

Joseph DiNapoli, Ph.D.
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Associate Professor
Department of Mathematics
Montclair State University
Montclair, NJ

FACULTY POSITIONS

Montclair State University

September 2023-present
Associate Professor
Department of Mathematics
College of Science and Mathematics
Montclair, NJ

Montclair State University

September 2018-August 2023 (tenured and promoted in 2023)
Assistant Professor
Department of Mathematics
College of Science and Mathematics
Montclair, NJ

EDUCATION

Doctor of Philosophy in Mathematics Education (Ph.D.)

August 2018
University of Delaware, Newark, DE
Dissertation Title: Examining the Role of Scaffolds on Ninth-Grade Students' Perseverance
across a Series of Challenging Mathematical Tasks
Dissertation Chair and Advisor: Dr. Amanda Jansen (University of Delaware)
Committee Members: Dr. James Hiebert (University of Delaware), Dr. James Middleton
(Arizona State University), Dr. Alfinio Flores (University of Delaware)

Master of Mathematics Education (M.Ed.)

May 2012
Millersville University, Millersville, PA
Thesis Title: The Effects of Cooperative Competition Pedagogy on Student Motivation in
Secondary Mathematics Classrooms
Thesis Chair and Advisor: Dr. Janet White

Bachelor of Science in Mathematics Education (B.S.Ed.)

May 2008
Millersville University, Millersville, PA

GRANT ACTIVITY

Collaborative Research: Building A Teacher Knowledge Base for the Implementation of High-quality Instructional Resources Through the Collaborative Investigation of Video Cases (AIM-TRU)

Funded by the National Science Foundation, Discovery Research K-12 Program, \$1,715,557

July 2019-June 2025

Principal Investigator

Montclair State University, Montclair, NJ

This longitudinal project investigates the ways in which teachers learn within communities of practice centered on the collective investigation of video-cases grounded in high-quality instructional materials. In addition, we explore how teacher participation in such communities impact their use of these high-quality materials in their classrooms.

I am responsible for leading the project at Montclair State University. This includes collecting, storing, and analyzing data, managing the logistics of working with practitioner participants, dissemination of findings, and leading our team of doctoral students.

Noyce at Montclair: Preparing the Effective Elementary Mathematics Teacher

Funded by the National Science Foundation, Noyce Teacher Scholarship Grant, \$1,449,992

November 2018-March 2025

Co-Principal Investigator

Montclair State University, Montclair, NJ

Principal Investigator: Dr. Steven Greenstein

This NSF-funded project recruits and supports mathematics majors to teach in high-need elementary schools upon graduation.

I am responsible for recruiting mathematics majors to join the program, hosting monthly seminars, supporting student research, and supporting the transition into K-6 teaching in high-need areas.

Cultivating Research, Innovation, and Talent: Opportunity Meets Innovation Challenge (OMIC) Grant

Funded by the State of New Jersey, \$510,000

July 2021-June 2023

Senior Personnel

Montclair State University, Montclair, NJ

Principal Investigator: Dr. Lora Billings

This project involved supporting instructors of MATH 111 to teach using problem-based learning pedagogy through ongoing professional development. Additionally, this project involved training and supporting our pre-service teacher mathematics major undergraduate students to serve as student research mentors of MATH 111 students. These student research mentors tutored MATH 111 students, and also collected and analyzed research data on MATH 111 students' perseverance in problem-solving and its development.

I was responsible for overseeing the project alongside Dr. Ashwin Vaidya. This included overseeing the professional development sessions, the professional development facilitators, and the work of the student research mentors. This also included collecting, storing, and analyzing data, managing the logistics of working with our MATH 111 participants, and disseminating our findings.

Meaningful Sketching and Meaningful Struggle in STEM Education

Funded by a subaward from eGrove Education, Inc., via the National Science Foundation, SBIR-Phase II Program, \$36,526

September 2018-February 2021

Principal Investigator

Montclair State University, Montclair, NJ

This NSF-funded project developed a STEM learning environment where students can freehand sketch on a touchscreen phone, tablet, or computer. They receive personalized feedback based on the sketches they draw to improve their conceptual understanding. The software algorithms developed interpret student sketches and provide optional hints that help students stay engaged in the zone of meaningful struggle for effective learning. Subject areas include elementary school mathematics, spatial visualization for 7th-12th grade technical education, postsecondary vocational and engineering programs, and eventually physics, geology, medicine and other STEM areas.

I was responsible for providing oversight and expertise on the development of K-6 mathematics curriculum for topics included in the eLearning environment. I was also responsible for leading a pilot of the application in local elementary schools to ascertain the effects of student engagement within the eLearning environment on conceptual understanding.

Research Experience for Teachers (RET) Award: Meaningful Sketching and Meaningful Struggle in STEM Education

Awarded by the National Science Foundation, \$20,000

September 2018-August 2020

Related to the NSF-funded SBIR-Phase II: Meaningful Sketching and Meaningful Struggle in STEM Education project, this award supported two teachers affiliated with the development of the K-6 mathematics education software application.

I was responsible for co-preparing the grant proposal and overseeing the involvement of these two teachers in application development, piloting, and dissemination of research findings based on such involvement.

Understanding the Effects of Mathematics Teacher Preparation on the Quality of Classroom Teaching and Students' Learning

Funded by the National Science Foundation, Division of Research on Learning, \$1,024,679

September 2015-August 2018

Research Assistant

University of Delaware, Newark, DE

Principal Investigator: Dr. Dawn Berk

Worked on a longitudinal project, studying how the university's elementary teacher preparation experiences impact classroom mathematics teaching and students' mathematics learning.

I wrote manuscripts as first author, wrote conference proposals as first author, designed data collection instruments, conducted classroom observations of practicing teachers, organized data collection and maintenance procedures, designed data analysis protocols, coded and analyzed written data, and conducted statistical analyses of the data in alignment with our research questions.

Integrated Science and Mathematics Education: A Model Course for Pre-Service Teachers

Funded by the National Science Foundation, Division of Undergraduate Education, \$198,996
June 2015-August 2017

Research Assistant

University of Delaware, Newark, DE

Principal Investigator: Dr. Jungeun Park

Worked on a longitudinal, NSF-funded project, which focused on transforming calculus problems to web-based problem sets to promote dynamic understanding of the function and the derivative, and exploring the Graduate Teaching Assistants and undergraduate students' use of this web-based problem sets.

I coded, analyzed, and designed derivative problem sets, and coded and analyzed teaching video data.

A Longitudinal Study of the Effects of K-8 Mathematics Teacher Preparation on Teacher Knowledge, Teaching Practices, and Student Learning

Funded by the National Science Foundation, Division of Research on Learning, \$1,983,506

September 2014-September 2015

Research Assistant

University of Delaware, Newark, DE

Principal Investigator: Dr. Dawn Berk

Worked on a longitudinal, NSF-funded project, studying the mathematical content knowledge, teaching skills, and beliefs about ideal mathematics teaching of recent graduates of the university's elementary teacher education program.

I conducted classroom observations of study participants, and coded and analyzed written data.

PEER-REVIEWED PUBLICATIONS

DiNapoli, J. (In press). An exploration of the relationship between instructional time and perseverance growth for elementary pre-service teachers. *Proceedings of the forty-sixth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*.

DiNapoli, J., Corven, J., Johnson, K., Long, V., Olanoff, D., Tobias, J., Litster, K., Kang, B., Velasco, R., Clark, D., An, T., Bajwa, N. P., Wessman-Enzinger, N., & Tjoe, H. (In press). Third report: Working group on mathematics curriculum recommendations for elementary teacher preparation. *Proceedings of the forty-sixth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*.

Olanoff, D., Corven, J., An, T., Bajwa, N. P., Clark, D., **DiNapoli, J.**, Johnson, K., Kang, B., Litster, K., Long, V., Tobias, J., & Wessman-Enzinger, N. (In press). Mathematics curriculum recommendations for elementary teacher preparation working group: Research in progress. *Proceedings of the forty-sixth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*.

DiNapoli, J. (2024). Investigating the relationship between mathematics instructional time and perseverance growth with elementary pre-service teachers. *Education Sciences*, 14(12), 1373. <https://doi.org/10.3390/educsci14121373>

- Daniel, A., & **DiNapoli, J.** (2024). Students' attitudes and perseverance in problem-solving in undergraduate precalculus. In Cook, S., Katz, B., & Moore-Russo D. (Eds.) *Proceedings of the 26th Annual Conference on Research in Undergraduate Mathematics Education* (pp. 1275-1276). Omaha, NE.
- Daniel, A., & **DiNapoli, J.** (2024). Investigating pedagogies in undergraduate precalculus and their relationships to students' attitudes towards mathematics and perseverance in problem-solving. *Journal of Research in Science, Mathematics and Technology Education*, 7(SI), 43-59. Bronze Medal Winner. <https://doi.org/10.31756/jrsmte.314SI>
- Morales, Jr., H., Chval, K. B., **DiNapoli, J.**, & Pizzi, T. G. (2024). Meaning-making systems: A multimodal analysis of a Latinx student's mathematical learning. *International Electronic Journal of Mathematics Education*, 19(2), 1-11. <https://doi.org/10.29333/iejme/14363>
- DiNapoli, J.**, Daniel, A., Leonard, H. S., Kim, Y., Bonaccorso, V. D., & Murray, E. (2023). Characterizing mathematics teacher learning patterns through collegial conversation in a community of practice. *Journal of Mathematics Education Leadership*, 24(2), 25-47.
- Alhammouri, A. M., & **DiNapoli, J.** (2023). Secondary teachers' perspectives on mathematical modeling and modeling mathematics: Discovery, appreciation, and conflict. *Journal of the Korean Society of Mathematical Education Series D*, 26(3), 203-233. <https://doi.org/10.7468/jksmed.2023.26.3.203>
- Bonaccorso, V. D., Leonard, H. S., Daniel, A., Kim, Y., & **DiNapoli, J.** (2023). Exploring changes in mathematics teacher practice from professional development rooted in the TRU framework. 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. 1) (pp. 631-640). University of Nevada, Reno. <http://www.pmena.org/pmenaproceedings/PMENA%2045%202023%20Proceedings%20Vol%201.pdf>
- Corven, J., **DiNapoli, J.**, Johnson, K., Long, V., Olanoff, D., & Tobias, J. (2023). Mathematics curriculum recommendations for elementary teacher preparation working group: Establishing a research base. 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. 659-661). University of Nevada, Reno. <http://www.pmena.org/pmenaproceedings/PMENA%2045%202023%20Proceedings%20Vol%202.pdf>
- Corven, J., **DiNapoli, J.**, Johnson, K., Long, V., Olanoff, D., Tobias, J., Litster, K., Kang, B., Clark, D., & An, T. (2023). Working group on mathematics curriculum recommendations for elementary teacher preparation: Second report. 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. 649-658). University of Nevada, Reno. <http://www.pmena.org/pmenaproceedings/PMENA%2045%202023%20Proceedings%20Vol%202.pdf>

- DiNapoli, J.** (2023). Distinguishing between grit, persistence, and perseverance for learning mathematics with understanding. *Education Sciences*, 13(4), 1-28.
<https://doi.org/10.3390/educsci13040402>
- Corven, J., **DiNapoli, J.**, Gibbons, L., Johnson, K., Long, V., Olanoff, D., & Starks, R. (2022). Mathematics curriculum recommendations for elementary teacher preparation working group: Phase II. 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. 2114-2116). Middle Tennessee State University.
<https://www.pmena.org/pmenaproceedings/PMENA%2044%202022%20Proceedings.pdf>
- Corven, J., **DiNapoli, J.**, Gibbons, L., Johnson, K., Long, V., Olanoff, D., & Starks, R. (2022). Working group on mathematics curriculum recommendations for elementary teacher preparation: First report. 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. 2109-2113). Middle Tennessee State University.
<https://www.pmena.org/pmenaproceedings/PMENA%2044%202022%20Proceedings.pdf>
- Bonaccorso, V. D., **DiNapoli, J.**, & Murray, E. (2022). Promoting meaningful conversations among prospective teachers. In A. Rogerson & J. Morska (Eds.) *Building on the Past to Prepare for the Future, Proceedings of the 16th International Conference of The Mathematics Education for the Future Project* (pp. 50-55). Munster: WTM.
<https://doi.org/10.37626/GA9783959872188.0>
- Russell, J. L., **DiNapoli, J.**, & Murray, E. (2022). Documenting professional learning focused on implementing high-quality instructional materials in mathematics: The AIM-TRU learning cycle. *International Journal of STEM Education*, 9(1), 1-17.
<https://doi.org/10.1186/s40594-022-00362-y>
- Corven, J., **DiNapoli, J.**, Willoughby, L., & Hiebert, J. (2022). Long-term relationships between mathematics instructional time during teacher preparation and specialized content knowledge. *Journal for Research in Mathematics Education*, 53(4), 277-306.
<https://doi.org/10.5951/jresmetheduc-2020-0036>
- DiNapoli, J.**, & Miller, E. K. (2022). Recognizing, supporting, and improving student perseverance in mathematical problem-solving: The role of conceptual thinking scaffolds. *Journal of Mathematical Behavior*, 66, 1-20. <https://doi.org/10.1016/j.jmathb.2022.100965>
- Leonard, H. S., **DiNapoli, J.**, Murray, E., & Bonaccorso, V. D. (2022). Collegial frame processes supporting mathematics teacher learning in a community of practice. In the *American Educational Research Association Online Paper Repository*. American Educational Research Association. <https://doi.org/10.3102/1891262>

- Ward, J. K., **DiNapoli, J.**, & Monahan, K. (2022). Instructional perseverance in early-childhood classrooms: Supporting children's development of STEM reasoning in a social justice context. *Education Sciences*, 12(3), 1-19. <https://doi.org/10.3390/educsci12030159>
- DiNapoli, J.**, & Morales, Jr., H. (2021). Translanguaging to persevere is key for Latinx bilinguals' mathematical success. *Journal of Urban Mathematics Education*, 14(2), 71-104. <https://doi.org/10.21423/jume-v14i2a390>
- Amenya, M., Perkoski, A., Cane, R. & **DiNapoli, J.** (2021). Affordances and challenges of implementing mathematical modeling in secondary classrooms: Teachers' perspectives. *Proceedings of the 14th Annual International Conference of Education, Research, and Innovation* (pp. 2014-2023). International Academy of Technology, Education, and Development. <https://library.iated.org/view/AMENYA2021AFF>
- Corven, J., **DiNapoli, J.**, Gibbons, L., Long, V., & Starkes, R. (2021). Curriculum recommendations for elementary mathematics teacher education. In D. Olanoff, K. Johnson, K., & S. Spitzer, (Eds.) *Proceedings of the 43rd Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1941-1943). Philadelphia, PA. <http://www.pmena.org/pmenaproceedings/PMENA%2043%202021%20Proceedings.pdf>
- Leonard, H. S., Kim, Y., Bonaccorso, V. D., Lim, S., **DiNapoli, J.**, & Murray, E. (2021). The development of critical teaching skills for preservice secondary mathematics teachers through video case study analysis. In S. S. Karunakaran and A. Higgins (Eds.) *2021 Research in Undergraduate Mathematics Education Reports* (pp. 171-179). http://sigmaa.maa.org/rume/2021_RUME_Reports.pdf
- Dalzell, M., & **DiNapoli, J.** (2021). Assessing cognitive demand in innovative and reform-based mathematics textbooks. In the *Education and New Learning Technologies (EDULearn) 2021 Proceedings* (pp. 9364-9371). International Academy of Technology, Education, and Development. <https://doi.org/10.21125/edulearn.2021.1891>
- DiNapoli, J.**, Delson, N., Van Den Einde, L., & Cowan, E. (2021). Anticipating errors to support students' perseverance with fraction tasks in a digital sketching application. In the *Education and New Learning Technologies (EDULearn) 2021 Proceedings* (pp. 2397-2406). International Academy of Technology, Education, and Development. <https://doi.org/10.21125/edulearn.2021.0527>
- DiNapoli, J.**, Amenity, M., Van Den Einde, L., Delson, N., & Cowan, E. (2021). Simulating remote support for mathematical perseverance through a digital sketching application. *Journal of Higher Education Theory and Practice*, 21(4), 41-52. <https://doi.org/10.33423/jhetp.v21i4.4208>
- DiNapoli, J.** (2021). Investigating perseverance improvement in secondary mathematics students. In E. de Vries, Y. Hod, and J. Ahn (Eds.), *The 15th International Conference of the*

Learning Sciences – Conference Proceedings (pp. 871-872). International Society of the Learning Sciences.

<https://drive.google.com/file/d/1mhgFmv3V1J884nP2yxOEZP7UbpYrF6p1/view>

DiNapoli, J., Delson, N., Van Den Einde, L., & Cowan, E. (2021). Implementing a feedback hierarchy to support mathematical perseverance in a digital sketching application. In the *International Technology, Education, and Development 2021 Proceedings* (pp. 8141-8150). International Academy of Technology, Education, and Development. <https://doi.org/10.21125/inted.2021.1646>

Kim, Y., Bonaccorso, V. D., Mohamed, M. M., Leonard, H. S., **DiNapoli, J.**, & Murray, E. (2021). Analyzing teacher learning in a community of practice centered on video cases of mathematics teaching. In A. I. Sacristan and J. C. Cortes (Eds.) *Proceedings of the 42nd Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 2262-2269). Cinvestav – Department of Mathematics Education and AMIUTEM. <https://doi.org/10.51272/pmena.42.2020-384>

Satyam, V. R., Simpson A., **DiNapoli, J.**, & Yao, X. (2021). Building a robot: Making mathematics visible in a non-formal STEM learning environment. In A. I. Sacristan and J. C. Cortes (Eds.) *Proceedings of the 42nd Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 2353-2354). Cinvestav – Department of Mathematics Education and AMIUTEM. <https://doi.org/10.51272/pmena.42.2020-399>

Leonard, H. S., Bonaccorso, V. D., **DiNapoli, J.**, & Murray, E. (2021). Methodological advancements for analyzing teachers' learning in a community of practice. In the *American Educational Research Association Online Paper Repository*. American Educational Research Association. <https://doi.org/10.3102/1687500>

DiNapoli, J., Amenya, M., Van Den Einde, L., Delson, N., & Cowan, E. (2020). Supporting mathematical perseverance remotely through a digital sketching application. In the *Education, Research, and Innovation 2020 Proceedings* (pp. 1105-1115). International Academy of Technology, Education, and Development. <https://doi.org/10.21125/iceri.2020.0307>

Marzocchi, A. S. & **DiNapoli, J.** (2020). Infusing pedagogy in mathematics content courses for future elementary teachers. *Issues in the Undergraduate Mathematics Preparation of School Teachers*, 2, 1-10. <http://www.k-12prep.math.ttu.edu/journal/2.pedagogy/marzocchi01/article.pdf>

DiNapoli, J., & Morales, Jr., H. (2020). Translanguaging to persevere: Supporting and recognizing the meaning-making process for Latinx bilingual students of mathematics. *Teaching for Excellence and Equity in Mathematics*, 11(2), 26-33. <https://toma.memberclicks.net/assets/documents/TEEM/TEEM11-No2FINAL.pdf>

DiNapoli, J., & Miller, E. K. (2020). Recognizing and supporting perseverance in mathematical problem-solving via conceptual thinking scaffolds. In M. Gresalfi and I. S. Horn (Eds.), *The Interdisciplinarity of the Learning Sciences, 14th International Conference of the Learning Sciences*

(ICLS) 2020, Volume 1 (pp. 11-18). International Society of the Learning Sciences.
<https://icls2020.org/>

Suppa, S., **DiNapoli, J.**, Thanheiser, E., Tobias, J. M., & Yeo, S. (2020). Supporting novice mathematics teacher educators teaching elementary mathematics content courses for the first time. *The Mathematics Enthusiast*, 17(2 & 3), 493-536.
<https://scholarworks.umt.edu/tmc>

DiNapoli, J. (2019). "Getting better at sticking with it": Examining perseverance improvement in secondary mathematics students. In S. Otten, Z. de Araujo, A. Candela, C. Munter, & C. Haines (Eds.), *Proceedings of the 41st Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1386-1395). University of Missouri.
<https://www.pmena.org/pmenaproceedings/PMENA%2041%202019%20Proceedings.pdf>

Morales, Jr., H., & **DiNapoli, J.** (2019). Translanguaging to persevere: Bridging methodological lenses to examine Latinx bilingual students' problem-solving. In S. Otten, Z. de Araujo, A. Candela, C. Munter, & C. Haines (Eds.), *Proceedings of the 41st Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1820-1825). University of Missouri.
<https://www.pmena.org/pmenaproceedings/PMENA%2041%202019%20Proceedings.pdf>

DiNapoli, J. (2019). Persevering toward what? Investigating the relationship between ninth-grade students' achievement goals and perseverant actions on an algebraic task. *International Electronic Journal of Mathematics Education*, 14(3), 435-453.
<https://doi.org/10.29333/iejme/5747>

DiNapoli, J. (2018). Leveraging collaborative competition in mathematics classrooms. *Australian Mathematics Teacher*, 74(2), 10-18. <https://eric.ed.gov/?id=EJ1231044>

DiNapoli, J. (2018). Supporting secondary students' perseverance for solving challenging mathematics tasks. 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. 890-897). University of South Carolina.
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Morales, Jr., H. & **DiNapoli, J.** (2018). Latinx bilingual students' perseverance on a mathematical task: A rehumanizing perspective. *REDIMAT: Journal of Research in Mathematics Education*, 7(3), 226-250. <https://doi.org/10.17583/redimat.2018.3274>

Morales Jr., H. & **DiNapoli, J.** (2018). Latinx bilinguals' perseverance on a mathematical task. 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. 970-974). University of South Carolina.

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Suppa, S., **DiNapoli, J.**, & Mixell, R. A. (2018). Teacher preparation does matter: Relationships between elementary mathematics content courses and graduates' analyses of teaching. *Mathematics Teacher Education and Development*, 20(2), 25-57.
<https://eric.ed.gov/?id=EJ1186011>

DiNapoli, J. & Marzocchi, A. S. (2017). Productive struggle: What we can learn from working with pre-service teachers. *The ComMuniCator*, 41(4), 10-13.

Jansen, A., **DiNapoli, J.**, & McKenney, K. (2017). Reconsidering affect in mathematics education – A review of From beliefs to dynamic affect systems in mathematics education: Exploring a mosaic of relationships and interactions. *Journal for Research in Mathematics Education*, 48(1), 106-110. <https://doi.org/10.5951/jresmetheduc.48.1.0106>

Park, J., **DiNapoli, J.**, Mixell, R. A., & Flores, A. (2016). Use of words and visuals in modeling context of an annual plant. *International Journal of Mathematical Education*, 48(5), 682-701.
<https://doi.org/10.1080/0020739X.2016.1264634>

DiNapoli, J. (2016). Examining how mathematics curriculum materials encourage student perseverance. In M. B. Wood, E. E. Turner, & M. Civil (Eds.), *Proceedings of the 38th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 115-116). University of Arizona. Retrieve from:
<http://www.pmena.org/pmenaproceedings/PMENA%2038%202016%20Proceedings.pdf>

INVITED TALKS

Jabon, D., Wilson, D., **DiNapoli, J.**, & Murray, E. (2023, June). *Creating and sustaining partnerships in professional development projects*. Invited session at the National Science Foundation's Discovery Research PreK-12 Principal Investigators Meeting, facilitated by the Community for Advancing Discovery Research in Education (CADRE), Arlington, VA.

DiNapoli, J. (2023, May). *Conceptualizing, operationalizing, and exploring perseverance in problem-solving across contexts*. Invited talk at Virginia Commonwealth University, Richmond, VA. Talk available online at:
https://vcu.mediaspace.kaltura.com/media/VCU+Math+Ed+Seminar/1_jbwf01sl?st=20

DiNapoli, J. (2022, November). *Facilitating productive struggle in high school mathematics classrooms*. Invited talk at Jacksonville State University, Jacksonville, AL.

DiNapoli, J. (2022, May). *Combating procedural experiences in remote mathematics learning*. Invited presentation for the Children and Screens' Education Technology and Virtual Learning Research Retreat.

DiNapoli, J. (2020, October). *Formatively assessing exponential reasoning in middle school math classrooms*. Invited talk at Jacksonville State University, Jacksonville, AL.

Morales, Jr., H., **DiNapoli, J.**, & Willey, C. (2020, July). *Translanguaging to persevere: Exploring Latinx bilingual students' collective problem-solving*. Invited session for the National Council of Teachers of Mathematics' 100 Days of Professional Learning.

DiNapoli, J., Murray, E., O'Roark, D., & Russell, J. L. (2020, June). *Analyzing teacher learning in a community of practice centered on video cases of mathematics teaching*. Invited session at the National Science Foundation's Discovery Research PreK-12 Principal Investigators Meeting, facilitated by the Community for Advancing Discovery Research in Education (CADRE).

CONFERENCE PRESENTATIONS, WORKING GROUPS, & SYMPOSIA

DiNapoli, J., Leonard, H. S., Daniel, A., & Cook, D. (Accepted, 2025, April). *Creating powerful and equitable mathematics classrooms through innovative professional development*. Presentation at the National Council of Teachers of Mathematics 2025 Virtual Conference.

DiNapoli, J. (2025, February). *How does instructional time relate to perseverance growth for pre-service elementary teachers?* Presentation at the annual meeting of the Association of Mathematics Teacher Educators in Reno, NV.

DiNapoli, J. (2024, November). *An exploration of the relationship between instructional time and perseverance growth for elementary pre-service teachers*. Presentation at the forty-sixth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education in Cleveland, OH.

Olanoff, D., Corven, J., An, T., Bajwa, N. P., Clark, D., **DiNapoli, J.**, Johnson, K., Kang, B., Litster, K., Long, V., Tobias, J., & Wessman-Enzinger, N. (2024, November). *Mathematics curriculum recommendations for elementary teacher preparation working group: Research in progress*. Working Group at the forty-sixth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education in Cleveland, OH.

Leonard, H. S., Daniel, A., Cook, D., & **DiNapoli, J.** (2024, September). *Challenging inequitable teaching practices with the AIM-TRU professional development model*. Presentation at the annual conference of the National Council of Supervisors of Mathematics in Chicago, IL.

Daniel, A., & **DiNapoli, J.** (2024, February). *Students' attitudes and perseverance in problem-solving in undergraduate precalculus*. Presentation at the 26th Annual Conference on Research in Undergraduate Mathematics Education in Omaha, NE.

Daniel, A., Kim, Y., Leonard, H. S., Bonaccorso, V. D., & **DiNapoli, J.** (2024, February). *Working toward a collegiality spectrum to describe teacher learning in a community of practice*. Presentation at the annual meeting of the Association of Mathematics Teacher Educators in Orlando, FL.

- Daniel, A., & **DiNapoli, J.** (2023, November). *Investigating instructional enactments in undergraduate precalculus and their relationships to students' attitudes and perseverance in problem-solving*. Virtual presentation at the 7th Northeastern Conference on Research in Undergraduate Mathematics Education.
- Kim, Y., Daniel, A., Leonard, H. S., Bonaccorso, V. D., & **DiNapoli, J.** (2023, October). *Fostering mathematics teacher learning in professional development through video-case study and collegial dialogue grounded in the TRU framework*. Presentation at the annual conference of the National Council of Supervisors of Mathematics in Washington, D.C.
- Bonaccorso, V. D., Leonard, H. S., Daniel, A., Kim, Y., & **DiNapoli, J.** (2023, October). *Exploring changes in mathematics teacher practice from professional development rooted in the TRU framework*. Presentation at the forty-fifth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education in Reno, NV.
- Corven, J., **DiNapoli, J.**, Johnson, K., Long, V., Olanoff, D., & Tobias, J. (2023, October). *Mathematics curriculum recommendations for elementary teacher preparation working group: Establishing a research base*. Working group at the forty-fifth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education in Reno, NV.
- Bonaccorso, V. D., & **DiNapoli, J.** (2023, February). *Changes in frame processes as preservice teachers engage in video case analysis*. Presentation at the annual meeting of the Association of Mathematics Teacher Educators in New Orleans, LA.
- Daniel, A., Kim, Y., Leonard, H. S., Bonaccorso, V. D., & **DiNapoli, J.** (2023, February). *Building collegial conversations in mathematics professional development*. Presentation at the annual meeting of the Association of Mathematics Teacher Educators in New Orleans, LA.
- Corven, J., **DiNapoli, J.**, Gibbons, L., Johnson, K., Long, V., Olanoff, D., & Starkes, R. (2022, November). *Mathematics curriculum recommendations for elementary teacher preparation working group: Phase II*. Working Group at the forty-fourth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education in Nashville, TN.
- DiNapoli, J.**, & Alhammouri, A. M. (2022, November). *Mathematical modeling and modeling with mathematics: Are they alike?* Presentation at the annual meeting of the Alabama Council of Teachers of Mathematics in Oxford, AL.
- Daniel, A., Kim, Y., Leonard, H. S., Bonaccorso, V. D., & **DiNapoli, J.** (2022, September). *Characterizing mathematics teacher learning through collegial conversations in a community of practice*. Presentation at the National Council of Teachers of Mathematics Research Conference in Los Angeles, CA.
- Bonaccorso, V. D., **DiNapoli, J.**, & Murray, E. (2022, August). *Promoting meaningful conversations among prospective teachers*. Presentation at the 16th International Conference of The Mathematics Education for the Future Project at King's College, Cambridge, UK.

- Leonard, H. S., **DiNapoli, J.**, Murray, E., & Bonaccorso, V. D. (2022, April). *Collegial frame processes supporting mathematics teacher learning in a community of practice*. Presentation at the annual meeting of the American Educational Research Association in San Diego, CA.
- Corven, J., Long, V., & **DiNapoli, J.** (2022, February). *Mathematics curriculum recommendations for elementary teacher preparation*. Working Group at the annual meeting of the Association of Mathematics Teacher Educators in Las Vegas, NV.
- DiNapoli, J.**, Bonaccorso, V. D., Murray, E., & O’Roark, D. (2022, January). *Transforming Prognostic Framing as Evidence of Mathematics Teacher Learning in a Collegial Community of Practice*. Presentation at the Research Conference of the National Council of Teachers of Mathematics.
- Amenya, M., Perkoski, A., Cane, R., & **DiNapoli, J.** (2021, November). *Affordances and challenges of implementing mathematical modeling in secondary classrooms: Teachers’ perspectives*. Virtual presentation at the 14th Annual International Conference of Education, Research, and Innovation in Seville, Spain.
- Ward, J. K., **DiNapoli, J.**, & Monahan, K. (2021, November). *In tandem: The careful coordination of perseverance between preschool children and their mathematics teachers*. Accepted presentation at the annual meeting of the National Council of Teachers of Mathematics in Atlanta, GA.
- Corven, J., **DiNapoli, J.**, Gibbons, L., Long, V., & Starkes, R. (2021, October). *Curriculum recommendations for elementary mathematics teacher education*. Working Group at the annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education in Philadelphia, PA.
- Monahan, K., Ward, J. K., & **DiNapoli, J.** (2021, September). *Conceptualizing instructional perseverance in early-childhood mathematics settings*. Virtual presentation at the annual conference of the National Council of Supervisors of Mathematics in Atlanta, GA.
- Dalzell, M., & **DiNapoli, J.** (2021, July). *Assessing cognitive demand in innovative and reform-based mathematics textbooks*. Virtual presentation at the 13th Annual International Conference on Education and New Learning Technologies (EDULearn21) in Palma de Mallorca, Spain.
- DiNapoli, J.**, Delson, N., Van Den Einde, L., & Cowan, E. (2021, July). *Anticipating errors to support students’ perseverance with fraction tasks in a digital sketching application*. Virtual presentation at the 13th Annual International Conference on Education and New Learning Technologies (EDULearn21) in Palma de Mallorca, Spain.
- DiNapoli, J.** (2021, June). *Investigating perseverance improvement in secondary mathematics students*. Virtual presentation at the 15th Annual International Conference of the Learning Sciences (ICLS) in Bochum, Germany.
- Kim, Y., Bonaccorso, V. D., Mohamed, M. M., Leonard, H. S., **DiNapoli, J.**, & Murray, E. (2021, June). *Analyzing teacher learning in a community of practice centered on video cases of*

mathematics teaching. Virtual presentation at the annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education in Mazatlán, Sinaloa, Mexico.

Satyam, V. R., Simpson A., **DiNapoli, J.**, & Yao, X. (2021, June). *Building a robot: Making mathematics visible in a non-formal STEM learning environment*. Virtual presentation at the annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education in Mazatlán, Sinaloa, Mexico.

Leonard, H. S., Bonaccorso, V. D., **DiNapoli, J.**, & Murray, E. (2021, April). *Methodological advancements for analyzing teachers' learning in a community of practice*. Virtual presentation at the annual meeting of the American Educational Research Association in Orlando, FL.

DiNapoli, J., Delson, N., Van Den Einde, L., & Cowan, E. (2021, March). *Implementing a feedback hierarchy to support mathematical perseverance in a digital sketching application*. Virtual presentation at the 15th Annual International Technology, Education, and Development Conference in Valencia, Spain.

DiNapoli, J., Ameyna, M., Van Den Einde, L., Delson, N., & Cowan, E. (2020, November). *Supporting mathematical perseverance remotely through a digital sketching application*. Virtual presentation at the 13th Annual International Conference of Education, Research, and Innovation in Seville, Spain.

DiNapoli, J., & Miller, E. K. (2020, June). *Recognizing and supporting perseverance in mathematical problem-solving via conceptual thinking scaffolds*. Virtual presentation at the International Conference for the Learning Sciences in Nashville, TN.

DiNapoli, J., Van Den Einde, L., Delson, N., Cowan, E., Evancho, M., & Lewis, D. (Accepted, 2020, April). *The Drawn2Math platform*. Exposition table at the annual meeting of the National Council of Teachers of Mathematics in Chicago, IL. Conference cancelled.

DiNapoli, J. (2019, November). "Getting better at sticking with it": *Examining perseverance improvement in secondary mathematics students*. Presentation at the annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education in St. Louis, MO.

Limbere, A. M., Ameyna, M., & **DiNapoli, J.** (Accepted 2019, November). *Comparing Kenyan and Singapore-based mathematics curricula*. Accepted presentation at the International Conference on Arts, Education, and Social Science. Conference cancelled.

Morales, Jr., H. & **DiNapoli, J.** (2019, November). *Translanguaging to persevere: Bridging methodological lenses to examine Latinx bilingual students' collective problem-solving*. Presentation at the annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education in St. Louis, MO.

Corven, J., **DiNapoli, J.**, & Hiebert, J. (2019, February). *Complicated relationships between time spent studying mathematics topics in teacher preparation and graduates' useable knowledge*. Individual session

at the annual meeting of the Association of Mathematics Teacher Educators in Orlando, FL.

DiNapoli, J. (2018, November). *Supporting secondary students' perseverance for solving challenging mathematics tasks*. Presentation at the annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education in Greenville, SC.

DiNapoli, J. & Morales, Jr., H. (2018, November). *Latinx bilinguals' translanguaging and perseverance on a mathematical task*. Presentation at the annual international conference of the National Association for Multicultural Education in Memphis, TN.

Morales Jr., H. & **DiNapoli, J.** (2018, November). *Latinx bilinguals' perseverance on a mathematical task*. Presentation at the annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education in Greenville, SC.

DiNapoli, J. (2018, May). *Supporting secondary students' perseverance at moments of impasse during mathematical problem solving*. Presentation at the Marion H. Steele Symposium of the University of Delaware in Newark, DE.

DiNapoli, J. (2018, April). *Supporting secondary students' perseverance for solving challenging mathematics tasks*. Presentation at the University of Delaware Graduate Student Forum in Newark, DE.

DiNapoli, J. (Organizer). (2018, April). *Time matters: Developing useable knowledge for teaching mathematics*. Symposium at the annual research conference of the National Council of Teachers of Mathematics in Washington, D.C.

DiNapoli, J. (2017, May). *How can teachers support students to persevere while working on challenging mathematical tasks?* Presentation at the annual Pennsylvania chapter of the Association of Mathematics Teacher Educators Symposium in Shippensburg, PA.

DiNapoli, J. (2017, April). *Examining secondary students' perseverance across a series of challenging mathematical tasks*. Presentation at the Marion H. Steele Symposium of the University of Delaware in Newark, DE.

DiNapoli, J. (2017, April). *Exploring student perseverance on challenging mathematical tasks*. Presentation at the annual research conference of the National Council of Teachers of Mathematics in San Antonio, TX.

DiNapoli, J. (2017, April). *Assessing knowledge for teaching: Preparing elementary teachers to teach Common Core mathematics*. Presentation at the annual research conference of the National Council of Teachers of Mathematics in San Antonio, TX.

Hiebert, J., Berk, D., **DiNapoli, J.**, Mixell, R., & Young, S. (2017, April). *How should time be allocated during math preparation for K-6 teachers?* Discussion session at the annual research conference of the National Council of Teachers of Mathematics in San Antonio, TX.

Berk, D., **DiNapoli, J.**, Dyson, N., Hiebert, J., Mixell, R., Willoughby, L. & Young, S. (2017, February). *Testing the feasibility of preparing elementary mathematics teachers to teach the Common Core*. Presentation at the annual Association of Mathematics Teacher Educators conference in Orlando, FL.

DiNapoli, J. (2017, February). *Using authentic video-analysis tasks to measure elementary mathematics teachers' preparation to teach the Common Core*. Presentation at the annual Association of Mathematics Teacher Educators conference in Orlando, FL.

DiNapoli, J. (2016, November). *Examining how mathematics curriculum materials encourage student perseverance*. Presentation at the annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education in Tucson, AZ.

DiNapoli, J. (2016, April). *Investigating components of student perseverance during challenging mathematical task work*. Presentation at the Marion H. Steele Symposium of the University of Delaware in Newark, DE.

ADVISING & RESEARCH SUPERVISION

I have served several doctoral students in the Mathematics Education program at Montclair State University in many ways, including as:

- Dissertation Chairperson
- Dissertation Committee Member
- Research Supervisor
- Academic Advisor

I have served several undergraduate students at Montclair State University in several ways, including as:

- Research Supervisor
- Academic Advisor

UNIVERSITY TEACHING EXPERIENCE

I have taught the following courses at Montclair State University:

- Doctoral Seminar (MATH 830) (doctoral course)
- Research in Mathematics Education (MATH 825) (doctoral course)
- Mathematics Curricula (MATH 816) (doctoral course)
- Research in Mathematical Modeling Education (MATH 812) (doctoral course)
- Teaching Mathematics (MATH 519) (graduate course)
- Numbers and Operations for the Middle Grades (MTHM 505) (graduate course)
- Research in Mathematics Education (MATH 491) (undergraduate course)

Teaching of Mathematics (MATH 470) (undergraduate course)

Mathematics in Elementary Schools P-6 II (MTHM 302) (undergraduate course)

New Student Experience for Mathematics (MATH 102) (undergraduate course)

I have taught the following courses at the University of Delaware:

K-8 Mathematics: Number and Operations (MATH 251) (undergraduate course)

I have taught the following courses at the Millersville University:

Calculus for Management (MATH 151) (undergraduate course)

Fundamentals of Mathematics for Elementary Teachers (MATH 104) (undergraduate course)

College Algebra (MATH 101) (undergraduate course)

Basic Mathematics (MATH 090) (undergraduate course)

K-12 TEACHING EXPERIENCE

High School Mathematics Teacher

August 2008-July 2014

Manheim Central School District, Manheim, PA

Designed, developed curriculum for, and taught secondary mathematics courses including Calculus, Pre-Calculus, Algebra II, Algebra I, Geometry, Mathematics Enrichment, and Mathematics Remediation.

AWARDS & HONORS

Third Place Manuscript Award (as faculty co-author) – Journal of Research in Science, Mathematics, and Technology Education (JRMSTE) Graduate Student Special Edition III

July 2024

Awarded by the JRMSTE Editorial Board

Doctoral Faculty Status

2019-2027 (reappointed in 2023)

Awarded by Montclair State University

Faculty Scholarship Program

2019-2028 (reappointed in 2023)

Awarded by Montclair State University

AMTE STaR Fellow (Association of Mathematics Teacher Educators Service, Teaching, and Research in Mathematics Education)

January 2019

Awarded by the Association of Mathematics Teacher Educators (<https://amte.net/star>)

First Place Award, Graduate Research Paper – Marion H. Steele Symposium

April 2018

Awarded by the College of Education & Human Development, University of Delaware, \$1,000

Mathematics Education Graduate Award – Outstanding Scholarship and Promise in the Field of Mathematics Education

April 2018

Awarded by the School of Education, University of Delaware, \$50

Doctoral Fellowship Award

June 2017

Awarded by the School of Education, University of Delaware, \$2,150

Dissertation Award

May 2017

Awarded by the School of Education, University of Delaware, \$500

Professional Development Award for Graduate Students

October 2016

Awarded by the Office of Graduate and Professional Education, University of Delaware, \$1,000

PROFESSIONAL MEMBERSHIPS

American Educational Research Association (AERA)

Association of Mathematics Teacher Educators (AMTE)

International Society of the Learning Sciences (ISLS)

National Association of Multicultural Education (NAME)

National Council of Supervisors of Mathematics (NCSM)

National Council of Teachers of Mathematics (NCTM)

New Jersey's Association of Mathematics Teacher Educators (NJ-AMTE)

North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA)

TODOS: Mathematics for ALL

SERVICE

Department Service

Chairperson of the Department Personnel Action Committee
Fall 2024-present
Montclair State University

Member of the Department Curriculum Committee
Fall 2023-present
Montclair State University

Member of the Department Personnel Action Committee
Fall 2023-Spring 2024
Montclair State University

Chairperson of the Department of Mathematics Tenure Track Faculty Search Committee
Summer 2022-Spring 2023
Montclair State University

Member of the Department of Mathematics Communications and Outreach Committee
Fall 2021-present
Montclair State University

Chairperson of the Department of Mathematics Clinical Specialist Search Committee
Spring 2021-Summer 2021
Montclair State University

Mathematics Liaison between the Mathematics and Teacher Education Departments
Fall 2020-present
Montclair State University

Presenter at Department of Mathematics' Open House/Accepted Student's Day for
Undergraduate and Graduate Programs
Fall 2024, Spring 2024, Fall 2022, Spring 2022, Spring 2021, Spring 2020
Montclair State University

Presenter at Department of Mathematics' Graduation Ceremony
Spring 2020-present
Montclair State University

Chairperson of the Department of Mathematics Election Committee
Fall 2019-Spring 2020
Montclair State University

Member of the Department of Mathematics Website Committee
Fall 2019-Summer 2021
Montclair State University

Member of the Department of Mathematics Social Media Committee
Fall 2019-Summer 2021
Montclair State University

Course Coordinator – Mathematics for Teaching I/II (MATH 370/470)
Fall 2019-present
Montclair State University

Member of the Department of Mathematics Teacher Education Policy Committee
Fall 2019-present
Montclair State University

edTPA Coordinator – Department of Mathematics
Fall 2019-Fall 2022
Montclair State University

Member of the Department of Mathematical Sciences Newsletter Committee
Fall 2019
Montclair State University

Member of the Department of Mathematics Scholarship Committee
Fall 2018-present
Montclair State University

Member of the Department of Mathematics Special Interest Group Committee: Mathematics
Education
Fall 2018-present
Montclair State University

College Service

Member of the CSAM Student Success Task Force
Fall 2023-present
Montclair State University

Mentor of Undergraduate Student Gianna Fazzini for her Participation in the Fall 2021 Mario
M. Casabona Future Scientists Program
Fall 2021
Montclair State University

Contributor to Grant Proposals related to CSAM Initiatives – OMIC grant (successfully funded)
Spring 2021
Montclair State University

Presenter at the College of Science and Mathematics' Homecoming Event
Fall 2018
Montclair State University

University Service

Voting Member of the University Academic Appeals Committee – CSAM representative
Spring 2019-present
Montclair State University

Voting Member of the University Grade Grievance Committee – CSAM representative
Fall 2024-Spring 2025 (alternate), Fall 2020-Spring 2021
Montclair State University

Service to the Field

Invited Panel Reviewer, Division C: Learning and Instruction, Mathematics – American
Educational Research Association (AERA)
Fall 2024

Invited Panel Reviewer – National Science Foundation
Fall 2024

Invited External Evaluator for the Department of Mathematics 5-Year Program Review –
Millersville University
Spring 2024

Volunteer Mentor for Graduate Students and Early Career Researchers – Special Interest
Group - Research in Mathematics Education (SIG-RME)
Fall 2023-present

Invited External Evaluator for Tenure & Promotion Decisions – University of Delaware
Summer 2023, Summer 2021

Invited Representative at the Third National Conference on Doctoral Programs in Mathematics
Education
Fall 2022

Invited External Evaluator for Tenure & Promotion Decisions – Jacksonville State University
Summer 2022

Graduate Student Representative – Pennsylvania Association of Mathematics Teacher
Educators Executive Board
August 2017-August 2018

Manuscript reviewer for the following journals:

American Educational Research Journal
Education Sciences
Educational Studies of Mathematics
International Electronic Journal of Mathematics Education
International Journal of Research of Mathematical Education in Science and Technology
Journal of Higher Education Theory and Practice
Journal of Mathematical Behavior

Journal of Mathematics Education Leadership
Journal of Mathematics Teacher Education
Journal of Research in Mathematics Education
Journal of Urban Mathematics Education
Mathematical Thinking and Learning
Mathematics Teacher Education and Development
Mathematics Teacher Educator
REDIMAT: Journal for Research in Mathematics Education
SAGE: Open
Teaching for Excellence and Equity in Mathematics
The Mathematics Enthusiast

Proposal reviewer for the following conferences:

American Educational Research Association (AERA)
Association of Mathematics Teacher Educators (AMTE)
International Conference of the Learning Sciences (ICLS)
National Association for Multicultural Education (NAME)
North American Chapter of the International Group for the Psychology of Mathematics
Education (PME-NA)
National Council of Supervisors of Mathematics (NCSM)
National Council of Teachers of Mathematics (NCTM)