TEO PAOLETTI

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EDUCATION

August 2015	PhD in Mathematics Education University of Georgia *Supervisor: Dr. Kevin C. Moore* *Committee Members: Dr. Leslie Steffe and Dr. Sybilla Beckmann* Dissertation Title: Pre-service Teachers' Development of Bidirectional Reasoning
June 2010	MS in Mathematics, Texas A&M University
December 2007	BA in Mathematics with 6-12 Mathematics Teacher Certification. Minor in Classical Studies, The College of New Jersey

RESEARCH EXPERIENCE

March 2017 – Present Prinicpal Investigator, Developing Middle-School Students' Understandings of Coordinate Systems (Mid-CoS)
Principal Investigator Dr. Teo Paoletti.
Funded by: Spencer Award 001040. $50,000
Brief description: In the Mid-CoS Project, I am extending my dissertation project by examining possible ways to support middle-grade students developing ideas of functions, variables, graphs, and rate of change via reasoning about relationships between quantities. The project aims to develop understandings of how to support middle school students in leveraging covariational reasoning to construct mathematical ideas and to create curricular materials teachers can use in their own classrooms for this purpose. This project has the potential to transform the ways in which 7^{th} and 8^{th} grade mathematics is currently taught if successful. This project is supported by a small research Spencer grant, awarded to less than 10% of applicants, to support my efforts at collecting and analysing data and disseminating important findings.

September 2018 – Present - Principal Investigator, Middle School Students' Graphing from the Ground Up (MSS-GGU)
Principal Investigators: Dr. Hwa Young Lee & Dr. Teo Paoletti.
Submitted to: National Science Foundation. $449,491
Brief description: In the MSS-GGU Project, we are interested in examining middle school students' developing understandings of graphs by first supporting their meanings for the underlying coordinate system and frames of reference on which the graphs are represented. Our goals include developing explanatory models of students' developing mathematical understandings as well as a task sequence that can support other students in developing compatible meanings.

September 2017 – Present Sept Consultant**,** Multimodel Informational and Conceptual Assistant (MICa)
Principal Investigator Dr. Justin Olmanson.
Funded by: Microsoft. $20,000
In collaboration with faculty from University of Nebraska – Lincoln, Steven Greenstein and Teo Paoletti are designing, developing and implementing a new type of learning environment using Microsoft's Azure artificial intelligence environment. The resulting Multimodel Informational and Conceptual assistant (MICa) can listen in on small group dialogue to identify concepts and ideas the students are discussing and provide real-time access to videos, graphics, simulations, etc. that students' can use as part of their problem solving. Currently at the pilot stages, MICa has the potential to support students as they represent, analyze, make predications about, and provide insights into real-world phenomena.

Jan 2016 –Present Consultant, Adjunct Mathematics Instructor Resources and Support: Improving Undergraduate Precalculus Teaching and Learning Experience
Principal Investigator Dr. Eileen Murray and co-PI Dr. Amir Golnabi.
Funded by: NSF Award IUSE-1712058. $300,000
Brief description: In collaboration with Dr. Eileen Murray and Dr. Amir Golnabi, we are exploring how we can better support adjunct precalculus instruction at Montclair State University through a combination of (a) course coordination, (b) adopting a research-based reform-oriented curriculum, and (c) providing professional development in the form of a summer workshop and weekly meetings. With the growing prevalence of introductory mathematics courses being taught by adjuncts across the country, this project will provide valuable insights into ways in which MSU and other universities can support their adjuncts in better preparing their students for calculus and, eventually, continuing into STEM degrees.

September 2016 – Present Project Lead, Examining Teachers' Understandings of Graphing Conventions
Brief description: In collaboration with Dr. Jason Silverman at Drexel University, Dr. Kevin Moore at University of Georgia and several Montclair State University graduate students, we are examining in-service teachers' understandings of various mathematical ideas in relation to graphing conventions. Serving as a natural extension of work conducted as part of the Advancing Reasoning project examining pre-service teachers' understandings of these same ideas, our goal is to examine in-service teachers' meanings for function and rate of change in relation to graphing conventions. We also examine if an on-line intervention supported the

teachers in developing more sophisticated meanings for these ideas. This project has the potential to extend into examining how efforts to scale such an intervention can serve as a productive means to support in-service teachers mathematical knowledge for teaching.

Sept 2014 – Present Research Assistant/Collaborator, Advancing Reasoning: Advancing Secondary Mathematics Teachers' Quantitative Reasoning.
Principal Investigator Dr. Kevin C. Moore.
Funded by: NSF CAREER Award DRL-1350342. $741,491
Brief description: In collaboration with faculty and graduate students at the University of Georgia, I am a collaborator in the Advancing Reasoning project, which aims to develop case studies providing examples of students' reasoning about relationships between quantities that proved beneficial and detrimental as well as examples of students' reasoning evolving over time. One outcome of the project is the development of research-based curriculum for pre-service teachers focusing on function, covariation, modeling, graphing and other major secondary mathematics concepts.

Jan 2016 –Present Project Lead, STEM Graphs Project
Brief description: In the STEM Graphs Project, a group of Montclair State University doctoral students and I are examining how mathematics textbooks use graphical representations and compare these uses to science and engineering textbooks and practitioner journals. By comparing and contrasting the different ways these resources represent information graphically, we intend to examine whether mathematics curriculum developers are presenting mathematics in a way that is attentive and transferable to other STEM fields.

Sept 2016 – December 2018 Collaborator. Instruction in Undergraduate Proof-Oriented Mathematics Classes.
Brief description: In collaboration with faculty and graduate students at Rutgers University (Dr. Keith Weber) and Temple University (Dr. Tim Fukawa-Connelly), the Instruction in Undergraduate Proof-Oriented Mathematics Classes aims to examine lecturers activities in proof-based mathematics classes. For instance, the project intends to examine different ways lecturers use questions and wait time in these courses.

Sept 2013 – August 2015 Dissertation Study. University of Georgia
Supervised by Dr. Kevin C. Moore
Brief description: I conducted a semester long teaching experiment with two undergraduate students to investigate how they could leverage reasoning about relationships between quantities to improve their function and inverse function understandings. Specifically, I examined how they could leverage making sense of relationships bidirectionally, understanding that two quantities simultaneously covaried and neither quantity was inherently the input quantity, to reconstruct their function and inverse function understandings.

Sept 2011 – June 2014 Research Assistant. University of Georgia
Supervised by Dr. Kevin C. Moore
Brief description: We conducted several rounds of data collection involving both clinical interviews and teaching experiments. The goal of the project was to investigate pre-service teachers' reasoning about relationships between quantities in order to make sense of

mathematics content. The teaching experiment focused on four students developing understandings of the polar coordinate system through their reasoning about relationships between quantities. The clinical interviews examined students' meanings for function, inverse function, graphs, and relationships which directly influenced my dissertation research project.

RESEARCH SUPERVISION AND MENTORING

I have supervised and mentored the following graduate students:

2015 - 2020	**Montclair State University**
Madhavi Vishnubhotla	Doctoral student (Dissertation Chair - Spring 2020)
Zareen Rahman	Doctoral student (Committee Member– Spring 2018)
Jacqueline Dauplaise	Doctoral student (Committee Member –Spring 2019)
Erell Germia	Doctoral student (Committee Member)
Anthony Emmons	Doctoral student (Committee Member)
Mustafa Mohamed	Doctoral student (Committee Member)
Zareen Rahman	Graduate Research Assistant for the STEM Graphs project
Debasmita Basu	Graduate Research Assistant for the STEM Graphs project
Justin Seventko	Graduate Research Assistant for the STEM Graphs project
Madhavi Vishnubhotla	Graduate Research Assistant for the STEM Graphs project
Erell Germia	Graduate Research Assistant for the Teacher Conventions project
Zareen Rahman	Graduate Research Assistant for the Teacher Conventions project
Ceire Monahan	Graduate Research Assistant for the Teacher Conventions project
Madhavi Vishnubhotla	Graduate Research Assistant for the Teacher Conventions project
Madhavi Vishnubhotla	Graduate Assistant for Technology Tips project
Ceire Monahan	Graduate Assistant for Technology Tips project
Alfred Limbre	Graduate Assistant for Mid-CoS project
Madhavi Vishnubhotla	Graduate Assistant for Mid-CoS project
Mustafa Mohamed	Graduate Assistant for Mid-CoS project
Su San Lim	Graduate Assistant for Mid-CoS project

UNIVERSITY TEACHING EXPERIENCE

Math for K-8 Teachers: Geometry, Algebra & Measurement (MATH 253), Instructor, Undergraduate course, University of Delaware, Fall 2020 (one course).

Selected Topics in Modern Mathematics (MATH 271), Instructor, Undergraduate course, Montclair State University, Spring 2020 (one course).

Algebra and Algebraic Thinking in the Middle Grades (MTHM 406/506) Instructor, completely on-line, co-listed undergraduate/graduate course, Montclair State University, Fall 2019 (one course).

Fundamentals of Pre-Service Mathematics (MATH 401), Instructor, Undergraduate Course, Montclair State University, Fall 2019 (one course).

Critical Thinking and Cognitive Development in Mathematics (MATH 815), Instructor, Doctoral course, Montclair State University, Spring 2019 (one course).

Mathematics For Teaching (MATH 370), Instructor, Undergraduate course, Montclair State University, Fall 2015 (one course), Spring 2016 (one course), Fall 2017 (one course), Spring 2018 (one course), Spring 2019 (one course).

Mathematics in Elementary Schools P- 6 (MTHM 201), Instructor, Undergraduate course, Montclair State University, Fall 2015 (two courses), Spring 2016 (one course), Fall 2016 (one course), Fall 2017 (one course), Spring 2018 (one course), Fall 2018 (one course), Fall 2019 (one course).

Mathematics in Elementary Schools P-6 II (MTHM 302), Instructor, Undergraduate course, Montclair State University, Fall 2016 (one course).

Mathematical Modeling for Middle Level & High School Grades (MATH 812), Instructor, Doctoral course, Montclair State University, Spring 2017 (one course).

Dissertation Proposal Seminar (MATH 830), Instructor, Doctoral course, Montclair State University, Spring 2016 (one course), Spring 2020 (one course).

Teaching Secondary School Mathematics III (EMAT 4900), Instructor, Undergraduate course, University of Georgia, Fall 2014 (one course), Spring 2015 (one course).

Field Experience (EMAT 4900L), Instructor, one-credit observation course, Undergraduate course, University of Georgia, Fall 2014 (one course), Spring 2015 (one course).

Teaching Secondary School Mathematics III (EMAT 4900), Teaching Assistant, Undergraduate course, University of Georgia, Spring 2014 (one course).

Field Experience (EMAT 4900L), Teaching Assistant, one-credit observation course, Undergraduate course, University of Georgia, Spring 2014 (one course).

Connections in Secondary School Mathematics I (EMAT 3700), Teaching Assistant, Undergraduate course, University of Georgia, Fall 2012 (one course), Spring 2012 (one course), Fall 2013 (one course).

Student Teaching Supervisor, Undergraduate pre-service teacher content supervisor, University of Georgia, Fall 2013 (one student), Spring 2014 (one student), Fall 2014 (one student). Montclair State University, Fall 2017 (one student).

K-12 TEACHING EXPERIENCE

Middle and High School Mathematics Teacher, Moorestown School District, Moorestown, NJ (January, 2008 – June, 2011). I taught the following courses: Accelerated 7th grade, Honors/On-Level/Inclusion Algebra I, On-level/Inclusion Geometry, Discrete Mathematics, Statistics, Calculus AB, and Calculus BC. Further, I wrote curricula for Discrete Mathematics and Algebra I to accommodate changing standards within the state.

PEER-REVIEWED JOURNAL PUBLICATIONS

Lee, H. Y., Hardison, H., & **Paoletti, T.** (2020) Foregrounding the background: Two uses of coordinate systems. *For the Learning of Mathematics,* 40(*1*), 32-37.

Paoletti, T. (2020) Reasoning about relationships between quantities to reorganize inverse function meanings: The case of Arya. *The Journal of Mathematical Behavior,* 57, 1-24.

Moore, K. C., Stevens, I. E., **Paoletti, T.**, Hobson, N. L. F., & Liang, B. (2019). Pre-service teachers' figurative and operative graphing actions. *Journal of Mathematical Behavior*, 56.

Moore, K. C., Silverman, J., **Paoletti, T.**, Liss, D. R., & Musgrave, S. (2019). Conventions, Habits, and U.S. Teachers' Meanings For Graphs. *Journal of Mathematical Behavior,* 53, 179-195.

Paoletti, T. & Moore, K. C. (2018) A covariational understanding of function: Putting a horse before the cart. *For the Learning of Mathematics*, 38(3), 37-43.

Paoletti, T., Krupnik, V., Papadopoulos, D., Olsen, J., Fukawa-Connelly, T., & Weber, K. (2018). Teacher questioning and invitations to participate in advanced mathematics lectures. *Educational Studies in Mathematics*, 98(1), 1-17.

Paoletti, T., Stevens, I. E, Hobson, N. L. F., Moore, K. C., & LaForest, K. R. (2018) Inverse function: Pre-service teachers' techniques and meanings. *Educational Studies in Mathematics*, 97(1), 93-109.

Paoletti, T. & Moore, K. C. (2017) The parametric nature of two students' covariational reasoning. *The Journal of Mathematical Behavior*, 48, 137-151.

Paoletti, T., Stevens, I., & Moore, K. C. (2017) Tricks may inhibit student reasoning. *Mathematics Teacher*, 110(6), 446-453.

Paoletti, T., Monahan, C., & Vishnubhotla, M. (2017). Designing GeoGebra applets to maximize student engagement. *Mathematics Teacher*, 110(8), 628-630.

Moore, K. C., **Paoletti, T.**, & Musgrave, S. (2014). Complexities in students' construction of the polar coordinate system. *The Journal of Mathematical Behavior, 36*, 135-149.

Moore, K. C., Silverman, J., **Paoletti, T.**, & LaForest, K. (2014). Breaking conventions to support quantitative reasoning. *Mathematics Teacher Educator, 2*(2), 141-163.

Moore, K. C., **Paoletti, T.**, & Musgrave, S. (2013). Covariational reasoning and invariance among coordinate systems. *The Journal of Mathematical Behavior,* 32(3), 461-473.

Paoletti, T. (2013) Cracking codes and launching rockets. *Mathematics Teacher,* 107(4), 266-270.

Paoletti, T. (2013) A historical approach to infinity: Are all infinities created equal?. *Mathematics Teacher,* 107(2), 98-103.

Paoletti, T. (2006) Leonard Euler's solution to the Konigsberg bridge problem. *Convergence: A Magazine of the Mathematical Association of America.*

PEER-REVIEWED CONFERENCE PROCEEDINGS

Vishnubhotla, M. & **Paoletti, T.** (in press). Differentiating between Quadratic and Exponential Change via Covariational Reasoning: A Case Study. In *Proceedings of the Twenty-third Annual Conference on Research in Undergraduate Mathematics Education*. Boston, MA.

Mohamed, M. M., Vishnubhotla, M., Limbre, A., & **Paoletti, T.** (in press). Using RME to Support PSTs' Meanings for Quadratic Relationships. In *Proceedings of the Twenty-third Annual Conference on Research in Undergraduate Mathematics Education*. Boston, MA.

Paoletti, T., Vishnubhotla, M., & Mohamed, M. M. (2019) Inequalities and systems of relationships: Reasoning covariationally to develop productive meanings. Otten, S., Candela, A. G., de Araujo, Z., Haines, C., & Munter, C. (2019). *Proceedings of the forty-first annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. St Louis, MO: University of Missouri (pp. 157-166).

Paoletti, T., Vishnubhotla, M., Mohamed, M. M., & Cella, R. G. (2019) Comparative and conditional inequalities: A distinction emerging from student thinking. Otten, S., Candela, A. G., de Araujo, Z., Haines, C., & Munter, C. (2019). *Proceedings of the forty-first annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. St Louis, MO: University of Missouri (pp. 186-190).

Paoletti, T. (2019) Support students' understanding graphs as emergent traces: The faucet task. In Graven, M., Venkat, H., Essien, A. & Vale, P. (Eds). (2019). *Proceedings of the 43rd Conference of the International Group for the Psychology of Mathematics Education* (Vol 3, pp. 185-192). Pretoria, South Africa: PME.

Paoletti, T., Greenstein, S., Vishnubhotla, M., & Mohamed, M. M. (2019) Designing tasks and 3D physical manipulatives to promote students' covariational reasoning. In Graven, M., Venkat, H., Essien, A. & Vale, P. (Eds). (2019). *Proceedings of the 43rd Conference of the International Group for the Psychology of Mathematics Education* (Vol 3, pp. 193-200). Pretoria, South Africa: PME.

Paoletti, T., Vishnubhotla, M., & Mohamed, M. M. (2019) Reasoning covariationally to develop productive meanings of systems of relationships and inequalities. In Graven, M., Venkat, H., Essien, A. & Vale, P. (Eds). (2019). *Proceedings of the 43rd Conference of the International Group for the Psychology of Mathematics Education* (Vol 4, pp. 171). Pretoria, South Africa: PME.

Vishnubhotla, M. & **Paoletti, T**. (2018). Reasoning Covariationally to Distinguish between Quadratic and Exponential Growth. 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. 1048-1054). Oklahoma City, OK.

Nuzzi, J. T., Murray, E., Vishnubhotla, M., Rahman, Z., Golnabi, A., & **Paoletti, T**. (2018). Understanding the Impact of Supports on Adjunct Mathematics Instructor Knowledge. 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. 1161-1162). Oklahoma City, OK.

Paoletti, T., Lee, H.Y., Hardison, H., (2018). Static and emergent thinking in spatial and quantitative coordinate systems. In Hodges, T.E., Roy, G.J., Tyminski, A.M. (Eds.), Proceedings of the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. University of South Carolina & Clemson University, Greenville, SC, pp. 1315–1322.

Lee, H. Y., Hardison, H., & **Paoletti, T.** (2018). Uses of coordinate systems: A conceptual analysis with pedagogical implications. In Hodges, T.E., Roy, G.J., Tyminski, A.M. (Eds.), Proceedings of the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. University of South Carolina & Clemson University, Greenville, SC, pp. 1307–1314.

Paoletti, T., & Moore, K. C. (2018). A covariational understanding of function: Putting a horse before the cart. In Hodges, T.E., Roy, G.J., Tyminski, A.M. (Eds.), *Proceedings of the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. University of South Carolina & Clemson University, Greenville, SC, pp. 203–206.

Paoletti, T. (2018). Katlyn's Inverse Dilemma: School Mathematics Versus Quantitative Reasoning. 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. 360-367). San Diego, CA.

Paoletti, T., Silverman, J., Moore, K. C., Vishnubhotla, M., Rahman, Z., Monahan, C., & Germia, E. F. (2018). Reasoning about Quantities or Conventions: Investigating Shifts in In-service Teachers' Meanings after an On-line Graduate Course. 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. 508-516). San Diego, CA.

Paoletti, T., Silverman, J., Moore, K. C., Liss, D. R., Musgrave, S., Vishnubhotla, M., & Rahman, Z. (2018). Conventions or Constraints? Pre-service and In-service Teachers' Understandings. 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. 87-101). San Diego, CA.

Paoletti, T., Vishnubhotla, M., Rahman, Z., Seventko, J. & Basu, D. (2017) Comparing graph use in STEM textbooks and practitioner journals. In A. Weinberg, C. Rasmussen, J. Rabin, M. Wawro, & S. Brown (Eds.), *Proceedings of the Twentieth Annual Conference on Research in Undergraduate Mathematics Education* (pp. 1386-1392). San Diego, CA.

Paoletti, T., Krupnik, V., Papadopoulos, D., Olsen, J., Fukawa-Connelly, T. & Weber, K. (2017) Examining Lecturer's Questioning in Advanced Proof-Oriented Mathematics Classes. In A. Weinberg, C. Rasmussen, J. Rabin, M. Wawro, & S. Brown (Eds.), *Proceedings of the Twentieth Annual Conference on Research in Undergraduate Mathematics Education* (pp. 787-795). San Diego, CA.

Stevens, I. E., **Paoletti, T.**, Moore, K. C., Liang, B., & Hardison, H. H. (2017) Principles for Designing Tasks that Promote Covariational Reasoning. In A. Weinberg, C. Rasmussen, J. Rabin, M. Wawro, & S. Brown (Eds.), *Proceedings of the Twentieth Annual Conference on Research in Undergraduate Mathematics Education* (pp. 928–936). San Diego, CA.

Paoletti, T. (2017) Quantitative Reasoning and Inverse Function: A Mismatch. 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. 973-976). Indianapolis, IA: Hoosier Association of Mathematics Teacher Educators.

Paoletti, T., Silverman, J., Monahan, C., Rahman, Z., Vishnubhotla, M., & Germia, E. F. (2017) Graphing Rules or Understandings? Teachers' Understandings. . 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. 536). Indianapolis, IA: Hoosier Association of Mathematics Teacher Educators.

Paoletti, T. & Moore, K. C. (2016) Covariational and parametric reasoning. In T. Fukawa-Connelly, N. Infante, M. Wawro, & S. Brown (Eds.), *Proceedings of the Nineteenth Annual Conference on Research in Undergraduate Mathematics Education* (pp. 368–382). Pittsburgh, PA: West Virginia University.

Moore, K. C., Stevens, I. E., **Paoletti, T.**, & Hobson, N. L. F. (2016). Graphing habits: "I just don't like that". In T. Fukawa-Connelly, N. Infante, M. Wawro, & S. Brown (Eds.), *Proceedings of the Nineteenth Annual Conference on Research in Undergraduate Mathematics Education* (pp. 16–30). Pittsburgh, PA: West Virginia University.

Paoletti, T. (2015). Reasoning Quantitatively to Develop Inverse Function Meanings. In T. G. Bartell, K. N. Bieda, R. T. Putnam, K. Bradfield, & H. Dominguez (Eds.), *Proceedings of the 37th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 780-787). East Lansing, MI: Michigan State University.

Paoletti, T., Mauldin, K. D., Moore, K. C., Stevens, I. E., Hobson, N. L. F., & LaForest, K. L. (2015). Changing Cones: Students' Images of a Dynamic Situation. In T. G. Bartell, K. N. Bieda, R. T. Putnam, K. Bradfield, & H. Dominguez (Eds.), *Proceedings of the 37th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 472). East Lansing, MI: Michigan State University.

Stevens, I. E., Hobson, N. L. F., Moore, K. C., **Paoletti, T.**, LaForest, K. L., & Mauldin, K. D. (2015). Changing Cones: Themes in Students' Representations of a Dynamic Situation. In T. G. Bartell, K. N. Bieda, R. T. Putnam, K. Bradfield, & H. Dominguez (Eds.), *Proceedings of the 37th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 363-372). East Lansing, MI: Michigan State University.

Stevens, I. E., LaForest, K. L., & Hobson, N. L. F., **Paoletti, T.**, & Moore, K. C. (2015). Making sense of inverses: Preservice Teachers' Inverse Strategies and Meanings. In T. G. Bartell, K. N. Bieda, R. T. Putnam, K. Bradfield, & H. Dominguez (Eds.), *Proceedings of the 37th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 262). East Lansing, MI: Michigan State University.

Paoletti, T. (2015) Students' reasoning when constructing quantitatively rich situations. In T. Fukawa-Connolly, N. E. Infante, K. Keene, & M. Zandieh (Eds.), *Proceedings of the Eighteenth Annual Conference on Research in Undergraduate Mathematics Education* (pp. 845-852). Pittsburgh, PA: West Virginia University.

Paoletti, T., Stevens, I. E., Hobson, N. L. F., LaForest K., & Moore, K. (2015) Pre-service teachers' inverse function meanings. In T. Fukawa-Connolly, N. E. Infante, K. Keene, & M. Zandieh (Eds.), *Proceedings of the Eighteenth Annual Conference on Research in Undergraduate Mathematics Education* (pp. 853-867). Pittsburgh, PA: West Virginia University.

Moore, K. C., & **Paoletti, T.** (2015) Bidirectionality and covariational reasoning. In T. Fukawa-Connolly, N. E. Infante, K. Keene, & M. Zandieh (Eds.), *Proceedings of the Eighteenth*

Annual Conference on Research in Undergraduate Mathematics Education (pp. 774-781). Pittsburgh, PA: West Virginia University.

Moore, K. C., Liss II, D. R., Silverman, J., **Paoletti, T.**, LaForest, K. R., & Musgrave, S. (2013). Pre-service teachers' meanings and non-canonical graphs. In Martinez, M. & Castro Superfine, A. (Eds.), *Proceedings of the 35th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 441-448). Chicago, IL: University of Illinois at Chicago.

Moore, K. C., Silverman, J., **Paoletti, T.**, Liss, D., LaForest, K. R., & Musgrave, S. (2013). The primacy of mathematical conventions in student meanings. In Martinez, M. & Castro Superfine, A. (Eds.), *Proceedings of the 35th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 837-840). Chicago, IL: University of Illinois at Chicago.

LaForest, K. R., Moore, K. C., Silverman, J., **Paoletti, T.**, Musgrave, S., & Liss, D. (2013). Common treatments of function: Where's the relationship?. In Martinez, M. & Castro Superfine, A. (Eds.), *Proceedings of the 35th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 563). Chicago, IL: University of Illinois at Chicago.

Moore, K. C., **Paoletti, T.**, Gammaro, J., & Musgrave, S. (2013). Covariational reasoning and graphing in polar coordinates. In S. Brown, G. Karakok, K. H. Roh, & M. Oehrtman (Eds.), *Proceedings of the Sixteenth Annual Conference on Research in Undergraduate Mathematics Education* (pp. 351-365). Denver, CO: University of Northern Colorado.

Paoletti, T., Moore, K. C., Gammaro, J., & Musgrave, S. (2013). Students' emerging understandings of the polar coordinate system. In S. Brown, G. Karakok, K. H. Roh, & M. Oehrtman (Eds.), *Proceedings of the Sixteenth Annual Conference on Research in Undergraduate Mathematics Education* (pp. 366-380). Denver, CO: University of Northern Colorado.

INVITED TALKS

Paoletti, T. (2020, March). *One student's developing inverse function meanings: The case of Arya*. Presentation for students at the University of Oklahoma, Norman, OK.

Paoletti, T. (2019, April). *From student, to teacher, to academia: Lesson learned and shared*. Keynote Speaker for the Annual TCNJ Math Student Award Night Banquet, Ewing, NJ.

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Paoletti, T. (2017, November). *Reasoning about relationships between quantities to develop inverse function meanings*. Presentation for doctoral students at Clemson University, Clemson, SC.

Paoletti, T. (2017, October). *Rethinking mathematical ideas with an eye towards coherence: Looking beyond procedures*. Keynote Presentation for the Third Annual TCNJ Math Teacher Alumni Symposium at the College of New Jersey, Ewing, NJ.

Paoletti, T. (2015, December). *Examining and Supporting Pre-Service Teachers' Inverse Function Meanings*. Presentation for the Mathematics Education Seminar Series at Montclair State University, Montclair, NJ.

Paoletti, T. (2015, November). *Considering and Studying Students' Mathematics: A Journey from TCNJ to a Ph.D. in Mathematics Education*. Presentation for the College of New Jersey Mathematics Department, Ewing, NJ.

Paoletti, T., Stevens, I. E., Hobson, N. L. F., & LaForest, K. L. (2015, February). *College Students' Inverse Function Meanings.* Presentation for the University of Georgia Mathematics Club, Athens, GA.

CONFERENCE PRESENTATIONS

Vishnubhotla, M., & **Paoletti, T.** (2021, accepted) *Exploring Shifts In A Student's Graphical Shape Thinking*. Paper presented at the 42st annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Mazatlán, Sin. Mexico.

Stevens, I. E., Ko, I, **Paoletti, T.**, Boileau, N., & Herbst, P. G. (2021, accepted) *Inequalities and systems of relationships: Reasoning covariationally to develop productive meanings*. Paper presented at the 42st annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Mazatlán, Sin. Mexico.

Mohamed, M. M., **Paoletti, T.,** Vishnubhotla, M., Greenstein, S., & Lim S. S. (2021, accepted) *Supporting Students' Meanings for Quadratics: Integrating RME, Quantitative Reasoning and Designing for Abstraction*. Paper presented at the 42st annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Mazatlán, Sin. Mexico

Paoletti, T., Vishnubhotla, M., & Lim, S. S. (2020, April, cancelled) *Nuances in Students' Meanings for Inequalities: Comparative and Restrictive*. Presentation at the NCTM 2020 Research Symposium. Chicago, IL.

Paoletti, T., Vishnubhotla, M., & Mohamed, M. M. (2020, April, cancelled) *Reasoning Quantitatively to Construct & Represent Systems of Relationships*. Poster at the NCTM 2020 Research Symposium. Chicago, IL.

Paoletti, T., Vishnubhotla, M., & Mohamed, M. M. (2020, April, cancelled) *Playing with Water and Learning about What Graphs Represent*. Presentation at the Annual Meeting and Exposition of the National Council of Teachers of Mathematics (NCTM). Chicago, IL.

Vishnubhotla, M. & **Paoletti, T.** (2020, February). *Differentiating between Quadratic and Exponential Change via Covariational Reasoning: A Case Study*. Paper presented at the

Twenty-third Annual Conference on Research in Undergraduate Mathematics Education (RUME). Boston, MA.

Mohamed, M. M., Vishnubhotla, M., Limbre, A., & **Paoletti, T.** (2020, February). *Using RME to Support PSTs' Meanings for Quadratic Relationships.* Paper presented at the Twenty-third Annual Conference on Research in Undergraduate Mathematics Education (RUME). Boston, MA.

Paoletti, T., Vishnubhotla, M., & Mohamed, M. M. (2019, November) *Inequalities and systems of relationships: Reasoning covariationally to develop productive meanings*. 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.

Paoletti, T., Vishnubhotla, M., Mohamed, M. M., & Cella, R. G. (2019, November) *Comparative and conditional inequalities: A distinction emerging from student thinking*. 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.

Paoletti, T. (2019, July) *Support students' understanding graphs as emergent traces: The faucet task*. Paper presented at the 43rd annual meeting of the International Group for the Psychology of Mathematics Education, Pretoria, South Africa.

Paoletti, T., Greenstein, S., Vishnubhotla, M., & Mohamed, M. M. (2019, July) *Designing tasks and 3D physical manipulatives to promote students' covariational reasoning*. Paper presented at the 43rd annual meeting of the International Group for the Psychology of Mathematics Education, Pretoria, South Africa.

Paoletti, T., Vishnubhotla, M., & Mohamed, M. M. (2019, July) *Reasoning covariationally to develop productive meanings of systems of relationships and inequalities*. Poster presented at the 43rd annual meeting of the International Group for the Psychology of Mathematics Education, Pretoria, South Africa.

Vishnubhotla, M., & **Paoletti, T.** (2019, April) *Explore the Distinction between Quadratic and Exponential Growth Using Dynamic Tasks*. Presentation at the Annual Meeting and Exposition of the National Council of Teachers of Mathematics (NCTM). San Diego, CA.

Vishnubhotla, M. & **Paoletti, T.** (2019, February). *Reasoning Covariationally to Distinguish between Quadratic and Exponential Growth.* Paper presented at the Twenty-second Annual Conference on Research in Undergraduate Mathematics Education (RUME). Oklahoma City, OK.

Nuzzi, J. T., Murray, E., Vishnubhotla, M., Rahman, Z., Golnabi, A., & **Paoletti, T.** (2019, February). *Understanding the Impact of Supports on Adjunct Mathematics Instructor Knowledge*. Poster presented at the Twenty-second Annual Conference on Research in Undergraduate Mathematics Education (RUME). Oklahoma City, OK.

Paoletti, T., & Moore, K. C. (2018, November) *A covariational understanding of function: Putting a horse before the cart*. Paper presented at the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Greenville, SC.

Paoletti, T., Lee, H. Y., & Hardison, H. (2018, November) *Static and emergent thinking in spatial and quantitative coordinate systems*. Paper presented at the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Greenville, SC.

Lee, H. Y., Hardison, H., & **Paoletti, T.** (2018, November) *Uses of coordinate systems: A conceptual analysis with pedagogical implications.* Paper presented at the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Greenville, SC.

Paoletti, T. (2018, February). *Katlyn's Inverse Dilemma: School Mathematics Versus Quantitative Reasoning*. Paper submitted to 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.

Paoletti, T., Silverman, J., Moore, K. C., Vishnubhotla, M., Rahman, Z., Monahan, C., & Germia, E. F. (2018, February). *Reasoning about Quantities or Conventions: Investigating Shifts in In-service Teachers' Meanings after an On-line Graduate Course*. 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.

Paoletti, T., Silverman, J., Moore, K. C., Liss, D. R., Musgrave, S., Vishnubhotla, M., & Rahman, Z. (2018, February). *Conventions or Constraints? Pre-service and In-service Teachers' Understandings*. 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.

Vishnubhotla, M., **Paoletti, T.**, & Monahan, C. (2018, April) *Exploring Limits and Approximations of Definite Integrals Using GeoGebra*. Presentation at the Annual Meeting and Exposition of the National Council of Teachers of Mathematics (NCTM). Washington, DC.

Vishnubhotla, M., Moore, K. C., **Paoletti, T.**, Rahman, Z. & Silverman, J. (2018, April) *Conventions as Choices or Rules: Teachers' Understandings*. Presentation at the Annual Research Conference of the National Council of Teachers of Mathematics (NCTM). Washington, DC.

Paoletti, T. (2017, October) *Quantitative Reasoning and Inverse Function: A Mismatch*. Paper presented at the 39th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Indianapolis, IA.

Paoletti, T., Silverman, J., Monahan, C., Rahman, Z., Vishnubhotla, M., & Germia, E. F. (2017, October) *Graphing Rules or Understandings? Teachers Understandings*. Poster presented at the 39th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Indianapolis, IA.

Paoletti, T., Monahan, C., & Vishnubhotla, M (2017, April) *Designing Geogebra Applets to Maximize Student Engagement*. Burst session presentation at the Annual Meeting and Exposition of the National Council of Teachers of Mathematics (NCTM). San Antonio, TX.

Paoletti, T., Vishnubhotla, M., Rahman, Z., Seventko, J. & Basu, D. (2017, February) *Comparing graph use in STEM textbooks and practitioner journals*. Paper presented at the Twentieth Annual Special Interest Group of the Mathematical Association of America on Research in Undergraduate Mathematics Education (SIGMAA on RUME) Conference. San Diego, CA.

Paoletti, T., Krupnik, V., Papadopoulos, D., Olsen, J., Fukawa-Connelly, T. & Weber, K. (2017, February) *Examining Lecturer's Questioning in Advanced Proof-Oriented Mathematics Classes*. Paper presented at the Twentieth Annual Special Interest Group of the Mathematical Association of America on Research in Undergraduate Mathematics Education (SIGMAA on RUME) Conference. San Diego, CA.

Stevens, I. E., **Paoletti, T.**, Moore, K. C., Liang, B., & Hardison, H. H. (2017, February) *Principles for Designing Tasks that Promote Covariational Reasoning*. Paper presented at the Twentieth Annual Special Interest Group of the Mathematical Association of America on Research in Undergraduate Mathematics Education (SIGMAA on RUME) Conference. San Diego, CA.

Weber, K., **Paoletti, T.**, Papadopoulos, D., Krupnik, V., Olsen, J., & Fukawa-Connelly, T. (2017, January) *Teacher questioning in advanced mathematics lectures*. Paper presented at the 2017 Joint Mathematics Meetings. Atlanta, GA.

Paoletti, T., Moore, K. C., & Stevens, I. E. (2016, July). *Task-design principles for covariational reasoning*. Paper presented at the 13th International Congress on Mathematical Education. Hamburg, Germany.

Paoletti, T. & Moore, K. C. (2016, February) *Covariational and parametric reasoning*. Paper presented at the Nineteenth Annual Special Interest Group of the Mathematical Association of America on Research in Undergraduate Mathematics Education (SIGMAA on RUME) Conference. Pittsburgh, PA.

Moore, K. C., **Paoletti, T.**, Stevens, I. E., & Hobson, N. L. F. (2016, February) *Graphing habits: "I just don't like that"*. Paper presented at the Nineteenth Annual Special Interest Group of the Mathematical Association of America on Research in Undergraduate Mathematics Education (SIGMAA on RUME) Conference. Pittsburgh, PA.

Paoletti, T. (2015, November). *Reasoning Quantitatively to Develop Inverse Function Meanings.* Paper presented at the 37th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, East Lansing, MI.

Stevens, I. E., Hobson, N. L. F., Moore, K. C., **Paoletti, T.**, LaForest, K. L., & Mauldin, K. D. (2015, November). *Changing Cones: Themes in Students' Representations of a Dynamic Situation.* Paper presented at the 37th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, East Lansing, MI.

Stevens, I. E., LaForest, K. L., & Hobson, N. L. F., **Paoletti, T.**, & Moore, K. C. (2015, November). *Making sense of inverses: Preservice Teachers' Inverse Strategies and Meanings.* Poster presented at the 37th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, East Lansing, MI.

Paoletti, T., Mauldin, K. D., Moore, K. C., Stevens, I. E., Hobson, N. L. F., & LaForest, K. L. (2015, November). *Changing Cones: Students' Images of a Dynamic Situation.* Poster presented at the 37th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, East Lansing, MI.

Paoletti, T. (2015, February) *Students' reasoning when constructing quantitatively rich situations*. Paper presented at the Eighteenth Annual Special Interest Group of the Mathematical Association of America on Research in Undergraduate Mathematics Education (SIGMAA on RUME) Conference. Pittsburgh, PA.

Paoletti, T., Stevens, I. E., Hobson, N. L. F., LaForest K., & Moore, K. (2015, February) *Pre-service teachers' inverse function meanings*. Paper presented at the Eighteenth Annual Special Interest Group of the Mathematical Association of America on Research in Undergraduate Mathematics Education (SIGMAA on RUME) Conference. Pittsburgh, PA.

Moore, K. C., & **Paoletti, T.** (2015, February) *Bidirectionality and covariational reasoning*. Paper presented at the Eighteenth Annual Special Interest Group of the Mathematical Association of America on Research in Undergraduate Mathematics Education (SIGMAA on RUME) Conference. Pittsburgh, PA.

Moore, K. C., Liss, D., Silverman, J., **Paoletti, T.**, LaForest, K. R., & Musgrave, S. (2013, November). *The primacy of mathematical conventions in student meanings.* Paper presented at the 35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Chicago, IL.

Moore, K. C., Silverman, J., **Paoletti, T.**, Liss, D., LaForest, K. R., & Musgrave, S. (2013, November). *Pre-service teachers' meanings and non-canonical graphs.* Paper presented at the 35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Chicago, IL.

LaForest, K. R., Moore, K. C., Silverman, J., **Paoletti, T**., Musgrave, S., & Liss, D. (2013, November). *Common treatments of function: Where's the relationship?* Poster presented at the 35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Chicago, IL.

Paoletti, T., Moore, K. C., Gammaro, J., & Musgrave, S. (2013, February) *Students' emerging understandings of the polar coordinate system*. Paper presented at the Sixteenth Annual Special Interest Group of the Mathematical Association of America on Research in Undergraduate Mathematics Education (SIGMAA on RUME) Conference. Denver, CO.

Moore, K. C., **Paoletti, T.**, Gammaro, J., & Musgrave, S. (2013, February) *Covariational reasoning and graphing in polar coordinates*. Paper presented at the Sixteenth Annual Special Interest Group of the Mathematical Association of America on Research in Undergraduate Mathematics Education (SIGMAA on RUME) Conference. Denver, CO.

Moore, K. C., & **Paoletti, T.**, (2012, September) *Quantitative reasoning and graphing conventions: A mismatch?* Poster presented at the Studying the Emerging Challenges of the CCSSM symposium organized by University of Georgia and University of Missouri. Columbia, MO.

Paoletti, T. (2011, October) *Launching rockets and secret sharing in Algebra I*. Presentation at the 2011 National Council of Teachers of Mathematics Regional Conference and Exposition, Atlantic City, NJ.

OTHER PUBLICATIONS

Paoletti, T. (2015) The Norm Chronicles: Stories and Numbers about Danger and Death [Review of the book The Norm Chronicles: Stories and Numbers about Danger and Death by M. Blastland & D. Spiegelhalter]. *Mathematics Teacher.* 109(2), 158-159.

Paoletti, T. (2006) Leonard Euler's solution to the Konigsberg bridge problem. *Convergence: A Magazine of the Mathematical Association of America.*

PEER-REVIEWED PUBLICATIONS UNDER REVIEW OR IN PREPARATION

Paoletti, T., Lee, H.Y., Vishnubhotla, M., Rahman, Z., Seventko, J. & Basu, D. (Revise and Resubmit) Comparing graph use in STEM textbooks and practitioner journals. *International Journal of Mathematics Education in Science and Technology*.

Paoletti, T., Moore, K. C, Mohamed, M., & Vishnubhotla, M. (Under review) Covariational reasoning and function: When does the horse need to pull the cart? *For the Learning of Mathematics*.

Paoletti, T., Vishnubhotla, M., & Mohamed, M. (In preparation) Comparative and conditional inequalities *The Journal of Mathematical Behavior*.

GRANT ACTIVITY

Aug 2021 – Aug 2023 Principal Investigator
Middle grades students' Graphing from the Ground Up (MSS-GGU)
Submitted to NSF on 10/13/2019. $449,491

Aug 2018 – Aug 2020 Principal Investigator
Developing Sophisticated Graphical Understandings in Middle-School Students
Funded by: Spencer #201900012. $50,000

July 2018 Proposal Development
Enhancing Sophisticated Graphical Understandings in Middle-School Students
Montclair State University Internal Summer Grant Proposal Development Award: $4,000

Sept 2017 – Present Consultant
Multimodel Informational and Conceptual Assistant (MICa)
Principal Investigator Dr. Justin Olmanson.
Funded by: Microsoft. $20,000

Jan 2016 – Aug 2020 Consultant
Adjunct Mathematics Instructor Resources and Support: Improving Undergraduate Precalculus Teaching and Learning Experience.
Principal Investigator Dr. Eileen Murray.
Funded by: NSF IUSE-1712058. $300,000

Sept 2014 – Present Research Assistant/Collaborator
Advancing Reasoning: Advancing Secondary Mathematics Teachers' Quantitative Reasoning.
Principal Investigator Dr. Kevin C. Moore.
Funded by: NSF CAREER Award DRL-1350342. $741,491

AWARDS – HONORS

Conference on Research in Undergraduate Mathematics Education Honorable Mention for Best Paper Award, 2016. For Moore, K. C., Stevens, I. E., Paoletti, T., & Hobson, N. L. F. (2016). Graphing habits: "I just don't like that". In T. Fukawa-Connelly, N. Infante, M. Wawro, & S. Brown (Eds.), *Proceedings of the Nineteenth Annual Conference on Research in Undergraduate Mathematics Education* (pp. 16–30). Pittsburgh, PA: West Virginia University.

AMTE STaR Fellow (Association of Mathematics Teacher Educators Service, Teaching, and Research in Mathematics Education) awarded by The Association of Mathematics Teacher Educators (http://starfellows.com/), 2016

Certificate of Reviewing for the Journal of Mathematical Behaviour.

Doctoral Faculty status awarded by Montclair State University, 2016-2020

Outstanding Teaching Assistant Award, University of Georgia, 2015

University of Georgia Presidential Fellowship, 2012

Phi Beta Kappa, National Honor Society Inductee, 2007

Kappa Delta Pi, Education Honor Society Inductee, 2006

Pi Mu Epsilon, Mathematics Honor Society Inductee, 2006

PROFESSIONAL MEMBERSHIPS

- National Council of Teachers of Mathematics (NCTM)
- National Association of Mathematics Teacher Educators (AMTE)
- North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA)

OTHER TRAINING

- STaR program, Association of Mathematics Teacher Educators, June 2016.
- New faculty program, Montclair State University, AY 2015-2016
- CITI Training Qualification, Montclair State University, September 2015, 2019.

SERVICE

Advisory Board Member, *The Journal of Mathematical Behavior*, July 2019 – present.

NSF Grant Reviewer, Served as Primary Panelist and Secondary Panelist, January 2020.

Graduate Program Coordinator of MS in Mathematics and MS in Mathematics with a concentration in Mathematics Education, Fall 2019 – present.

Graduate Program Coordinator of MA in Teaching Middle Grades Mathematics and Certificate programs in Middle Grades Mathematics, Fall 2019 – present.

Graduate Program Coordinator of MAT in Teaching, with Teacher Certification in Mathematics (P-12), Fall 2019 – present.

College of Science and Mathematics Representative to the Montclair State University Grade Grievance Committee Fall 2017- present.

College of Science and Mathematics Representative to the Montclair State University Scholastic Appeals Committee Spring 2018- present.

Member of the College of Science and Mathematics Honors Committee to create document to launch the CSAM Honors Program at Montclair State University, Fall 2016- Spring 2017.

Member of the Department of Mathematical Sciences Scholarship Committee at Montclair State University, Fall 2015 – Spring 2017.

Chair of the Department of Mathematical Sciences Scholarship Committee at Montclair State University, Spring 2017 – Spring 2018.

Member of the Mathematics Education Hiring Committee at Montclair State University, Fall 2017 – Spring 2018.

Member of the Department of Mathematical Sciences Scheduling at Montclair State University, Fall 2016 – present.

Chair of the Department of Mathematical Sciences Curriculum Committee at Montclair State University, Fall 2016 – present.

Chair of the Mathematics Education Special Interest Group in the Department of Mathematical Sciences at Montclair State University, Fall 2017 – present.

Member of the Mathematics Education Special Interest Group in the Department of Mathematical Sciences at Montclair State University, Fall 2015 – Spring 2017.

Reviewer for the journals: Mathematics Teacher (2010 – Present), The Mathematics Educator (2012 – Present), Mathematics Teaching in the Middle School (2017 – Present), The Journal of Mathematical Behavior (2017 – Present), Educational Studies in Mathematics (2018 – Present), Mathematics Teacher Educator (2018 – Present), International Journal of Science and Mathematics Education (2019 – Present), Journal of Research in Mathematics Education (2018 – Present).

Reviewer for papers for the Conference of the Psychology of Mathematics Education - North American Chapter, Spring 2013, Spring 2015.

Reviewer for papers for the National Teachers of Mathematics Research Conference, Fall 2016.

Reviewer for papers for the Special Interest Group of the Mathematical Association of America Conference on Research in Undergraduate Mathematics Education (RUME), Fall 2013, Fall 2015, Fall 2016, Fall 2017.

Reviewer for proceedings for the Special Interest Group of the Mathematical Association of America Conference on Research in Undergraduate Mathematics Education (RUME), Fall 2015.

Reviewer for Connecting Abstract Algebra to Secondary Mathematics, for Secondary Mathematics Teachers (Wasserman, 2018)

Volunteer (by invitation by the PME-NA Organizing Committee) at a mentoring table.

Volunteer (by invitation by the RUME Committee on Equity and Mentoring) at a mentoring table.