.**, & Stevens, I. E.(in preparation). Analyzing Calculus textbooks from (co)variational reasoning perspective (based on our RUME 2018 paper).

Published Curricula

16. Moore, K. C., Liang, B., **Tasova, H. I.**, Stevens, I. E. (2019, online). *Advancing Reasoning Covariationally (ARC) curriculum*. [[Full electronic version](#)]
17. Ortaöğretim Matematik 9. Sınıf (2013) [Mathematics for Grade 9]. Team-written mathematics textbooks and teacher guides for 9th grades. National Ministry of Education Publishing House. (in Turkish). A product of the curriculum development project at TUBITAK. [[Sample pdf version](#)]

Peer Reviewed Proceedings

18. **Tasova, H. I.** (2023). Developing meanings for graphs from number lines: The case of Naya. In T. Lamberg & D. Moss, (Eds.). *Proceedings of the forty-fifth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (Vol. 2, pp. 238–239). University of Nevada, Reno.
19. **Tasova, H. I.** (2022). Developing meanings for graphs from number lines: The case of Mike. In A. E., Lischka, E. B., Dyer, R. S., Jones, J. N., Lovett, J., Strayer, & S., Drown, (Eds.). *Proceedings of the forty-fourth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 331–340). Nashville, TN. Middle Tennessee State University. DOI: 10.51272/pmena.44.2022
20. **Tasova, H. I.** (2022). Student reasoning in dynamic situations: Spatial proximity reasoning. In A. E., Lischka, E. B., Dyer, R. S., Jones, J. N., Lovett, J., Strayer, & S., Drown, (Eds.). *Proceedings of the forty-fourth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 341–345). Nashville, TN. Middle Tennessee State University. DOI: 10.51272/pmena.44.2022
21. Moore, K. C., Ellis, A., Waswa, A., Hamilton, M., **Tasova, H. I.**, Ozaltin Celik, A., & Wood, E. (2022). Using abstraction as a lens to analyze instructional materials. In A. E., Lischka, E. B., Dyer, R. S., Jones, J. N., Lovett, J., Strayer, & S., Drown, (Eds.). *Proceedings of the forty-fourth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 176–181). Nashville, TN. Middle Tennessee State University. DOI: 10.51272/pmena.44.2022
22. **Tasova, H. I.**, & Moore, K. C. (2021). From number lines to graphs: A middle school student's re-organization of the space. In D. Olanoff, K. Johnson., & S. Spitzer, (Eds.). *Proceedings of the forty-third*

- annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 598–602). Philadelphia, PA.
23. **Tasova, H. I.**, Ellis, A., Hamilton, M., Moore, K. C., Waswa, A., Ozaltin Celik, A., Ying, Y. (2021). A serendipitous mistake: How one teacher’s beliefs and knowledge mediated her in-the-moment instruction. In D. Olanoff, K. Johnson., & S. Spitzer, (Eds.). *Proceedings of the forty-third annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1574–1579). Philadelphia, PA.
 24. Hamilton, M., Moore, K. C., Ellis, A., Ying, Y., **Tasova, H. I.**, Ozaltin Celik, A. & Waswa, A., (2021). Supporting generalizing in the classroom: One teacher's beliefs and instructional practice. In D. Olanoff, K. Johnson., & S. Spitzer, (Eds.). *Proceedings of the forty-third annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1536–1541). Philadelphia, PA.
 25. Ellis, A., Ying, Y., Waswa, A., Moore, K. C., Hamilton, M., **Tasova, H. I.**, & Ozaltin Celik, A. (2021). Classroom supports for generalizing. In D. Olanoff, K. Johnson., & S. Spitzer, (Eds.). *Proceedings of the forty-third annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1420–1429). Philadelphia, PA.
 26. **Tasova, H. I.**, & Moore, K. C. (2020). Framework for representing a multiplicative object in the context of graphing. In A.I. Sacristán, J.C. Cortés-Zavala & P.M. Ruiz-Arias, (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* (pp. 210–219). Cinvestav/PME-NA
 27. **Tasova, H. I.**, Liang, B., & Moore, K. C. (2020). The role of line and points in the construction of emergent shape thinking. In S. S. Karunakaran, Z. Reed, & A. Higgins (Eds.), *Proceedings of the 23rd Annual Conference on Research in Undergraduate Mathematics Education* (pp. 562–570). Boston, MA.
 28. Moore, K. C., Liang, B., Stevens, I. E., & **Tasova, H. I.** (2020). A quantitative reasoning framing of concept construction. In S.S. Karunakaran, Z. Reed, & A. Higgins (Eds.), *Proceedings of the 23rd Annual Conference on Research in Undergraduate Mathematics Education* (pp. 743–752). Boston, MA.
 29. **Tasova, H. I.** & Moore, K. C. (2020). Constructing and representing a quantitative structure: A conceptual analysis. In M. Gresalfi & I. S. Horn (Eds.), *The Interdisciplinarity of the Learning Sciences, 14th International Conference of the Learning Sciences (ICLS) 2020, Volume 2* (pp. 1181–1188). Nashville, Tennessee: International Society of the Learning Sciences.
 30. Moore, K. C., Liang, B., **Tasova, H. I.**, & Stevens, I. E. (2019). Abstracted quantitative structures. In S. Otten, A. G., Candela, Z. de Araujo, C. Haines, & C. Munter (Eds.), *Proceedings of the 41st Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1879–1883). St. Louis, MO.
 31. **Tasova, H. I.**, Liang, B., & Moore, K. C. (2019). Generalizing actions of forming: Identifying patterns and relationships between quantities. In A. Weinberg, D. Moore-Russo, H. Soto, & M. Wawro (Eds.), *Proceedings of the Twenty-Second Annual Conference on Research in Undergraduate Mathematics Education* (pp. 602–610). Oklahoma City, OK.
 32. **Tasova, H. I.**, & Moore, K. M. (2018). Generalization of an invariant relationship between two “quantities.” 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. 588–595). Greenville, SC: Hoosier Association of Mathematics Teacher Educators.

33. Ellis, A., **Tasova, H. I.**, & Singleton, B. (2018). How quantitative reasoning can support graph understanding in Algebra. 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. 195–198). Greenville, SC: Hoosier Association of Mathematics Teacher Educators.
34. Liang, B., Stevens, I. E., **Tasova, H. I.**, & Moore, K. C. (2018). Magnitude reasoning: Characterizing a pre-calculus student's quantitative comparison between covarying magnitudes. 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. 608–611). Greenville, SC: Hoosier Association of Mathematics Teacher Educators.
35. Ellis, A., Ely, R., Singleton, B. & **Tasova, H. I.** (2018). Scaling continuous covariation: Supporting middle school students' algebraic reasoning. 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. 147–154). Greenville, SC: Hoosier Association of Mathematics Teacher Educators.
36. **Tasova, H. I.**, Stevens, I. E., & Moore, K. C. (2018). A framework for analyzing written curriculum from a shape-thinking and (co)variational reasoning perspective. In A. Weinberg, C. Rasmussen, J. Rabin, M. Wawro & S. Brown (Eds.), *Proceedings of the Twenty-First Annual Conference on Research in Undergraduate Mathematics Education* (pp. 1527–1533). San Diego, CA.
37. **Tasova, H. I.**, Koklu, O., Arican, M., & Olmez, I. B. (2017). *Student and school level correlates of mathematics performance in United States regarding PISA 2015*. 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* (pp. 1107–1110). Indianapolis, IN: Hoosier Association of Mathematics Teacher Educators.
38. Lee, H. Y., **Tasova, H. I.**, & Moore, K. C. (2017). Reasoning within quantitative frames of reference and graphing: The case of Lydia. 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* (pp. 753–756). Indianapolis, IN: Hoosier Association of Mathematics Teacher Educators.
39. **Tasova, H. I.**, & Delice A. (2012). Influence of thinking structures on process of modelling activities. Paper presented at the annual meeting of 10. Ulusal Fen Bilimleri ve Matematik Egitimi Kongresi, Nigde, Turkey. Retrieved from http://kongre.nigde.edu.tr/xufbmek/dosyalar/tam_metin/pdf/2422-30_05_2012-17_24_31.pdf
40. **Tasova, H. I.**, & Delice, A. (2010). An analysis of pre-service mathematics teachers' performance in modelling tasks in terms of Krutetskii thinking structures. Paper presented at the annual meeting of 9. Ulusal Fen Bilimleri ve Matematik Egitimi Kongresi, Izmir, Turkey.
41. **Tasova, H. I.**, & Delice, A. (2011). An analysis of pre-service mathematics teachers' performance in modelling tasks in terms of spatial visualization ability. In C. Smith (Ed.), *Proceedings of the British Society for Research into Learning Mathematics* (pp. 150–155). Oxford: BSRLM.
42. Basturk, S., **Tasova, H. I.**, & Seckin, G. (2008). Investigating teacher's practices according to level of students. In O. Demirel & A. M. Sunbul (Eds.), *Further Education in the Balkan Countries*, 9(2) p. 859–865.

Abstracts

43. **Tasova, H. I.**, Liang, B., Stevens, I. E., & Moore, K. C. (2019). Characterizing two undergraduate students' quantitative comparisons of covarying quantities' magnitudes. In C. D. Savage, G. Benkart, B. D. Boe, M. L. Lapidus, & S. H. Weintraub. *Abstracts of Papers Presented to the American Mathematical Society*, 40(1), 421. Available at http://jointmathematicsmeetings.org/amsmtgs/2217_abstracts/1145-j5-1210.pdf
44. Moore, K. C., Stevens, I. E., Liang, B., & **Tasova, H. I.** (2019). Concept construction and abstracted quantitative structures. In C. D. Savage, G. Benkart, B. D. Boe, M. L. Lapidus, & S. H. Weintraub. *Abstracts of Papers Presented to the American Mathematical Society*, 40(1), 421. Available at http://jointmathematicsmeetings.org/amsmtgs/2217_abstracts/1145-j5-1564.pdf
45. **Tasova, H. I.** & Moore, K. C. (2018). Justification of an invariant relationship between two quantities: Coordinating quantities vs. steepness of tangent lines. In C. D. Savage, G. Benkart, B. D. Boe, M. L. Lapidus, & S. H. Weintraub. *Abstracts of Papers Presented to the American Mathematical Society*, 39(1), 462. Available at http://jointmathematicsmeetings.org/amsmtgs/2197_abstracts/1135-j5-1148.pdf

Other Publications

46. **Tasova, H. I.** (2009). 3D Geometry is easier now. *Bilgi Cagi*, 63, 42–43.

PRESENTATIONS (*denotes the presenter)

International

- ***Tasova, H. I.** (2023, October). Developing meanings for graphs from number lines: The case of Naya. Poster presented at the 44th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Reno, Nevada.
- ***Tasova, H. I.** (2022, November). Developing meanings for graphs from number lines: The case of Mike. Paper presented at the 44th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Nashville, TN.
- ***Tasova, H. I.** (2022, November). Student reasoning in dynamic situations: Spatial proximity reasoning. Paper presented at the 44th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Nashville, TN.
- ***Tasova, H. I.**, & Moore, K. C. (2021, October). From number lines to graphs: A middle school student's re-organization of the space. Paper presented at the 43st Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Philadelphia, PA.
- ***Tasova, H. I.**, Ellis, A., Hamilton, M., Moore, K. C., Waswa, A., Ozaltin Celik, A., Ying, Y. (2021, October). A serendipitous mistake: How one teacher's beliefs and knowledge mediated her in-the-moment instruction. Paper presented at the 43st Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education Philadelphia, PA.
- *Hamilton, M., Moore, K. C., Ellis, A., Ying, Y., **Tasova, H. I.**, Ozaltin Celik, A. & Waswa, A., (2021, October). Supporting generalizing in the classroom: One teacher's beliefs and instructional practice. Paper presented at the 43st Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education Philadelphia, PA.

- *Ellis, A., Ying, Y., Waswa, A., Moore, K. C., Hamilton, M., **Tasova, H. I.**, & Ozaltin Celik, A. (2021, October). Classroom supports for generalizing. Paper presented at the 43rd Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education Philadelphia, PA.
- ***Tasova, H. I.**, & Moore, K. C. (2021, June). Framework for representing a multiplicative object in the context of graphing. Paper presented at the 42nd Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Mexico.
- ***Tasova, H. I.** (2021, April 8-12). *A developmental shift in a student's meanings of graphs: The case of Zane* [Poster presentation]. The 2021 annual meeting of the American Educational Research Association.
- *Byerley, C., Joshua, S., Yoon, H., Moore, K. C., You, S., Drimalla, J., Park, M. S., Valaas, L., Gong, M. & **Tasova, H.** (2021, March). Interpreting and Understanding COVID-19 Data. A presentation at International Consortium for Research in Science and Mathematics Education Conference.
- ***Tasova, H. I.**, & Moore, K. C. (2020, July). Constructing and representing a quantitative structure: A conceptual analysis. Paper presented at The International Conference of the Learning Sciences. Nashville, TN.
- *Moore, K. C., Liang, B., **Tasova, H. I.**, & Stevens, I. E. (2019, November). Abstracted quantitative structures. Paper presented at the 41st Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. St. Louis, MO.
- ***Tasova, H. I.**, & Moore, K. M. (2018, November). *Generalization of an invariant relationship between two "quantities."* Paper presented at the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Greenville, SC.
- Ellis, A., ***Tasova, H. I.**, & Singleton, B. (2018, November). *How quantitative reasoning can support graph understanding in Algebra.* Paper presented at the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Greenville, SC.
- *Liang, B., Stevens, I. E., **Tasova, H. I.**, & Moore, K. C. (2018, November). *Magnitude reasoning: Characterizing a pre-calculus student's quantitative comparison between covarying magnitudes.* Paper presented at the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Greenville, SC.
- *Ellis, A., *Ely, R., Singleton, B. & **Tasova, H. I.** (2018, November). *Scaling continuous covariation: Supporting middle school students' algebraic reasoning.* Paper presented at the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Greenville, SC.
- ***Tasova, H. I.**, Koklu, O., Arican, M., & Olmez, I. B. (2017, October). *Student and school level correlates of mathematics performance in United States regarding PISA 2015.* Paper presented at the 39th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Indianapolis, IN.
- *Lee, H. Y., ***Tasova, H. I.**, & Moore, K. C. (2017, October). *Reasoning within quantitative frames of reference and graphing: The case of Lydia.* Paper presented at the 39th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Indianapolis, IN.

- ***Tasova, H. I.**, & Delice, A. (2011, November). *An analysis of pre-service mathematics teachers' performance in modelling tasks in terms of spatial visualization ability*. Paper presented at the British Society for Research into Learning Mathematics Conference, Oxford University.
- Basturk, S., ***Tasova, H. I.**, & Seckin, G. (2008, October). *Investigating teacher's practices according to level of students*. Paper presented at the annual meeting of 11th International Conference on Further Education in the Balkan Countries, Konya, Turkey. Abstract retrieved from http://www.pegem.net/akademi/kongrebildiri_detay.aspx?id=48412

National

- ***Tasova, H. I.** (2022, October). *Different conceptions of lines and points in the context of graphing* [Paper presentation]. The 2022 National Council of Teachers of Mathematics Research Conference, Los Angeles, CA, Unites States.
- ***Tasova, H. I.** (2022, October). *Developing meanings for graphs from number lines: The case of Zane* [Paper presentation]. The 2022 National Council of Teachers of Mathematics Research Conference, Los Angeles, CA, United States.
- ***Tasova, H. I.**, Liang, B., & Moore, K. C. (2020, February). *The role of line and points in the construction of emergent shape thinking*. Paper presented at the Twenty-Third Annual Special Interest Group of the Mathematical Association of America Conference on Research in Undergraduate Mathematics Education. Boston, MA.
- *Moore, K. C., Liang, B., Stevens, I. E., & **Tasova, H. I.** (2020, February). *A quantitative reasoning framing of concept construction*. Paper presented at the Twenty-Third Annual Special Interest Group of the Mathematical Association of America Conference on Research in Undergraduate Mathematics Education. Boston, MA.
- ***Tasova, H. I.**, Liang, B., & Moore, K. C. (2019, February). *Generalizing actions of forming: Identifying patterns and relationships between quantities*. Paper presented at the 22th Annual Conference on Research in Undergraduate Mathematics Education.
- ***Tasova, H. I.**, Lee, H. Y., & Moore, K. C. (2019, February). *Supporting quantitative reasoning through establishing frames of reference*. Presentation at Twenty-Third Annual Conference of the Association of Mathematics Teacher Educators. Orlando, FL.
- ***Tasova, H. I.**, Liang, B., Stevens, I. E., & Moore, K. C. (2019, January). *Characterizing two undergraduate students' quantitative comparisons of covarying quantities' magnitudes*. Abstract presented at the Joint National Meeting of the American Mathematical Society and the Mathematical Association of America. Baltimore, MD.
- *Moore, K. C., Stevens, I. E., Liang, B., & **Tasova, H. I.** (2019, January). *Concept construction and abstracted quantitative structures*. Abstract presented at the Joint National Meeting of the American Mathematical Society and the Mathematical Association of America. Baltimore, MD.
- ***Tasova, H. I.**, *Stevens, I. E., & Moore, K. C. (2018, February). *A framework for analyzing written curriculum from a shape-thinking and (co)variational reasoning perspective*. Paper presented at the Twenty-First Annual Special Interest Group of the Mathematical Association of America on Research in Undergraduate Mathematics Education (SIGMAA on RUME) Conference. San Diego, CA.
- ***Tasova, H. I.** & Moore, K. C. (2018, January). *Justification of an invariant relationship between two quantities: Coordinating quantities vs. steepness of tangent lines*. Abstract presented at the Joint National Meeting of the American Mathematical Society and the Mathematical Association of America. San Diego, CA.

- ***Tasova, H. I.**, & Delice A. (2012, September). *An investigation of mathematics teacher trainees' process of modelling activities based on their thinking structures*. Abstract presented at the annual meeting of 21th National Education Science Conference, Istanbul, Turkey. Abstract retrieved from http://www.pegem.net/akademi/kongrebildiri_detay.aspx?id=136543
- ***Tasova, H. I.**, & Basturk, S. (2009). *The implementation and evaluation of a learning environment designed with Cabri 3D geometry software*. Paper presented at the annual meeting of Egitimde Iyi Ornekler Konferansi, Istanbul, Turkey.

Regional/Local

- ***Tasova, H. I.** (2023, November 3–4). *Enjoying Students' Brilliance in "Misconceptions" with Graphs?* [Abstract presentation]. The 64th California Mathematics Council–South Annual Mathematics Conference, Palm Springs, CA, Unites States.
- ***Tasova, H. I.** (2022, November 4–5). *What is "the" meaning of a point in a coordinate plane?* [Abstract presentation]. The 63rd California Mathematics Council–South Annual Mathematics Conference, Palm Springs, CA, Unites States.
- ***Tasova, H.I.** (2022, October 25). *Pedagogical Technologies That Support Equitable Teaching Practices in Mathematics* [Abstract presentation]. The 2nd DEI-Related Research at CSUSB, San Bernardino, CA, Unites States.
- ***Tasova, H. I.** (2020, October). *Developing Productive Meanings for Graphs from Quantitative Reasoning Perspective*. Abstract presented at the 61th Annual Georgia Mathematics Conference. Eatonton, GA.
- ***Tasova, H. I.** (2020, February). *A coherent system of representation of quantitative relationships*. Poster presentation at the College of Education Research Conference 2020, University of Georgia, Athens, GA.
- ***Tasova, H. I.** & Liang, B. (2019, October). *Reinventing the wheel: Trigonometric functions*. Abstract presented at the 60th Annual Georgia Mathematics Conference. Eatonton, GA.
- ***Tasova, H. I.** & *Stevens, I. E. (2018, October). *A special content knowledge task on functions and rate of change*. Abstract presented at the 59th Annual Georgia Mathematics Conference. Eatonton, GA.
- ***Tasova, H. I.** (2018, October). *What is essential to the concept of rate of change in dynamic situations and graphs?* Abstract presented at the 12th Annual Georgia Association of Mathematics Teacher Educators. Eatonton, GA.
- ***Tasova, H. I.** (2018, May). *Making Sense of Rate of Change in Dynamic Situations and Graphs Through "Amount of Change."* Abstract presented at SEER Center Spring Research Forum. Athens, GA.
- ***Tasova, H. I.** (2018, April). *Direction of Tangent Lines as a Justification of Curvature and Its Drawbacks: The Case of Emma*. Poster presented at Integrative Research and Ideas Symposium. Athens, GA.
- *Liang, B., Stevens, I. E., & **Tasova, H. I.** (2018, March). *Documenting college students' meanings for partitioning activity*. Poster presented at the 2018 College of Education Research Conference at University of Georgia. Athens, GA.
- ***Tasova, H. I.** (2017, May). *Trends in strength and slope of socio-economic gradients in mathematics in PISA 2006 and 2015 for the U.S.* Abstract presented at SEER Center Spring Research Forum. Athens, GA.
- ***Tasova, H. I.** (2017, April). *What can PISA 2015 Results Tell us about Disparities in Mathematics in the U.S.?* Poster presentation at the University of Georgia's College of Education Graduate Student and Faculty Research Conference. Athens, GA.

- ***Tasova, H. I.** & *Stevens, I. (2017, April). *An Analysis of U.S. and Turkish Textbooks through a Shape Thinking Perspective: Linear Functions*. Poster presentation at the University of Georgia's College of Education Graduate Student and Faculty Research Conference. Athens, GA.
- ***Tasova, H. I.** (2017, March). *Immigrant, Gender and Socioeconomic Differences in Mathematics, Science, and Reading Performance in the U.S.: Multilevel Findings from PISA 2015*. Abstract presented at Integrative Research and Ideas Symposium. Athens, GA.
- ***Tasova, H. I.**, & Moore, K.C. (2017, January). *A Comparative Analysis of Turkish Textbooks through Shape Thinking Perspective*. Abstract presented at the Southern sectional meeting of the Mathematical Association of America. Macon, GA.

GRANT ACTIVITY

External

- The California State University Office of the Chancellor, Center for the Advancement of Instruction in Quantitative Reasoning (CAIQR), *Exploring PK-5 Science Concepts and the Next Generation Science Standards*. \$75,000, Coprincipal Investigator (Principal Investigator Dr. Jonathan Hall) (awarded)
- National Science Foundation *Collaborative Research: HSI Implementation and Evaluation Project: Providing Equitable Access of Fundamental Data Analytical Skills to STEM Students with a Theme-Based Approach*. Coprincipal Investigator (Principal Investigator Dr. Yingzhuo Fu from UCR) (submitted)
- National Science Foundation Racial Equity in STEM Education Program, *Racial Equity: Enhancing Culturally Responsive STEM Education through a Teacher Residency Program*. Coprincipal Investigator (Principal Investigator Eun-Ok Baek) (declined)
- National Council of Teachers of Mathematics Early Career Research Grant, *Investigating Equitable STEM Education Through Robotics-Enhanced Algebra Learning*. Principal Investigator. (declined)

Internal

- California State University San Bernardino, James R. Watson & Judy Rodriguez Watson College of Education Faculty Summer Research Fellowship, *Designing Pedagogical Technologies that Promote Equitable Teaching Practices in STEM Education*, 2023, \$3000, Principal Investigator (awarded)
- California State University San Bernardino, Mini-Grants, *Investigating the Use of Codable Robots to Enhance Mathematics Instruction*, 2023, \$6,500, Principal Investigator (awarded)
- California State University San Bernardino, Mini-Grants, *Exploring the use of robotics in teaching and learning graphs in STEM*, 2022, \$6,100, Principal Investigator (awarded)
- California State University San Bernardino, College of Education Summer Research Fellowship, *Investigating the Use of Programmable Robots in Developing Productive Meanings for Graphs*, 2022, \$4000, Principal Investigator (declined)
- California State University San Bernardino, Summer Research Fellowship, *Framework for characterizing students' meanings of coordinate systems, points and graphs*, 2022, \$3000, Principal Investigator (awarded)
- California State University San Bernardino, Innovative Course Development Grants, *Flipped Mentoring for Student Teachers and Interns: Effective Instructional Practices and Routines*, 2022, \$6,100, Principal Investigator (awarded)
- California State University San Bernardino, Open Educational Resources (OER) Grant, *Teacher Education and Foundations, ESEC 6013*, 2022, \$700, Principal Investigator (awarded)

Marmara University, Istanbul, Turkey, Marmara University Science and Research Council, *Investigating thinking structures and visualization skills of pre-service mathematics teachers in modeling activities and performance*, 6000 Turkish Lira, Principal Investigator (awarded)

TEACHING EXPERIENCE

Instructor, California State University San Bernardino,

Advanced STEM Teaching Methods, ESTM 6203 (Fall 2022, Fall 2023, Spring 2024)

Research Methods in STEM Education, ESTM 6344 (Spring 2022, Spring 2023)

Research methods course required for students in MA program in STEM Education

Methods of Teaching in the Content Areas: Mathematics, ESEC 6013 (2 sections in Fall 2021, Spring 2022, Fall 2022, Spring 2023, Fall 2023, Spring 2024 * Hybrid format)

Method course required for all secondary mathematics teacher candidates.

Supervised Field Experience I, ESEC 6020 (Fall 2021, Spring 2022, Spring 2024)

Supervising student teachers.

Intern Supervision I, ESEC 6071 (Fall 2021, Spring 2022, Spring 2024)

Supervising interns.

Instructor, University of Georgia,

Children's Mathematical Learning, EMAT 3400 (Fall 2020 *Hybrid format)

Method course required for all elementary pre-service teachers.

Precalculus, MATH 1113 (Fall 2019)

Connections in Secondary Mathematics I, EMAT 4810/6810 (Spring 2018, 2019)

Team-taught, the first content course for secondary pre-service mathematics teachers; focus on function, rate of change, and algebra.

The Mathematics Educator Seminar, EMAT 8990 (Summer 2017, Fall 2019)

Co-taught, introduction to academic journal reviewing, editing, and publishing for graduate students in mathematics education.

Teaching Assistant, University of Georgia,

Children's Mathematical Learning, EMAT 3400 (2 sections in Spring 2020 *Hybrid, 2 sections in Spring 2021 *Online)

First method course required for all elementary pre-service teachers

Mathematics Teaching and Curriculum in Grades PreK-5, EMAT 3410 (Fall 2020)

Second method course required for all elementary pre-service teachers.

Teaching Secondary School Mathematics I, EMAT 4800 (Spring 2019)

First method course for secondary pre-service mathematics teachers.

Field Experience in Secondary School Mathematics I, EMAT 4800L (Spring 2019)

Field components of the first method course for pre-service secondary teachers.

Connections in Secondary Mathematics I, EMAT 4810/6810 (Spring 2017, Spring 2018, Spring 2019, Spring 2020)

First content course for pre-service secondary mathematics teachers; focus on function, rate of change, and algebra.

Group Facilitator (Teaching Internship), University of Georgia,

Algebra for Middle Grades Teachers, MATH 5035 (Spring 2017)

Content course for pre-service secondary teachers; focus on fraction, ratio, proportional relationships; taught by Dr. Sybilla Beckmann
Connections in Secondary Mathematics II, EMAT 3800/4910 (Spring 2016)
 Second content course for pre-service secondary mathematics teachers; focus on fraction, proportion, and multiplication; taught by Dr. Andrew Izsak
Arithmetic for Middle School Teachers, MATH 5020 (Fall 2017)
 Content course for pre-service secondary teachers; focus on number system, set theory, fractions, and multiplication; taught by Dr. Sybilla Beckmann
Guest Lecturer, University of Georgia
 Children’s Mathematical Learning, EMAT 3400 (for a week in Spring 2020)
 Precalculus, MATH 1113 (for a week in Fall 2019)
 Arithmetic for Elementary School Teachers, MATH 2003 (for a week in Spring 2019)
 Where does mathematics exist?, FYO 1001 (for a day in Fall 2019)
Guest Lecturer, University of Wisconsin-Stevens Point
 Techniques in Secondary Education, MED 335 (for a day in Fall 2022 and Spring 2023)
Professional Development Facilitator, California State University San Bernardino,
 California Mathematics Project, Lesson Study in Bear Valley Unified School District (Fall 2022)
Professional Development Facilitator, University of Georgia,
 Generalization Across Multiple Mathematical Areas - Classrooms and Teaching (Spring & Summer 2021)
Professional Development Facilitator, The University System of Georgia,
 STEM initiative, Lesson Study in Clarke County School District (Fall 2016, Spring 2017)
Mathematics Teacher, Istanbul Science High School, Turkey (Fall 2008 – Spring 2013)
 Taught integrated math including algebra, geometry, probability and statistics.
 Supervised after-school Math Club, which included weekend events.
 Served as an advisor to a small group of students who were competing in Math Olympiads.
 Mentored two student teachers.

AWARDS AND HONORS

2023	James R. Watson & Judy Rodriguez Watson College of Education Faculty Summer Research Fellowship California State University San Bernardino
2022	Summer Research Fellowship California State University San Bernardino
2021	Outstanding Graduate Student Research Poster Award The American Educational Research Association (AERA Division C)
2020	Mathematics and Science Education Student Travel Award University of Georgia
2020	Dr. Thomas Cooney Travel Award University of Georgia
2020	Graduate School Student Travel Grant University of Georgia

- 2019 Mathematics and Science Education Student Travel Award
University of Georgia
- 2019 Graduate School Student Travel Grant
University of Georgia
- 2018 Dr. Thomas Cooney Travel Award
University of Georgia
- 2018 “Research Informing Practice” Award by SEER Center Spring Research Forum
University of Georgia
- 2018 Travel Grant from Dr. Denise Spangler’s Professorship Endowment
University of Georgia
- 2018 Graduate School Student Travel Grant
University of Georgia
- 2017 Registration Scholarship Award
The North American Chapter of the Psychology of Mathematics Education
- 2017 Best Poster Award, College of Education Research Conference
University of Georgia
- 2017 (March) MTLT SCK Institute Travel Grant
University of Michigan
- 2017 (July) MTLT SCK Institute Travel Grant
University of Michigan

PROFESSIONAL SERVICE and LEADERSHIP

Editorship

- 2020-2021 Associate Editor
The Mathematics Educator, Volume 29. University of Georgia, Athens, GA.
- 2016-2020 Co-Editor
The Mathematics Educator, Volumes 25(Special Issue), 26(1), 26(2), 27(1), 27(2), 28(1), 28(2). University of Georgia, Athens, GA.

Journal Manuscript Reviewer

- 2023-present *Mathematical Thinking and Learning*
- 2019-present *Mathematics Teacher: Learning and Teaching Pre-K–12*
- 2016-present *The Mathematics Educator*

Proposal Reviewer for Professional Conferences

- 2018-present *Psychology of Mathematics Education – North American Chapter*
- 2019-2020 *The International Conference of the Learning Sciences (ICLS)*
- 2017-2021 *Research in Undergraduate Mathematics Education*

Service

- 2023-present Educational Policy and Resources Committee (EPRC) Member

- California State University San Bernardino
I was elected to serve on the Academic Technologies and Distributed Learning (ATDL) Committee as a representative of the Watson College of Education.
- 2023-present Search Committee Member
Department of Teacher Education and Foundations at California State University San Bernardino
A member of the search committee for Administrative Support Staff position in the Department of Teacher Education and Foundations.
- 2023-present STEAM Steering Committee Member
San Bernardino City Unified School District (SBCUSD)
Analyzing the current state of STEAM in SBCUSD and creating a vision map.
- 2022-present STEM Exploration Center Committee Member
California State University San Bernardino, College of Education
Collaborating to establish a STEM center dedicated to serving the K-12 population in the Inland Empire.
- 2022-present Academic Technologies and Distributed Learning (ATDL) Committee Member
California State University San Bernardino
I was elected to serve on the Academic Technologies and Distributed Learning (ATDL) Committee as a representative of the Watson College of Education.
- 2022-2023 Search Committee Member
Department of Teacher Education and Foundations at California State University San Bernardino
Served as a member of the search committee for an open rank tenure-track faculty of Educational Psychology and Adolescent Development.
- 2019–2020 Colloquium Chair,
Mathematics Education Student Association at the University of Georgia
 - Recruited appropriate members of the mathematics education community to present their work in colloquium format.
 - Made arrangements for a speaker’s travel and accommodations.
 - Scheduled each colloquium; e.g., arrange for a room, plan for refreshments, publicize each colloquium etc.
 - Prepared and submitted appropriate paperwork for colloquium speakers’ reimbursements.
- 2016–2017 Treasurer,
Mathematics Education Student Association at the University of Georgia
 - Maintained all financial records of MESA.
 - Submitted, with assistance from the President, an annual request for funding to the COE office related to Student Organizations.
 - Assisted in attainment of reimbursements for MESA members for items as travel, MESA events, etc.
- 2017–2018 Vice President,
Turkish Student Association at the University of Georgia

2016–2017 Board Member,
Turkish Student Association at the University of Georgia

Conference Session Chairing and Presiding

2016 Invited Sessions Presider for two sessions.
50th Anniversary of Mathematics Education at the University of Georgia, Athens, GA

Professional Development

Feb 2024 Facilitator
Dinner and a STEM Problem at California State University, San Bernardino, with teachers, educators, and CSUSB students from the larger San Bernardino-Riverside community

Nov 2023 Facilitator
64rd Annual California Mathematics Council South Conference in Palm Springs with middle and high school mathematics teachers

Fall 2023 Facilitator
Bear Valley Unified School District Professional Learning Day, with Big Bear Middle School mathematics teachers

Summer 2023 Facilitator
Early Childhood Education Institute at California State University, San Bernardino, with TK-3 Educators from Inland Empire, Center for Enhancement of Mathematics Education.

Mar 2023 Facilitator
Dinner and a Math Problem at California State University, San Bernardino, with teachers, educators, and CSUSB students from the larger San Bernardino-Riverside community

Fall 2022 Facilitator
Bear Valley Unified School District Professional Learning Day, with Big Bear Middle School mathematics teachers

Nov 2022 Facilitator
63rd Annual California Mathematics Council South Conference in Palm Springs with middle and high school mathematics teachers

Summer 2021 Facilitator and Assistant Facilitator
Professional Development Session on Generalization, with middle and high school mathematics teachers through GAMMA-CAT.

Spring 2021 Facilitator and Assistant Facilitator
Professional Development Session on Generalization, with middle and high school mathematics teachers (online) through GAMMA-CAT.

Oct 2020 Facilitator
The 61st annual Georgia Mathematics Conference, with middle and high school mathematics teachers (online)

Oct 2019 Facilitator
The 60th annual Georgia Mathematics Conference, with high school mathematics teachers
Rock Eagle, GA.

Oct 2018 Facilitator

- The 59th annual Georgia Mathematics Conference*, with middle and high school mathematics teachers
Rock Eagle, GA.
- Feb 2017 Assistant Facilitator
Clarke County School District Professional Learning Day, with 8th grade and 9th grade mathematics teachers,
Clarke Central High School, Athens, GA.
- Oct 2016 Assistant Facilitator
Clarke County School District Professional Learning Day, with 8th grade and 9th grade mathematics teachers,
Clarke Central High School, Athens, GA.
- Mar 2012 Facilitator
Teacher Professional Development Conference, with high school mathematics and geometry teachers,
GeoGebra training workshop for mathematics and geometry teachers
Private Istanbul Science High School, Istanbul, Turkey
- Oct. 2011 Facilitator
Teacher Professional Development Conference, with high school mathematics and geometry teachers,
GeoGebra training workshop for mathematics and geometry teachers
Private Istanbul Science High School, Istanbul, Turkey

Other

- 2024 SIMSEF 2024 Secondary Science Fair Judge
- 2017 A team member for developing/applying tasks for middle school students in Math Fest of MESA at the University of Georgia.

PROFESSIONAL MEMBERSHIPS

- 2021 – present TODOS: Mathematics for ALL
- 2020 – present American Educational Research Association (AERA)
- 2020 – 2021 The International Society of the Learning Sciences (ISLS)
- 2018 – present Association of Mathematics Teacher Educators (AMTE)
- 2017 – present Special Interest Group of the MAA on Research in Research in Undergraduate Mathematics (SIGMAA-RUME)
- 2017 – 2021 Society for Industrial and Applied Mathematics (SIAM)
- 2016 – present North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA)
- 2014 – present National Council of Teachers of Mathematics (NCTM)
- 2014 – 2021 Mathematics Education Student Association (MESA), University of Georgia