

Curriculum Vitae

**NICK WASSERMAN, Ph.D.**

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**EDUCATION**

**Ph.D., Mathematics Education** · May 2011

Teachers College, Columbia University, New York, NY

*Dissertation Title: When beginning mathematics teachers report learning successful attributes:  
Reflections on teacher education*

*Mathematics Coursework: Combinatorics, Graph Theory, Abstract Algebra, Analysis, Topology,  
Foundations of Number Systems, Advanced Modeling and Information Theory, Foundations  
of Statistics, Problem Solving, Finite Mathematics, Geometry*

**Master of Science, Mathematics Education** · October 2010

Teachers College, Columbia University, New York, NY

**Master of Arts, Mathematics Education** · October 2008

Teachers College, Columbia University, New York, NY

**Bachelor of Science, Mathematics (UTeach Program)** · December 2003

The University of Texas at Austin, Austin, TX

*La Universidad de Granada, Granada, Spain (Semester Abroad), February 2002-May 2002*

**ACADEMIC APPOINTMENTS**

Teachers College, Columbia University, New York, NY

**Professor, Mathematics Education** · September 2024-present

**Chair, Department of Mathematics, Science and Technology** · September 2025-present

*Associate Professor, Mathematics Education, September 2019-August 2024*

*Assistant Professor, Mathematics Education, September 2013-August 2019*

**Graduate Courses Taught:**

Mathematics

MSTM 4038. Finite Mathematics

MSTM 5030/6030. Topics/Advanced Topics in Probability Theory

MSTM 5036/6036. Topics/Advanced Topics in Discrete Mathematics

MSTM 5034/6034. Topics/Advanced Topics in Analysis

MSTM 5032/6032. Topics/Advanced Topics in Geometry

Mathematics Education

MSTM 6500. Research Seminar in Mathematics Education

MSTM 4025. Teaching Mathematics with Technology

MSTM 4005. Teaching Mathematics in Diverse Cultures

MSTM 5011. Mathematics in the Secondary School

MSTM 4020. Mathematics Teaching and Learning II

MSTM 5022. Mathematics Curriculum Development

MSTM 4199. Special Topics: STEM in Education

MSTM 7500. Dissertation Seminar in Mathematics Education

Southern Methodist University, Dallas, TX

**Assistant Professor, Mathematics Education** · August 2011-May 2013

**Undergraduate Courses Taught:**

Mathematics

MATH 1337. Calculus I

MATH 3308. Discrete Mathematics

**Graduate Courses Taught:**

Mathematics Education

EDU 6379. Numerical Reasoning: Numbers and Operations

EDU 6380. Algebraic Reasoning and Patterns

EDU 6381. Geometry and Measurement

EDU 6382. Everyday Mathematics: Probability and Statistics

Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile

**Visiting Professor, Mathematics Education** · May 2022-June 2022

**SECONDARY TEACHING EXPERIENCE**

Marymount School of New York, New York, NY

**Mathematics Teacher** · August 2008-May 2011

**Upper School Courses Taught:**

Calculus BC, Finite Mathematics, Pre-Calculus, Geometry, Algebra

James Bowie High School, Austin, TX

**Mathematics Teacher** · August 2004-May 2007

**Algebra Team Leader** · August 2006-May 2007

**High School Courses Taught:**

Geometry, Algebra

**FELLOWSHIPS, AWARDS, AND HONORS**

2021 Faculty Teaching Award, Honorable Mention · Teachers College, Columbia University, 2021

Fulbright Specialist · U.S. Department of State, Bureau of Educational and Cultural Affairs (ECA), 2019-2022

Outstanding Reviewer · *Journal for Research in Mathematics Education* (JRME), 2018

Best Paper Award ("Leveraging real analysis to foster pedagogical practices") · Annual Conference on Research in Undergraduate Mathematics Education (RUME), San Diego, CA, 2017

STaR Fellow · Service, Teaching, and Research (STaR) Program for Early Career Mathematics Educators, 2012-2013

MST Doctoral Writing Scholarship Award · Department of Mathematics, Science and Technology (MST), Teachers College, Columbia University, New York, NY, October 2010

R. L. Moore Award for Best Inquiry Lesson · University of Texas at Austin, Austin, TX, April 2008

**PUBLICATIONS**

**Authored Books**

**Wasserman, N.**, Serbin, K., Cook, J. P., Álvarez, J. A. M., & Bremser, P. (under contract). *Understanding abstract algebra and its connections to secondary mathematics teaching*. Cham, Switzerland. Springer.

**Wasserman, N.**, Fukawa-Connelly, T., Weber, K., Mejia-Ramos, J. P., & Abbott, S. (2022). *Understanding analysis and its connections to secondary mathematics teaching*. Cham, Switzerland: Springer. <https://doi.org/10.1007/978-3-030-89198-5>

Karp, A., & **Wasserman, N.** (2015). *Mathematics in middle and secondary schools: A problem solving approach*. Charlotte, NC: Information Age Publishing Inc.

**Edited Books and Collections**

Buchbinder, O., **Wasserman, N.**, & Buchholtz, N. (Eds.) (2023). Special issue: Exploring and strengthening university mathematics courses for secondary teacher preparation. *ZDM* –

*Mathematics Education*, 55(4). <https://link.springer.com/journal/11858/volumes-and-issues/55-4>

**Wasserman, N.** (Ed.) (2018). *Connecting abstract algebra to secondary mathematics, for secondary mathematics teachers*. In J. Cai and J. A. Middleton (Eds.), *Research in Mathematics Education Series*. Cham, Switzerland: Springer. <https://doi.org/10.1007/978-3-319-99214-3>

### Book Chapters

**Wasserman, N.**, & Dawkins, P. (in press). Toward an empirical basis for the GeT SLOs. In A. Brown, P. Herbst, N. Miller, L. Pyzdrowski, & B. Reynolds (Eds.), *The GeT course: Resources and objectives for the geometry courses* (pp. 722-736). *MAA Notes*.

Lai, Y., **Wasserman, N.**, Strayer, J. F., Casey, S., Weber, K., Fukawa-Connelly, T., & Lischka, A. (2024). Making advanced mathematics work in secondary teacher education. In B. Benken (Ed.), *The AMTE Handbook of mathematics teacher education: Reflection on past, present and future – paving the way for the future of mathematics teacher education*, AMTE Professional Book Series (Vol. 5) (pp. 199-218). Charlotte, NC: IAP. <https://doi.org/10.1108/979-8-88730-543-120251013>

**Wasserman, N.** (2023). Mathematical challenge in connecting advanced and secondary mathematics: Recognizing binary operations as functions. In R. Leikin (Ed.), *Mathematical challenge for all*, *Research in Mathematics Education Series* (pp. 241-260). Cham, Switzerland: Springer. [https://doi.org/10.1007/978-3-031-18868-8\\_13](https://doi.org/10.1007/978-3-031-18868-8_13)

**Wasserman, N.** (2018). Exploring advanced mathematics courses and content for secondary mathematics teachers. In N. Wasserman (Ed.), *Connecting abstract algebra to secondary mathematics, for secondary mathematics teachers*, *Research in Mathematics Education Series* (pp. 1-15). Cham, Switzerland: Springer. [https://doi.org/10.1007/978-3-319-99214-3\\_1](https://doi.org/10.1007/978-3-319-99214-3_1)

**Wasserman, N.**, & Galarza, P.\* (2018). Exploring an instructional model for designing modules for secondary mathematics teachers in an abstract algebra course. In N. Wasserman (Ed.), *Connecting abstract algebra to secondary mathematics, for secondary mathematics teachers*, *Research in Mathematics Education Series* (pp. 335-361). Cham, Switzerland: Springer. [https://doi.org/10.1007/978-3-319-99214-3\\_16](https://doi.org/10.1007/978-3-319-99214-3_16)

**Wasserman, N.** (2017). The dilemma of advanced mathematics: Instructional approaches for secondary mathematics teacher education. In A. Karp (Ed.), *Current issues in mathematics education: Materials of the American-Russian workshop* (pp. 107-123). Bedford, MA: The Consortium for Mathematics and Its Applications (COMAP).

**Wasserman, N.** (2015). Bringing dynamic geometry to three dimensions: The use of SketchUp in mathematics education. In D. Polly (Ed.), *Cases on technology integration in mathematics education* (pp. 68-99). Hershey, PA: IGI-Global. <https://doi.org/10.4018/978-1-4666-6497-5.ch004>

### Refereed Research Journal Articles

Delgado-Rebolledo, R., Zakaryan, D., & **Wasserman, N.** (2026). Interpreting students' responses and providing instructional explanations: Using networking theory to link prospective mathematics teachers' knowledge and practices. *International Journal of Science and Mathematics Education*, 24(6), 68, 1-23. <https://doi.org/10.1007/s10763-026-10688-6>

**Wasserman, N.** (online first). Framing connections between secondary and advanced mathematics in ways that help teachers reflect on the potential utility of disciplinary knowledge. *Journal of Mathematics Teacher Education*, XX(X), XXX. <https://doi.org/10.1007/s10857-025-09740-z>

Chen, Y.\*, LaPlace, E.\*, **Wasserman, N.**, & Paoletti, T. (online first). Exploring students' approaches to function composition from graphs. *International Journal of Mathematical*

\* Indicates work done with a current or former graduate student.

- Education in Science and Technology*, XX(X), XXX.  
<https://doi.org/10.1080/0020739X.2025.2572379>
- Wasserman, N.**, & Duggan, K.\* (2026). Comparing problem types with problem stems and across mathematical domains. *Investigations in Mathematics Learning*, 18(2), 116-134.  
<https://doi.org/10.1080/19477503.2025.2488231>
- Wasserman, N.** (2025). Adding diversity to mathematical connections to counter Klein's second discontinuity. *Recherches en Didactique des Mathématiques*, 45(1), 5-31.  
<https://doi.org/10.46298/rdm.13675>
- Wasserman, N.**, Buchbinder, O., & Buchholtz, N. (2023). Making university mathematics matter for secondary teacher preparation. *ZDM – Mathematics Education*, 55(4), 719-736.  
<https://doi.org/10.1007/s11858-023-01484-5>
- Wasserman, N.** (2023). Investigating a teacher-perspective on pedagogical mathematical practices: Possibilities for using mathematical practice to develop pedagogy in mathematical coursework. *ZDM – Mathematics Education*, 55(4), 807-821.  
<https://doi.org/10.1007/s11858-023-01468-5>
- Wasserman, N.** (2022). Re-exploring the intersection of mathematics and pedagogy. *For the Learning of Mathematics*, 42(3), 28-33. <https://www.jstor.org/stable/27239247>
- Wasserman, N.** (2022). Unpacking foreshadowing in mathematics teachers' planned practices. *Educational Studies in Mathematics*, 111(3), 423-443. <https://doi.org/10.1007/s10649-022-10152-6>
- Mirin, A., Milner, F., **Wasserman, N.**, & Weber, K. (2021). On two definitions of 'function'. *For the Learning of Mathematics*, 41(3), 22-24. <https://www.jstor.org/stable/27091216>
- Wasserman, N.**, & McGuffey, W.\* (2021). Opportunities to learn from (advanced) mathematical coursework: A teacher perspective on observed classroom practice. *Journal for Research in Mathematics Education*, 52(4), 370-406. <https://doi.org/10.5951/jresmetheduc-2019-0017>
- Lockwood, E., **Wasserman, N.**, & Tillema, E. (2020). A case for combinatorics: A research commentary. *Journal of Mathematical Behavior*, 59(1), 100783.  
<https://doi.org/10.1016/j.jmathb.2020.100783>
- Weber, K., Mejia-Ramos, J. P., Fukawa-Connelly, T., & **Wasserman, N.** (2020). Connecting the learning of advanced mathematics with the teaching of secondary mathematics: Inverse functions, domain restrictions, and the arcsine function. *Journal of Mathematical Behavior*, 57(1), 100752. <https://doi.org/10.1016/j.jmathb.2019.100752>
- Fukawa-Connelly, T., Mejia-Ramos, J. P., **Wasserman, N.**, & Weber, K. (2020). An evaluation of ULTRA: An experimental real analysis course built on a transformative theoretical model. *International Journal of Research in Undergraduate Mathematics Education*, 6(2), 159-185.  
<https://doi.org/10.1007/s40753-019-00102-8>
- Wasserman, N.** (2019). Duality in combinatorial notation. *For the Learning of Mathematics*, 39(3), 16-21. <https://www.jstor.org/stable/26854429>
- Wasserman, N.**, Weber, K., Fukawa-Connelly, T., & McGuffey, W.\* (2019). Designing advanced mathematics courses to influence secondary teaching: Fostering mathematics teachers' "attention to scope." *Journal of Mathematics Teacher Education*, 22(4), 379-406.  
<https://doi.org/10.1007/s10857-019-09431-6>
- McGuffey, W.\*, Quea, R., Weber, K., **Wasserman, N.**, Fukawa-Connelly, T., & Mejia-Ramos, J. P. (2019). Pre- and in-service teachers' perceived value of an experimental real analysis course for teachers. *International Journal of Mathematical Education in Science and Technology*, 50(8), 1166-1190. <https://doi.org/10.1080/0020739X.2019.1587021>
- Dawkins, P., Inglis, M., & **Wasserman, N.** (2019). The use(s) of 'is' in mathematics. *Educational Studies in Mathematics*, 100(2), 117-137. <https://doi.org/10.1007/s10649-018-9868-6>
- Wasserman, N.**, & Galarza, P.\* (2019). Conceptualizing and justifying sets of outcomes with combination problems. *Investigations in Mathematics Learning*, 11(2), 83-102.  
<https://doi.org/10.1080/19477503.2017.1392208>

- Wasserman, N.**, Weber, K., Villanueva, M., & Mejia-Ramos, J. P. (2018). Mathematics teachers' views about the limited utility of real analysis: A transport model hypothesis. *Journal of Mathematical Behavior*, 50(1), 74-89. <https://doi.org/10.1016/j.jmathb.2018.01.004>
- Lockwood, E., **Wasserman, N.**, & McGuffey, W.\* (2018). Classifying combinations: Investigating undergraduate students' responses to different categories of combination problems. *International Journal of Research in Undergraduate Mathematics Education*, 4(2), 305-322. <https://doi.org/10.1007/s40753-018-0073-x>
- Huey, M. E., Champion, J., Casey, S., & **Wasserman, N.** (2018). Secondary mathematics teachers' planned approaches for teaching standard deviation. *Statistics Education Research Journal*, 17(1), 61-84. <https://doi.org/10.52041/serj.v17i1.176>
- Wasserman, N.** (2018). Knowledge of nonlocal mathematics for teaching. *Journal of Mathematical Behavior*, 49(1), 116-128. <https://doi.org/10.1016/j.jmathb.2017.11.003>
- Wasserman, N.**, & Weber, K. (2017). Pedagogical applications from real analysis for secondary mathematics teachers. *For the Learning of Mathematics*, 37(3), 14-18. <https://www.jstor.org/stable/26548463>
- Wasserman, N.** (2017). Making sense of abstract algebra: Exploring secondary teachers' understanding of inverse functions in relation to its group structure. *Mathematical Thinking and Learning*, 19(3), 181-201. <https://doi.org/10.1080/10986065.2017.1328635>
- Wasserman, N.**, Casey, S., Champion, J., & Huey, M. (2017). Statistics as unbiased estimators: Exploring the teaching of standard deviation. *Research in Mathematics Education*, 19(3), 236-256. <https://doi.org/10.1080/14794802.2017.1333918>
- Wasserman, N.** (2017). Exploring how understandings from abstract algebra can influence the teaching of structure in early algebra. *Mathematics Teacher Education and Development*, 19(2), 81-103. <https://files.eric.ed.gov/fulltext/EJ1160832.pdf>
- Wasserman, N.**, Fukawa-Connelly, T., Villanueva, M., Mejia-Ramos, J. P., & Weber, K. (2017). Making real analysis relevant to secondary teachers: Building up from and stepping down to practice. *PRIMUS*, 27(6), 559-578. <https://doi.org/10.1080/10511970.2016.1225874>
- Stockton, J., & **Wasserman, N.** (2017). Forms of knowledge of advanced mathematics for teaching. *The Mathematics Enthusiast*, 14(1), 575-606. <https://doi.org/10.54870/1551-3440.1412>
- Wasserman, N.**, Quint, C.\*, Norris, S. A., & Carr, T. (2017). Exploring flipped classroom instruction in Calculus III. *International Journal of Science and Mathematics Education*, 15(3), 545-568. <https://doi.org/10.1007/s10763-015-9704-8>
- Wasserman, N.** (2016). Abstract algebra for algebra teaching: Influencing school mathematics instruction. *Canadian Journal of Science, Mathematics and Technology Education*, 16(1), 28-47. <https://doi.org/10.1080/14926156.2015.1093200>
- Wasserman, N.** (2015). Unpacking teachers' moves in the classroom: Navigating micro- and macro-levels of mathematical complexity. *Educational Studies in Mathematics*, 90(1), 75-93. <https://doi.org/10.1007/s10649-015-9615-1>
- Casey, S., & **Wasserman, N.** (2015). Teachers' knowledge about informal line of best fit. *Statistics Education Research Journal*, 14(1), 8-35. <https://doi.org/10.52041/serj.v14i1.267>
- Wasserman, N.**, & Rossi, D. (2015). Mathematics and science teachers' use of and confidence in empirical reasoning: Implications for STEM teacher preparation. *School Science and Mathematics*, 115(1), 22-34. <https://doi.org/10.1111/ssm.12099>
- Wasserman, N.**, & Walkington, C. (2014). Exploring links between beginning UTeachers' beliefs and observed classroom practices. *Teacher Education and Practice*, 27(2/3), 376-401.
- Wasserman, N.** (2014). Introducing algebraic structures through solving equations: Vertical content knowledge for K-12 mathematics teachers. *PRIMUS*, 24(3), 191-214. <https://doi.org/10.1080/10511970.2013.857374>
- Wasserman, N.**, & Ham, E. (2013). Beginning teachers' perspectives on attributes for teaching secondary mathematics: Reflections on teacher education. *Mathematics Teacher Education and Development*, 15(2), 70-96. <https://files.eric.ed.gov/fulltext/EJ1018634.pdf>

**Wasserman, N.**, & Stockton, J. (2013). Horizon content knowledge in the work of teaching: A focus on planning. *For the Learning of Mathematics*, 33(3), 20-22.  
<https://www.jstor.org/stable/43894856>

### Refereed Professional Journal Articles

Pogorelova, L. \*, Sheehan-Braine, S. \*, John, A. \*, & **Wasserman, N.** (2024). A problem-based curriculum to conceptually develop the multiplication principle for counting. *Journal of Mathematics Education at Teachers College*, 15(1), 37-43.  
<https://doi.org/10.52214/jmetc.v15i1.11949>

**Wasserman, N.** (2020). Dynamically reconstructed proof visualizations in real analysis. *Electronic Journal of Mathematics and Technology*, 14(1), 38-49.

**Wasserman, N.**, Weber, K., Fukawa-Connelly, T., & Mejia-Ramos, J. P. (2020). Area-preserving transformations: Cavalieri in 2D. *Mathematics Teacher: Learning and Teaching PK-12*, 113(1), 53-60. <https://doi.org/10.5951/MTLT.2019.0079>

Murray, E., Baldinger, E., **Wasserman, N.**, Broderick, S., & White, D. (2017). Connecting advanced and secondary mathematics. *Issues in the Undergraduate Mathematics Preparation of School Teachers* (Vol. 1, August 2017), 1-10.  
<https://files.eric.ed.gov/fulltext/EJ1151024.pdf>

**Wasserman, N.** (2017). Math madness: Coloring, reasoning, and celebrating. *Teaching Children Mathematics*, 23(8), 468-475. <https://doi.org/10.5951/teacchilmath.23.8.0468>

**Wasserman, N.** (2015). A random walk: Stumbling across connections. *Mathematics Teacher*, 108(9), 686-695. <https://doi.org/10.5951/mathteacher.108.9.0686>

**Wasserman, N.** (2014). A rationale for irrationals: An unintended exploration of  $e$ . *Mathematics Teacher*, 107(7), 500-507. <https://doi.org/10.5951/mathteacher.107.7.0500>

Gould, H., & **Wasserman, N.** (2014). Striking a balance: Students' tendencies to oversimplify or overcomplicate in mathematical modeling. *Journal of Mathematics Education at Teachers College*, 5(1), 27-34. <https://doi.org/10.7916/jmetc.v5i1.640>

**Wasserman, N.**, & Ham, E. (2012). Gaining perspective on success, support, retention, and student test scores: Listening to beginning teachers. *Leaders of Learners*, 5(3), 9-14.

**Wasserman, N.**, & Arkan, I. (2011). Technology tips: An Archimedean walk. *Mathematics Teacher*, 104(9), May 2011, 710-714. <https://doi.org/10.5951/MT.104.9.0710>

**Wasserman, N.** (2011). The Common Core State Standards: Comparisons of access and quality. *Journal of Mathematics Education at Teachers College*, 2(1), 18-27.  
<https://doi.org/10.7916/jmetc.v2i1.699>

**Wasserman, N.** (2011). Partition and iteration in Algebra: Intuition with linearity. *Association of Mathematics Teachers of New York State Journal*, 61(1), 10-14.

**Wasserman, N.** (2010). Inside the UTeach program: Implications for research in mathematics teacher education. *Journal of Mathematics Education at Teachers College*, 1(1), 12-16.  
<https://doi.org/10.7916/jmetc.v1i1.671>

### Refereed Conference Papers and Proceedings

**Wasserman, N.**, & Dawkins, P. (2025). Conceptualizing language for mathematical problem types across domains. In S. Cook, B. Katz, and K. Melhuish (Eds.), *Proceedings of the 27<sup>th</sup> Annual Conference on Research in Undergraduate Mathematics Education (RUME)* (pp. 1021-1026). Alexandria, VA: RUME.

LaPlace, E. \*, Chen, Y. \*, **Wasserman, N.**, & Paoletti, T. (2024). Exploring graphical reasoning from revised responses to function composition tasks. In S. Cook, B. Katz, and D. Moore-Russo (Eds.), *Proceedings of the 26<sup>th</sup> Annual Conference on Research in Undergraduate Mathematics Education (RUME)* (pp. 170-177). Omaha, NE: RUME.

Lai, Y., **Wasserman, N.**, Strayer, J. F., Casey, S., Weber, K., Fukawa-Connelly, T., & Lischka, A. E. (2024). Representing learning in advanced mathematics courses for secondary mathematics teachers. In S. Cook, B. Katz, and D. Moore-Russo (Eds.), *Proceedings of the*

- 26<sup>th</sup> Annual Conference on Research in Undergraduate Mathematics Education (RUME) (pp. 546-555). Omaha, NE: RUME.
- Wasserman, N.** (2023). Strengthening the role of practice in mathematics teacher education: Opportunities for university mathematics courses. In R. Delgado-Rebolledo and D. Zakaryan (Eds.), *Proceedings of the Congreso Iberoamericano sobre conocimiento especializado del professor de matemáticas (CIMTSK-VI)* (pp. 20-30). Valparaíso, Chile: CIMTSK.
- Delgado-Rebolledo, R., Zakaryan, D., & **Wasserman, N.** (2023). Una aproximación a las conexiones entre el MTSK y las prácticas matemáticas pedagógicas. In R. Delgado-Rebolledo and D. Zakaryan (Eds.), *Proceedings of the Congreso Iberoamericano sobre conocimiento especializado del professor de matemáticas (CIMTSK-VI)* (pp. 328-335). Valparaíso, Chile: CIMTSK.
- Chen, Y., **Wasserman, N.**, & Paoletti, T. (2023). Exploring geometric reasoning with function composition. In S. Cook, B. Katz, and D. Moore-Russo (Eds.), *Proceedings of the 25<sup>th</sup> Annual Conference on Research in Undergraduate Mathematics Education (RUME)* (pp. 145-153). Omaha, NE: RUME.
- Mirin, A., Weber, K., & **Wasserman, N.** (2020). What is a function? In A. I. Sacristán, J. C. Cortés-Zavala, and P. M. Ruiz-Arias (Eds.), *Proceedings of the 42<sup>nd</sup> Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA)* (pp. 1156-1164). Mazatlán, Mexico: PME-NA.
- Wasserman, N.**, Zazkis, R., Baldinger, E., Marmur, O., & Murray, E. (2019). Points of connection to secondary teaching in undergraduate mathematics courses. In A. Weinberg, D. Moore-Russo, H. Soto, and M. Wawro (Eds.), *Proceedings of the 22<sup>nd</sup> Annual Conference on Research in Undergraduate Mathematics Education (RUME)* (pp. 819-826). Oklahoma City, OK: RUME.
- Wasserman, N.** (2018). Exploring the secondary teaching of functions in relation to the learning of abstract algebra. In A. Weinberg, C. Rasmussen, J. Rabin, M. Wawro, and S. Brown (Eds.), *Proceedings of the 21<sup>st</sup> Annual Conference on Research in Undergraduate Mathematics Education (RUME)* (pp. 687-694). San Diego, CA: RUME.
- Weber, K., **Wasserman, N.**, Mejia-Ramos, J. P., & Fukawa-Connelly, T. (2018). Connecting the study of advanced mathematics to the teaching of secondary mathematics: Implications for teaching inverse trigonometric functions. In A. Weinberg, C. Rasmussen, J. Rabin, M. Wawro, and S. Brown (Eds.), *Proceedings of the 21<sup>st</sup> Annual Conference on Research in Undergraduate Mathematics Education (RUME)* (pp. 643-651). San Diego, CA: RUME.
- Dawkins, P., Inglis, M., & **Wasserman, N.** (2018). The use(s) of 'is' in mathematics. In A. Weinberg, C. Rasmussen, J. Rabin, M. Wawro, and S. Brown (Eds.), *Proceedings of the 21<sup>st</sup> Annual Conference on Research in Undergraduate Mathematics Education (RUME)* (pp. 500-507). San Diego, CA: RUME.
- Wasserman, N.**, Weber, K., & McGuffey, W.\* (2017). Leveraging real analysis to foster pedagogical practices [2017 RUME Best Paper Award]. In A. Weinberg, C. Rasmussen, J. Rabin, M. Wawro, and S. Brown (Eds.), *Proceedings of the 20<sup>th</sup> Annual Conference on Research in Undergraduate Mathematics Education (RUME)* (pp. 1-15). San Diego, CA: RUME.
- Baldinger, E., Murray, E., White, D., Broderick, S., & **Wasserman, N.** (2016). Exploring connections between advanced and secondary mathematics. In M. B. Wood, E. E. Turner, M. Civil, and J. A. Eli (Eds.), *Proceedings of the 38<sup>th</sup> Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA)* (pp. 1633-1640). Tucson, AZ: The University of Arizona.
- Wasserman, N.** (2016). Nonlocal mathematical knowledge for teaching. In C. Csíkos, A. Rausch, and J. Sztányi (Eds.), *Proceedings of the 40<sup>th</sup> Conference of the International Group for the Psychology of Mathematics Education (PME)* (Vol. 4, pp. 379-386). Szeged, Hungary: PME.

- Lockwood, E., **Wasserman, N.**, & McGuffey, W.\* (2016). Classifying combinations: Do students distinguish between different categories of combination problems? In T. Fukawa-Connelly, N. E. Infante, M. Wawro, and S. Brown (Eds.), *Proceedings of the 19<sup>th</sup> Annual Conference on Research in Undergraduate Mathematics Education (RUME)* (pp. 296-309). Pittsburgh, PA: RUME.
- Murray, E., Baldinger, E., **Wasserman, N.**, Broderick, S., Cofer, T., White, D., & Stanish, K. (2015). Exploring connections between advanced and secondary mathematics. In T. G. Bartell, K. N. Bieda, R. T. Putnam, K. Bradfield, and H. Dominguez (Eds.), *Proceedings of the 37<sup>th</sup> Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA)* (pp. 1368-1376). East Lansing, MI: Michigan State University.
- Wasserman, N.**, & Mamolo, A. (2015). Knowledge for teaching: Horizons and mathematical structure. In T. Fukawa-Connelly, N. Infante, K. Keene, and M. Zandieh (Eds.), *Proceedings of the 18<sup>th</sup> Annual Conference on Research in Undergraduate Mathematics Education (RUME)* (pp. 1032-1036). Pittsburgh, PA: RUME.
- Wasserman, N.**, Villanueva, M., Mejia-Ramos, J. P., & Weber, K. (2015). Secondary mathematics teachers' perceptions of real analysis in relation to their teaching practices. In T. Fukawa-Connelly, N. Infante, K. Keene, and M. Zandieh (Eds.), *Proceedings of the 18<sup>th</sup> Annual Conference on Research in Undergraduate Mathematics Education (RUME)* (pp. 1037-1040). Pittsburgh, PA: RUME.
- Wasserman, N.**, Mamolo, A., Ribeiro, C. M., & Jakobsen, A. (2014). Exploring horizons of knowledge for teaching. In P. Liljedahl, C. Nicol, S. Oesterle, and D. Allan (Eds.), *Proceedings of the Joint Meeting of PME 38 and PME-NA 36* (Vol. 1, p. 247). Vancouver, Canada: PME.
- Wasserman, N.** (2013). Exploring teachers' categorizations for and conceptions of combinatorial problems. In S. Reeder and G. Matney (Eds.), *Proceedings of the 40<sup>th</sup> Annual Meeting of the Research Council on Mathematics Learning (RCML)* (pp. 145-154). Tulsa, OK: RCML.
- Wasserman, N.**, Norris, S., & Carr, T. (2013). Comparing a "flipped" instructional model in an undergraduate Calculus III course. In S. Brown, G. Karakok, K. H. Roh, and M. Oehrtman (Eds.), *Proceedings of the 16<sup>th</sup> Annual Conference on Research in Undergraduate Mathematics Education (RUME)* (Vol. 2, pp. 652-655). Denver, CO: RUME.
- Wasserman, N.**, & Ham, E. (2012). Attributes of good mathematics teaching: When are they learned? *Conference Proceedings for the 12<sup>th</sup> International Congress on Mathematics Education (ICME-12)* (p. 7843). Seoul, Korea: ICME-12.

### Professional Resources, Reviews, and Other Scholarship

- Wasserman, N.**, Holbert, N., & Blikstein, P. (2020). Will the coronavirus infect education, too? *New York Daily News*, 8 April 2020. Op ed. Available at: <http://www.nydailynews.com/opinion/ny-oped-coronavirus-infect-education-20200408-tasi4zfbozcxlgq34f22rk4zwm-story.html>
- Baldinger, E., Broderick, S., Murray, E., **Wasserman, N.**, & White, D. (2015). Connections between abstract algebra and high school algebra: A few connections worth exploring. *American Mathematical Society (AMS) Blogs: On Teaching and Learning Mathematics* (December 10, 2015). Available at: <http://blogs.ams.org/matheducation/2015/12/10/connections-between-abstract-algebra-and-high-school-algebra-a-few-connections-worth-exploring/>
- Wasserman, N.** (2015). Review of the book *Getting to the common core: Using research-based strategies that empower students to own their own achievement*, by S. L. Spencer & S. Vavra. *Teachers College Record*. Available at: <http://www.tcrecord.org/Content.asp?ContentID=18176>
- Wasserman, N.**, Mamolo, A., Ribeiro, C. M., & Jakobsen, A. (2015). Discussion Group 2: Exploring horizons of knowledge for teaching. *International Group for the Psychology of Mathematics Education (PME) Newsletter*, December 2014/January 2015, 7-10.

- Zachary, S. C., Zannou, Y., Basaraba, D., **Wasserman, N.**, Hill, S., & Ketterlin-Geller, L. (2013). Middle School Students in Texas: Algebra Ready (MSTAR): Learning Progressions Development (Tech. Rep. No. 13-03). Dallas, TX: Southern Methodist University, Research in Mathematics Education.
- Wasserman, N.** (2011). Bending steel. In H. Gould, D. Murray, and A. Sanfratello (Eds.), *Teachers College Mathematical Modeling Handbook* (pp. 75-82). Bedford, MA: The Consortium for Mathematics and Its Applications (COMAP).
- Wasserman, N.** (2011). A bit of information. In H. Gould, D. Murray, and A. Sanfratello (Eds.), *Teachers College Mathematical Modeling Handbook* (pp. 83-91). Bedford, MA: The Consortium for Mathematics and Its Applications (COMAP).
- Wasserman, N.** (2010). Reader reflections: A fourth way to break a stick: Conditional probability. *Mathematics Teacher*, 104(1), 9-10.

### Manuscripts Under Review and in Preparation

- Wasserman, N., & Lockwood, E. (in preparation). Affordances and constraints of various multichoose representations in combinatorics. *Journal of Mathematical Behavior*.
- Wasserman, N., & Issever, E. (in preparation). Exploring equivalence through combinatorial representations for division. *International Journal for Research in Undergraduate Mathematics Education*.
- Wasserman, N. (in preparation). Division in combinatorics: Trying to invert representations for multiplication. In K. Yan, A. Mamolo, & R. Zazkis (Eds.) *Pedagogical encounters and mathematical detours: Stories of disturbance and learning from mathematics education researchers*.
- Wasserman, N., & Lockwood, E. (under review). Visualizations of combinatorial multiplication and division. *For the Learning of Mathematics*.
- Wasserman, N., & Ely, R. (in preparation). The necessarily nonlinear trajectory of school mathematics and its implications. *For the Learning of Mathematics*.
- Wasserman, N. (under revisions review). A visualization for graphically composing functions. *College Mathematics Journal*.
- Carnauba, F., & Wasserman, N. (in preparation). Accessibility and Difficulty of combinatorics problems. *Journal for Research in Mathematics Education*.

## PRESENTATIONS

### Plenary Presentations

- Wasserman, N. (upcoming). *Framing connections between school and university mathematics in teacher education: Lessons and ideas from an abstract algebra course*. **El XXX Jornadas Nacionales de Educación Matemática**, Valparaíso, Chile. XX December 2026.
- Wasserman, N. (2026). *Prácticas Matemáticas Pedagógicas en la formación matemática de profesores secundarias*. **El XVI Simposio de Matemática y Educación Matemática (MEM) 2026**, Bogota, Columbia. 20 February 2026.
- Wasserman, N. (2023). *Strengthening the role of practice in mathematics teacher education: Opportunities for university mathematics courses*. **Congreso Iberoamericano sobre conocimiento especializado del professor de matemáticas (CIMTSK-VI)**, Valparaíso, Chile. 10 November 2023.
- Wasserman, N. (2022). *Bridging the teacher education divide: Possibilities for university mathematics courses*. **Annual Conference of the Korea Society of Educational Studies in Mathematics**, Seoul, South Korea. 5 November 2022.
- Wasserman, N. (2022). *Leveraging mathematical practice to develop pedagogy in advanced mathematical coursework*. **Mathematics Education Forum Research Day 2022**, Fields Institute for Research in Mathematical Sciences, Toronto, Canada. 29 January 2022.
- Wasserman, N. (2021). *Preparing teachers through advanced mathematical coursework*. **Northeastern Conference on Research in Undergraduate Mathematics Education**. 20 November 2021.

### Invited Presentations

- Wasserman, N. (upcoming). *Combinatorial representations: A closer look at portraying some outcomes and some operations*. **Department of Mathematics Colloquium**, Texas State University, San Marcos, TX. 4 September 2026.
- Wasserman, N. (2026). *Joint work: Reflections on building bridges between mathematics educators and mathematicians*. **Algebra, K-theory and applications, honoring the works of Hyman Bass and Charles Weibel**, Rutgers University, New Brunswick, NJ. 15 May 2026.
- Wasserman, N. (2026). *Prácticas matemáticas pedagógicas*. **Seminario las Prácticas Matemáticas en la Formación del Profesorado**, Universidad de Huelva, Spain. 23 April 2026.
- Wasserman, N. (2026). *Prácticas matemáticas pedagógicas: Uso de la práctica matemática para desarrollar la pedagogía*. **Interdisciplinary Science Teaching through Learning Situations**, Universidad de Huelva, Spain. 21 April 2026.
- Corwin, I., Dragomir, G., Wasserman, N., Connelly, M., Blumberg, A. J., Collins, J., & Yu, S. (2026). *Panel: Implications on mathematical learning*. **(Fun)damental uses of AI in Math - Pedagogy Symposia**, Data Science Institute, Columbia University, New York, NY. 12 March 2026.
- Wasserman, N. (2026). *Panel: Cómo investigar en educación matemática?* **El XVI Simposio de Matemática y Educación Matemática (MEM) 2026**, Bogota, Columbia. 19 February 2026.
- Wasserman, N. (2025). *Exemplifying opportunities to enhance secondary teachers' university mathematical preparation*. **Department of Mathematics Seminar**, Uppsala University, Uppsala, Sweden. 7 November 2025.
- Wasserman, N. (2025). *Pedagogical mathematical practices in secondary teachers' mathematical preparation*. **Department of Education Seminar**, Uppsala University, Uppsala, Sweden. 3 November 2025.
- Wasserman, N. (2025). *Designing tasks with mathematical activity in mind – including dynamic technology tools for teaching*. **Math Education and Communication Seminar**, City University of New York (CUNY) Graduate Center, New York, NY. 28 April 2025.
- Wasserman, N. (2025). *Pedagogical mathematical practices in secondary teachers' mathematical preparation*. **SMT Center Seminar**, Ontario Institute for Studies in Education (OISE), Toronto, Canada. 28 March 2025.
- Wasserman, N. (2025). *Don't forget Discrete mathematics!* **TIME 2000** (Teaching Improvements through Mathematics Education) **Seminar**, Queens College, New York, NY. 18 March 2025.
- Buchbinder, O., Wasserman, N., & Buchholtz, N. (2023). *Exploring and strengthening university mathematics courses for secondary teacher preparation*. **ZDM – Mathematics Education Webinar Series**. 28 September 2023.
- Wasserman, N. (2023). *Mejorando la preparación de los profesores a través de sus cursos de matemáticas avanzado*. **Seminario en Educación Matemática**, Programa de Maestría y Doctorado en Educación Matemática, Universidad Antonio Nariño, Bogota, Colombia. 9 August 2023.
- Wasserman, N. (2022). *STEM in Education*. **Workshop for Kazakhstan Visiting Scholars Program**, Teachers College, Columbia University, New York, NY. 9 December 2022.
- Wasserman, N. (2022). *Upgrading Learning for Teachers in Real Analysis: A Look at Diversifying Content Connections to Counter Klein's Second Discontinuity*. **International Online Seminar: From University Mathematics to Mathematics Education**, Laboratoire de Didactique André Revuz and Institut Montpelliérain Alexander Grothendieck, University of Rouen Normandie and University of Montpellier, France. 12 September 2022.
- Wasserman, N. (2022). *Mejorando la preparación de los profesores a través de sus cursos de matemáticas avanzado*. **Conferencia Pública**, Pontificia Universidad Católica de Chile,

- Pontificia Universidad Católica de Valparaíso, y Fundación Columbia University Global Center en Chile, Santiago, Chile. 22 June 2022.
- Wasserman, N. (2022). *Investigando cursos matemáticas en la formación de profesores de matemáticas*. **Seminario de Didáctica de la Matemática**, Programa de Doctorado en Didáctica de la Matemática, Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile. 6 June 2022.
- Wasserman, N. (2021). *Pedagogical Mathematical Practices as a way to develop pedagogy from mathematics coursework*. **Mathematics Courses Designed to Develop Mathematical Knowledge for Teaching** (AMS Special Session), Joint Mathematics Meetings of the MAA and AMS, Washington D.C. 6 January 2021.
- Wasserman, N. (2020). *Secondary mathematics teachers' pedagogical learning: Pedagogical mathematical practices in university mathematics courses*. **Seminar on Mathematics Education**, Department of Science Teaching, Weizmann Institute of Science, Rehovot, Israel. 22 November 2020.
- Wasserman, N. (2020). *Secondary mathematics teachers' mathematical learning: Expanding mathematical connections in university mathematics courses*. **Seminar on Mathematics Education**, Department of Science Teaching, Weizmann Institute of Science, Rehovot, Israel. 8 November 2020.
- Wasserman, N. (2020). *Secondary mathematics teachers' pedagogical learning: Pedagogical mathematical practices as a way to develop pedagogy from university mathematics courses*. **Center for Research in Mathematics Education Seminar Series**, Seoul National University, Seoul, South Korea. 31 October 2020.
- Wasserman, N. (2020). *Secondary mathematics teachers' mathematical learning: Connecting to classroom teaching as a way to develop mathematics from university mathematics courses*. **Center for Research in Mathematics Education Seminar Series**, Seoul National University, Seoul, South Korea. 17 October 2020.
- Wasserman, N., & Thanheiser, E., Jones, D., Amidon, J. (Hosts) (2020). *Connecting secondary teaching to advanced mathematics* (No. 17) [Audio podcast]. In **Teaching Math Teaching podcast**. Association of Mathematics Teacher Educators (AMTE). 8 July 2020. Available at: <https://www.teachingmathteachingpodcast.com/17>
- Wasserman, N. (2020). *Connecting advanced to secondary mathematics, for secondary mathematics teachers*. **Seminario de Didáctica de la Matemática**, Instituto de Matemáticas, Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile. 11 May 2020.
- Wasserman, N., Holbert, N., Blikstein, P., & Cutarelli, C. (Host) (2020). *Classes in Corona* (No. 3) [Audio podcast]. In **The Blue Jay**. The Blue and White, The Undergraduate Magazine of Columbia University. May 2020. Available at: <https://open.spotify.com/episode/5g8CINZTbELSkL7foQikVP>
- Cook, J. P., Heid, M. K., Smith, J. P., Zazkis, R., & Wasserman, N. (2019). *Connecting abstract algebra to secondary mathematics, for secondary mathematics teachers*. **Program in Mathematics Colloquium Series**, Teachers College, Columbia University, New York, NY. 7 October 2019.
- Heid, M. K., Lai, Y., Wasserman, N., & Zazkis, R. (2019). *Panel: Connecting advanced and secondary mathematics*. **Connecting Advanced and Secondary Mathematics (CASM) Conference**, Minneapolis, Minnesota. 20 May 2019.
- Dawkins, P., Inglis, M., & Wasserman, N. (2019). *The use(s) of 'is' in mathematics*. **Joint Mathematics Meetings of the MAA and AMS**, Baltimore, MA. 19 January 2019.
- Wasserman, N. (2018). *Using discrete mathematics problems in secondary teaching*. **Math for America (MfA) Mini-Course** (3 sessions), New York, NY. Fall 2018.
- Wasserman, N. (2018). *Don't forget discrete mathematics!* **National Council of Teachers of Mathematics (NCTM) Annual Meeting**, Washington D.C. 26 April 2018.

- Wasserman, N., Weber, K., & McGuffey, W.\* (2018). *Leveraging real analysis to foster pedagogical practices*. **Joint Mathematics Meetings of the MAA and AMS**, San Diego, CA. 13 January 2018.
- Wasserman, N. (2017). *Applying ideas from real analysis to secondary teaching*. **Math for America (MfA) Mini-Course** (3 sessions), New York, NY. Fall 2017.
- Wasserman, N. (2017). *Designing advanced mathematics courses for secondary teachers: Connecting to their future professional work in the classroom*. **Mathematics for Future Teachers**: A one-day conference on designing and teaching mathematics courses for pre-service teachers, Rutgers University, New Brunswick, NJ. 11 May 2017.
- Wasserman, N. (2017). *What can we learn for teaching from studying advanced mathematics?* **Special Seminar**, Simon Fraser University, Vancouver, British Columbia. 24 January 2017.
- Wasserman, N. (2016). *Making advanced content courses relevant to secondary teachers: Investigating an instructional model from a real analysis course*. **Brown Bag Lunch Speaker Series**, Graduate School of Education, Rutgers University, New Brunswick, NJ. 7 December 2016.
- Wasserman, N. (2016). *Addressing the dilemma of advanced mathematics in secondary teacher preparation: The case of a real analysis course*. **Montclair State University Colloquium Series**, Department of Mathematical Sciences, Montclair State University, Montclair, NJ. 5 December 2016.
- Wasserman, N. (2016). *The dilemma of advanced mathematics: Instructional approaches for secondary mathematics teacher education*. **Current Issues in Mathematics Education Workshop**, Teachers College, Columbia University, New York, NY. 20 November 2016.
- Wasserman, N. (2016). *Accommodation of teachers' knowledge of inverse functions with the group of invertible functions*. Invited paper presented at the 13<sup>th</sup> **International Congress on Mathematical Education (ICME-13), Topic Study Group 46** (Knowledge in/for teaching mathematics at secondary level), Hamburg, Germany. 29 July 2016.
- Wasserman, N., & Otten, S. (Host) (2015). *Nick Wasserman* (No. 1503) [Audio podcast]. **Math Ed Podcast: Conversations with mathematics education researchers**. Fibre Studios. 23 February 2015. Available at: [http://mathed.podomatic.com/entry/2015-02-18T07\\_12\\_33-08\\_00](http://mathed.podomatic.com/entry/2015-02-18T07_12_33-08_00)
- Wasserman, N. (2014). *Using pedagogical contexts to foster teachers' mathematical development and practices*. **Joint Seminar in Mathematics Education of Stony Brook University and Teachers College**, Teachers College, Columbia University, New York, NY. 5 December 2014.
- Wasserman, N. (2014). *Using pedagogical contexts to explore mathematics: A parallelogram task in teacher education*. **Proof Comprehension Research Group (PCRG) Seminar**, Rutgers University, New Brunswick, NJ. 14 November 2014.
- Wasserman, N. (2014). *Using cognitive conflict in mathematics education*. Opening keynote address. **World Mathematical Olympiad Competition**, hosted by the China National Committee for the Wellbeing of the Youth (NCWY), Columbia University, New York, NY. 20 August 2014.
- Wasserman, N., & Walkington, C. (2013). *Exploring research in Algebra: Tackling algebra in middle school and high school*. **Research in Mathematics Education (RME) Annual Research to Practice Conference**, Dallas, TX. 15 February 2013.
- Wasserman, N. (2012). *Mathematics and teaching: Teachers' knowledge of tasks and proof*. **Department of Mathematics Colloquium Series**, Southern Methodist University, Dallas, TX. 1 February 2012.
- Wasserman, N., & Schielack, J. (2012). *Systems level content development: Establishing learning progressions*. **Research in Mathematics Education (RME) Annual Research to Practice Conference**, Dallas, TX. 24 February 2012.

## Refereed Presentations: International and National Conferences

- Wasserman, N., Viirman, O., & Jacobsson, M. (upcoming). *Deepening big ideas about the function concept and the process of representation in abstract algebra*. Association of Mathematics Teacher Educators (AMTE) Annual Conference, Baltimore, MD. XX February 2027.
- Wasserman, N. (upcoming). *Visualizing function composition*. National Council of Teachers of Mathematics (NCTM) Annual Meeting. Denver, CO. 29 October 2026.
- Stern, M., Issever, E., Zhang, T., Wasserman, N., & Dawkins, P. (2026). *Exploring the relationship between language and two problem types* (Poster). Annual Conference on Research in Undergraduate Mathematics Education (RUME), Alexandria, VA. 27 February 2026.
- Wasserman, N., & Dawkins, P. (2025). *Conceptualizing language for mathematical problem types across domains*. Annual Conference on Research in Undergraduate Mathematics Education (RUME), Alexandria, VA. 27 February 2025.
- Wasserman, N. (2024). *Possibilities for a 3-D representation of function composition to foster graphical conceptions*. Oral communication at the 15<sup>th</sup> International Congress on Mathematical Education (ICME-15), Topic Study Group 3.5 (Visualization and embodiment in mathematics education), Sydney, Australia. 10 July 2024.
- LaPlace, E. \*, Chen, Y. \*, Wasserman, N., & Paoletti, T. (2024). *Exploring graphical reasoning from revised responses to function composition tasks*. Annual Conference on Research in Undergraduate Mathematics Education (RUME), Omaha, NE. 23 February 2024.
- Lai, Y., Wasserman, N., Strayer, J. F., Casey, S., Weber, K., Fukawa-Connelly, T., & Lischka, A. E. (2024). *Representing learning in advanced mathematics courses for secondary mathematics teachers*. Annual Conference on Research in Undergraduate Mathematics Education (RUME), Omaha, NE. 23 February 2024.
- Wasserman, N. (2024). *Fostering a graphical conceptualization of function composition with a 3D representational tool*. Association of Mathematics Teacher Educators (AMTE) Annual Conference, Orlando, FL. 10 February 2024.
- Delgado-Rebolledo, R., Zakaryan, D., & Wasserman, N. (2023). *Una aproximación a las conexiones entre el MTSK y las prácticas matemáticas pedagógicas*. Congreso Iberoamericano sobre conocimiento especializado del profesor de matemáticas (CIMTSK-VI). Valparaíso, Chile. 9 November 2023.
- Chen, Y. \*, Wasserman, N., Paoletti, T., & LaPlace, E. \* (2023). *Exploring students' responses to composing functions given two graphs*. National Council of Teachers of Mathematics (NCTM) Research Conference, Washington, D.C. 25 October 2023.
- Pinto, A., Buchbinder, O., & Wasserman, N. (2023). *The affordances of advanced mathematics for secondary mathematics teaching: Comparing research approaches and theoretical perspectives* (Working Group). Annual Conference of the International Group for the Psychology of Mathematics Education (PME 46), Haifa, Israel. 17 July 2023.
- Chen, Y. \*, Wasserman, N., & Paoletti, T. (2023). *Exploring geometric reasoning with function composition*. Annual Conference on Research in Undergraduate Mathematics Education (RUME), Omaha, NE. 25 February 2023.
- Wasserman, N. (2023). *An exploration of Pedagogical Mathematical Practices from a teacher perspective*. Association of Mathematics Teacher Educators (AMTE) Annual Conference, New Orleans, LA. 3 February 2023.
- Wasserman, N. (2022). *Planning for mathematically coherent instruction: Four 'foreshadowing' practices*. Association of Mathematics Teacher Educators (AMTE) Annual Conference, Las Vegas, NV. 12 February 2022.
- Wasserman, N. (2022). *Focusing mathematical coursework on developing practice: An exploration of pedagogical mathematical practices*. Association of Mathematics Teacher Educators (AMTE) Annual Conference, Las Vegas, NV. 10 February 2022.
- Wasserman, N., Weber, K., Mejia-Ramos, J. P., & Fukawa-Connelly, T. (2021). *Upgrading learning for teachers in real analysis (ULTRA): An instructional model for secondary teacher education*. Long oral presentation at the 14<sup>th</sup> International Congress on Mathematical

- Education (ICME-14), Topic Study Group 33 (Knowledge in/for teaching mathematics at secondary level), Shanghai, China. 17 July 2021.
- Mirin, A., Weber, K., & Wasserman, N. (2021). *What is a function?* Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA 42), Mazatlán, Mexico. 29 May 2021.
- Fukawa-Connelly, T., Wasserman, N., Weber, K., & Mejia-Ramos, J. P. (2019). *Upgrading Learning for Teachers in Real Analysis (ULTRA): A curriculum project* (Poster). Annual Conference on Research in Undergraduate Mathematics Education (RUME), Oklahoma City, OK. 2 March 2019.
- Wasserman, N., Zazkis, R., Baldinger, E., Marmur, O., & Murray, E. (2019). *Points of connection to secondary teaching in undergraduate mathematics courses*. Annual Conference on Research in Undergraduate Mathematics Education (RUME), Oklahoma City, OK. 2 March 2019.
- Wasserman, N. (2019). *Content courses for secondary teachers: Teachers' attributions for influencing teaching practice*. Association of Mathematics Teacher Educators (AMTE) Annual Conference, Orlando, FL. 7 February 2019.
- Wasserman, N. (2018). *Exploring the secondary teaching of functions in relation to the learning of abstract algebra*. Annual Conference on Research in Undergraduate Mathematics Education (RUME), San Diego, CA. 24 February 2018.
- Weber, K., Wasserman, N., Mejia-Ramos, J. P., & Fukawa-Connelly, T. (2018). *Connecting the study of advanced mathematics to the teaching of secondary mathematics: Implications for teaching inverse trigonometric functions*. Annual Conference on Research in Undergraduate Mathematics Education (RUME), San Diego, CA. 22 February 2018.
- Dawkins, P., Inglis, M., & Wasserman, N. (2018). *The use(s) of 'is' in mathematics*. Annual Conference on Research in Undergraduate Mathematics Education (RUME), San Diego, CA. 22 February 2018.
- Wasserman, N., & McGuffey, W.\* (2018). *Advanced mathematics courses for secondary teachers: An instructional model for connecting to secondary teaching practice*. Association of Mathematics Teacher Educators (AMTE) Annual Conference, Houston, TX. 8 February 2018.
- Wasserman, N., Weber, K., Mejia-Ramos, J. P., & Fukawa-Connelly, T. (2018). *Designing real analysis courses for secondary mathematics teachers*. Joint Mathematics Meetings of the MAA and AMS, San Diego, CA. 11 January 2018.
- Wasserman, N., Fukawa-Connelly, T., & Weber, K. (2017). *Leveraging real analysis to foster pedagogical practices*. National Council of Teachers of Mathematics (NCTM) Research Conference, San Antonio, TX. 5 April 2017.
- Wasserman, N., Weber, K., & McGuffey, W.\* (2017). *Leveraging real analysis to foster pedagogical practices*. Annual Conference on Research in Undergraduate Mathematics Education (RUME), San Diego, CA. 23 February 2017.
- Baldinger, E., Murray, E., White, D., Broderick, S., & Wasserman, N. (2016). *Exploring connections between advanced and secondary mathematics* (Working Group). Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA 38), Tucson, AZ. 4 November 2016.
- Wasserman, N. (2016). *Nonlocal mathematical knowledge for teaching*. Annual Conference of the International Group for the Psychology of Mathematics Education (PME 40), Szeged, Hungary. 5 August 2016.
- Murray, E., & Wasserman, N. (2016). *Connecting solving equations in an advanced context to secondary mathematics instruction*. 13<sup>th</sup> International Congress on Mathematical Education (ICME-13), Topic Study Group 46 (Knowledge in/for teaching mathematics at secondary level), Hamburg, Germany. 29 July 2016.
- Ribeiro, M., Jakobsen, A., Ribeiro, A., Wasserman, N., Carrillo, J., Montes, M., & Mamolo, A. (2016). *Reflecting upon different perspectives on specialized advanced mathematical*

- knowledge for teaching* (Working Group). 13<sup>th</sup> International Congress on Mathematical Education (ICME-13), Hamburg, Germany. 29 July 2016.
- Lockwood, E., Wasserman, N., & McGuffey, W.\* (2016). *Classifying combinations: Do students distinguish between different types of combination problems?* Annual Conference on Research in Undergraduate Mathematics Education (RUME), Pittsburgh, PA. 26 February 2016.
- Wasserman, N. (2016). *Unpacking teachers' moves for navigating mathematical complexities in teacher education*. Association of Mathematics Teacher Educators (AMTE) Annual Conference, Irvine, CA. 29 January 2016.
- Murray, E., Baldinger, E., Wasserman, N., Broderick, S., Cofer, T., White, D., & Stanish, K. (2015). *Exploring connections between advanced and secondary mathematics* (Working Group). Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA 37), East Lansing, MI. 6 November 2015.
- Casey, S., Zejnnullahi, R., Wasserman, N., & Champion, J. (2015). *Preparing to teach statistics: Connecting subject matter and pedagogical content knowledge*. United States Conferences on Teaching Statistics (USCOTS), State College, PA. 29 May 2015.
- Wasserman, N., Stockton, J., Weber, K., Champion, J., Waid, B.\*, Sanfratello, A.\*, & McCallum, W. (2015). *Exploring the role of the mathematical horizon for secondary teachers*. National Council of Teachers of Mathematics (NCTM) Research Conference, Boston, MA. 14 April 2015.
- Wasserman, N., Villanueva, M., Mejia-Ramos, J. P., & Weber, K. (2015). *Secondary mathematics teachers' perceptions of real analysis in relation to their teaching practice*. Annual Conference on Research in Undergraduate Mathematics Education (RUME), Pittsburgh, PA. 21 February 2015.
- Wasserman, N., & Mamolo, A. (2015). *Knowledge for teaching: Horizons and mathematical structures*. Annual Conference on Research in Undergraduate Mathematics Education (RUME), Pittsburgh, PA. 19 February 2015.
- Wasserman, N., Casey, S., Champion, J., Huey, M., Sanfratello, A.\*, & Waid, B.\* (2015). *Exploring the impact of advanced mathematics on secondary teaching practices*. Association of Mathematics Teacher Educators (AMTE) Annual Conference, Orlando, FL. 13 February 2015.
- Wasserman, N., Mamolo, A., Ribeiro, C. M., & Jakobsen, A. (2014). *Exploring horizons of knowledge for teaching*. Joint meeting of the International Group for the Psychology of Mathematics Education (PME 38) and the North American Chapter of the Psychology of Mathematics Education (PME-NA 36), Vancouver, Canada. 16 July 2014.
- Casey, S., Wasserman, N., Wilson, D. C., Molnar, A., & Shaughnessy, J. M. (2014). *Knowledge for teaching informal line of best fit*. National Council of Teachers of Mathematics (NCTM) Research Presession, New Orleans, LA. 8 April 2014.
- Wasserman, N., & Stockton, J. (2014). *The impact of teachers' knowledge of group theory on early algebra teaching practices*. Association of Mathematics Teacher Educators (AMTE) Annual Conference, Irvine, CA. 6 February 2014.
- Wasserman, N., & Stockton, J. (2013). *Group theory's effect on mathematical knowledge for teaching* (Poster). National Council for Teachers of Mathematics (NCTM) Research Presession, Denver, CO. 15 April 2013.
- Wasserman, N. (2013). *A rationale for irrationals: Convincing students they exist*. National Council of Teachers of Mathematics (NCTM) Annual Meeting, Denver, CO. 18 April 2013.
- Wasserman, N., & Williams-Rossi, D. (2013). *Discussing proof in STEM fields: Mathematics and science teachers' use of inductive evidence*. International Consortium for Research in Science and Mathematics Education (ICRSME) Conference, Granada, Nicaragua. 13 March 2013.
- Wasserman, N. (2013). *Exploring teachers' categorizations and conceptions of combinatorial problems*. Research Council on Mathematics Learning (RCML) Annual Conference, Tulsa, OK. 28 February 2013.

- Wasserman, N., Norris, S., & Carr, T. (2013). *Comparing a 'flipped' instructional model in an undergraduate Calculus III course*. Annual Conference on Research in Undergraduate Mathematics Education (RUME), Denver, CO. 22 February 2013.
- Quebec-Fuentes, S., Wasserman, N., & Switzer, J. (2013). *Advanced mathematics content: A comparative analysis of CCSSM and mathematics textbooks for teachers*. Association of Mathematics Teacher Educators (AMTE) Annual Conference, Orlando, FL. 24 January 2013.
- Wasserman, N., & Stockton, J. (2013). *Researching the mathematical horizon: Two complementary perspectives* (Poster). Association of Mathematics Teacher Educators (AMTE) Annual Conference, Orlando, FL. 24 January 2013.
- Ketterlin-Gellar, L., Wasserman, N., Chard, D., Fontenot, S., & Zachary, S. (2012). *Progress with fractions: Using learning progressions to guide instruction*. Council for Learning Disabilities (CLD) International Conference. Austin, TX. 11 October 2012.
- Stockton, J., & Wasserman, N. (2012). *Mapping the Common Core State Standards to advanced mathematical knowledge for teaching*. Mathematical Association of America (MAA) MathFest. Madison, Wisconsin. 4 August 2012.
- Wasserman, N., & Walkington, C. (2012). *Exploring links between beginning UTeachers' beliefs and observed classroom practices*. UTeach Institute Annual Conference, University of Texas at Austin, Austin, TX. 1 June 2012.
- Wasserman, N., & Ham, E. (2012). *Attributes of good mathematics teaching: When are they learned?* (Poster). International Congress on Mathematics Education (ICME-12), Seoul, Korea. 11 July 2012.
- Wasserman, N., & Ham, E. (2011). *Learning to be a successful mathematics teacher: Reflections on two teacher education models*. UTeach Institute Annual Conference, University of Texas at Austin, Austin, TX. 24 May 2011.

### Refereed Presentations: Regional Conferences

- Basaraba, D., Wasserman, N., Ketterlin-Geller, L., & Hill, S. (2012). *Learning progressions for algebra readiness: A roadmap for instructional planning* (Poster). Center on Teaching and Learning (CTL) Research to Practice Conference, Portland, OR. 28 October 2012.
- Wasserman, N., & Ham, E. (2011). *A question of when, for beginning mathematics teachers*. National Council of Teachers of Mathematics (NCTM) Regional Conference, Albuquerque, NM. 3 November 2011.
- Wasserman, N., & Ham, E. (2011). *A question of when, for beginning mathematics teachers*. National Council of Teachers of Mathematics (NCTM) Regional Conference, Atlantic City, NJ. 21 October 2011.
- Welch, A., Wright, R., Wasserman, N., & Garcia, K. (2011). *UTeach Graduates Roundtable*. UTeach Institute Annual Conference, University of Texas at Austin, Austin, TX. 24 May 2011.
- Wasserman, N., & Arkan, I. (2011). *Archimedes rediscovered through technology*. New York State Association of Independent Schools (NYS AIS) Teaching with Technology Conference, Abraham Joshua Heschel School, New York, NY. 27 April 2011.
- Wasserman, N., & Ham, E. (2010). *A question of "When?" for beginning mathematics teachers*. Association of Mathematics Teachers of New York State (AMTNYS) Annual Conference, Saratoga Springs, NY. 13 November 2010.
- Wasserman, N. (2010). *Partition and iteration in Algebraic thinking: Intuition with linearity*. Association of Mathematics Teachers of New York State (AMTNYS) Annual Conference, Saratoga Springs, NY. 12 November 2010.
- Wasserman, N. (2006). *Stacking paper cups*. UTeach professional development, University of Texas at Austin, Austin, TX. November 2006.

### GRANTS

#### Awarded

- Wasserman, N. (PI). *A series of MST Initiatives: STEM, AI, and CS*. Teachers College, Columbia University, Provost Impact Award, Office of the Provost. 2025-2026. (Award: \$25,000)
- Wasserman, N. (PI). *Teaching mathematics with technology*. Teachers College, Columbia University, Rapid Prototyping Grant, Office of the Provost. 2018. (Award: \$6,000)
- Wasserman, N. (PI). *Designing abstract algebra tasks for secondary mathematics teacher education*. Teachers College, Columbia University, Dean's Grant for Pre-Tenured and Non-Tenure Track Faculty. 2017. (Award: \$9,500)
- Weber, K., Wasserman, N. (Co-PI), Mejia-Ramos, J. P., Fukawa-Connelly, T., & Cohen-Corwin, A. *Collaborative research: ULTRA: Upgrading learning for teachers in real analysis*. National Science Foundation, Improving Undergraduate STEM Education (IUSE). 2015-2018. (Award #1524739: \$519,650)
- Wasserman, N. (PI). *Teachers' advanced mathematics knowledge: Understanding what transforms the elementary, middle, and secondary teaching of mathematics*. Southern Methodist University, University Research Council. 2012-2013. (Award: \$2,600)

### Submitted

- Cook, J. P., Lockwood, E., Reed, Z., & Wasserman, N. (Co-PI). *Undergraduate students' reasoning about equivalence in multiple mathematical domains: Expanding and refining*. National Science Foundation, EHR Core Research (ECR). 2025. (Not awarded)
- Wasserman, N. (PI), Tillema, E., & Alexander, N. *Collaborative research: Accessibility and Identity via Discrete Mathematics (ACCESS-MATH)*. National Science Foundation, EHR Core Research (ECR). 2022. (Not awarded)
- Wasserman, N. (PI). *Investigating how secondary teachers' knowledge of abstract algebra impacts algebra teaching*. Spencer Postdoctoral Fellowship. National Academy of Education and the Spencer Foundation. 2013. (Not awarded)

### Fulbright Specialist

- Wasserman, N. (Fulbright Specialist). *Advanced mathematics courses in secondary teacher education*. Joint project proposal by Pontificia Universidad Católica de Chile, Santiago, Chile, and Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile. Fulbright Chile. U. S. Department of State. 2022 [Original project in 2020; delayed due to COVID-19].

### Other Contributions

- Wasserman, N. (Advisory Board Member – mathematics teacher educator expert). *Making upper division mathematics courses more relevant for future high school teachers: The case of inquiry-oriented dynamical systems and modeling* (PIs: Rasmussen, Carney & Fortune). National Science Foundation, Improving Undergraduate STEM Education (IUSE). 2024-2027.
- Wasserman, N. (Advisory Board Member – mathematics education doctoral educator). *Third national conference on doctoral programs in mathematics education* (PIs: Shih & Reys). National Science Foundation. 2019-2022 [delayed due to COVID-19].
- Wasserman, N. (Advisory Board Member – task design expert). *Developing and validating proof comprehension tests in real analysis* (PIs: Mejia-Ramos, Weber, Gitomer, Lew & Melhuish). National Science Foundation, Improving Undergraduate STEM Education (IUSE). 2018-2021.
- Wasserman, N. (STEM Course Development – mathematics content expert). *A series of STE(A)M initiatives*. Teachers College, Columbia University, Provost's Investment Fund. 2017-2018.
- Wasserman, N. (Consultant – mathematics content expert). *North Texas collaborative for science, math, and writing and Ft. Worth/Dallas Xtream science and math institute* (University of North Texas). Teacher Quality Grants, under 2002 NCLB: Public Law 107-110. 2012-2014; 2014-2015.

Wasserman, N. (Consultant – mathematics content expert). *Elementary school students in Texas algebra readiness (ESTAR) and Middle school students in Texas algebra readiness (MSTAR) diagnostic assessments* (Southern Methodist University, Research in Mathematics Education). Texas Education Agency. 2013-2014.

## OTHER PROFESSIONAL ACTIVITIES

Center for the Professional Education of Teachers (CPET), Mathematics instructional coach, Westchester Square Academy, Bronx, NY, 2018-2019  
 InchUp, LLC (founding partner), Dynamic software development, New York, NY, 2014-2021  
 Amplify., Curriculum development, Measurement in the Middle Grades, New York, NY, 2013-2014

## SERVICE ACTIVITIES

### Service to the Profession and Community

#### Journals (Editorial Board Member)

*International Journal of Research in Undergraduate Mathematics Education* (IJRUME) · 2021-present  
*Journal of Mathematical Behavior* (JMB) · 2020-present  
*Journal of Mathematics Education at Teachers College* (JMETC) · 2014-present (Chair · 2014-2025)

#### Journals (Other Editorial Positions)

*ZDM – Mathematics Education* (ZDM) (Guest Editor) · 2022-2023  
*Mathematics Teacher* (MT), Delving Deeper (Department Editor) · 2015-2019  
*Journal of Mathematics Education at Teachers College* (JMETC) (Guest Editor) · 2011

#### Journals (Peer Referee) (ongoing)

*Journal for Research in Mathematics Education*  
*Educational Studies in Mathematics*  
*Journal of Mathematical Behavior*  
*Journal of Mathematics Teacher Education*  
*For the Learning of Mathematics*  
*Journal of Teacher Education*  
*ZDM – Mathematics Education*  
*International Journal of Research in Undergraduate Mathematics Education*  
*Mathematical Thinking and Learning*

#### Journals (Peer Referee) (previous)

*Mathematics Teacher*  
*Mathematics Teaching in the Middle School*  
*School, Science and Mathematics*  
*Canadian Journal of Science, Mathematics and Technology Education*  
*International Journal of Science and Mathematics Education*  
*Nordic Studies in Mathematics Education (NOMAD)*  
*Problems, Resources, and Issues in Mathematics Undergraduate Studies*  
*Journal of Mathematics Education at Teachers College*

#### Professional Organizations and Conferences (Various roles)

Research in Undergraduate Mathematics Education (RUME), Special Interest Group of the Mathematical Association of America (MAA), Treasurer · 2020-2024 [two terms]  
 Research in Undergraduate Mathematics Education (RUME) Annual Conference, Program Committee Member · 2017-present  
 International Seminar of Conhecimento Interpretativo e Especializado do Professor que Ensina Matemática (CIEspMat), International Committee Member · 2019

Association of Mathematics Teacher Educators (AMTE), (STaR) AMTE Manuscript Mentor · 2019-2024

Association of Mathematics Teacher Educators (AMTE) Annual Conference, Reviewer · 2014-2024

Association of Mathematics Teacher Educators in Texas (AMTE-TX), Nominations and Elections Committee Member · 2012-2015

UTeach Alumni Conference (UTEACH), Program Committee Member · 2013-2014

*Other Professional Engagement (Various roles)*

Review for promotion and tenure, Blinded University, External Reviewer · 2026

Review for promotion and tenure, Blinded University, External Reviewer · 2025

Review for promotion and tenure, Blinded University, External Reviewer · 2025

Review for promotion and tenure, Blinded University, External Reviewer · 2025

National Science Foundation (NSF), NSF Panelist · 2024

Review for promotion and tenure, Blinded University, External Reviewer · 2024

Review for promotion and tenure, Blinded Universidad de Chile, External Reviewer · 2022

Review for promotion and tenure, Blinded University, External Reviewer · 2022

Review for promotion and tenure, Blinded University, External Reviewer · 2021

Review for promotion and tenure, Blinded University, External Reviewer · 2021

National Fund for Scientific and Technological Research (FONDECYT-CHILE), Agencia Nacional de Investigación y Desarrollo (ANID), Gobierno de Chile, Education Evaluation Group Reviewer · 2020

High School Redesign, James Bowie High School, Austin, TX, Steering Committee Member · 2005-2006

**Service to the College and University**

*Teachers College, Columbia University*

*College Committees (Chair)*

Faculty Executive Committee (FEC), FEC Chair · 2023-2024

Academic Program Subcommittee of the Faculty Executive Committee (APS), Chair of Committee · 2021-2023

*College Committees (Elected or Invited)*

Middle States Commission on Higher Education Working Group, Invited Committee Member · 2023-2024

Faculty Executive Committee (FEC), MST Department Elected Representative · 2020-2024

Academic Program Subcommittee of the Faculty Executive Committee (APS), MST Department Elected Representative · 2020-2024

Faculty Salary Committee (FSC), Elected Committee Member (Assistant Professor Representative) · 2014-2017

*College Committees (Volunteer)*

Sonia Kovalevsky Day, Mathematics Department, Columbia University, Committee Member · 2023-2024

Fulbright Student Program, Faculty Review Committee · 2020-present

Abby M. O'Neill Fellowship Committee, Committee Member (Department of Mathematics, Science, and Technology Representative) · 2018-2019, 2020-present

Teacher Education and Policy Committee (TEPC), Committee Member · 2017-present

FFSS Financial Plan Design Event, Volunteer Faculty Member · 2017

Dean's Grant for Student Research, Committee Member · 2013-2014

*Department of Mathematics, Science, and Technology (MST) Committees*

STEAMnasium, Presenter (with MSTM 4025 students) · 2018-2020

Departmental STEM Course Development Committee, Committee Member (Program in Mathematics Education Representative) · 2018-2019

Program in Mathematics Education, 2020 Council for the Accreditation of Educator Preparation (CAEP) Coordinator · 2016-present

*Journal of Mathematics Education at Teachers College*, Chair of Editorial Board · 2014-2025

#### *Search Committees*

A&H Music Education Faculty Search Committee, Committee Member · 2024-2025

Associate Provost Search Committee, Committee Member · 2023

C&T Disability Studies in Education Faculty Search Committee, Committee Member · 2022-2023

Program in Mathematics Education Visiting Professor Search Committee, Committee Member · 2022-2023

Program in Mathematics Education Faculty Search Committee, Committee Member · 2017-2018

Director of Academic Administration Search Committee, Committee Member (Program in Mathematics Education Representative) · 2014

#### *Other Professional Engagement* (Various roles)

Review for promotion, Internal Reviewer · 2023

#### Southern Methodist University

##### *College Committees*

Scholarship, Admissions, and Recruitment Committee, Committee Member · 2012-2013

Math, Science, Technology Faculty Search Committee, Committee Member · 2012-2013

Math, Science, Technology Graduate Curriculum Committee, Chair of Committee · 2011-2013

## **GRADUATE ADVISING**

### **Doctoral Sponsor (Current)**

Benjamin Bailey, Program in Mathematics Education (Ed.D.)

Cindy Zhang, Program in Mathematics Education (Ed.D.)

Jimmy Giff, Program in Mathematics Education (Ed.D.)

Elcilia Taveras, Program in Mathematics Education (Ed.D.)

Ericka Betancourt, Program in Mathematics Education (Ed.D.)

Sekou Cox, Program in Mathematics Education (Ed.D.)

Esther Issever, Program in Mathematics Education (Ed.D.)

Anthony Zhang, Program in Mathematics Education (Ed.D.)

Carly Johnson, Program in Mathematics Education (Ed.D.)

### **Graduate Research Assistants**

Esther Issever, Program in Mathematics Education (Ed.D.), 2025

Katherine Duggan, Program in Mathematics Education (M.S.), 2023

Novia Anditya, Program in Mathematics Education (M.S.), 2023

Emma LaPlace, Program in Mathematics Education (Ph.D.), 2023

Yuxi Chen, Program in Mathematics Education (Ed.D.), 2022-2023

Nathan Dilworth, Program in Mathematics Education (Ph.D.), 2019

Sarah Nelson, Program in Mathematics Education (Ph.D.), 2018-2019

William McGuffey, Program in Mathematics Education (Ph.D.), 2015-2018

Patrick Galarza, Program in Mathematics Education (Ph.D.), 2017

Cris Wellington, Program in Mathematics Education (Ed.D.), 2017

Elizabeth Wentworth, Program in Mathematics Education (Ed.D.), 2016-2017

Andrew Sanfratello, Program in Mathematics Education (Ph.D.), 2014-2015

Christa Quint, Program in Mathematics Education (Ed.D.), 2014-2015  
Brandie Waid, Program in Mathematics Education (Ph.D.), 2014  
Arundhati Velamuri, Program in Mathematics Education (M.A.), 2013-2014

**Graduate Student Guest Editors** (*Journal of Mathematics Education at Teachers College*)

Daria Chudnovsky, Program in Mathematics Education, 2025-2026  
Kihoon Lee, Program in Mathematics Education, 2025  
Molly Stern, Program in Mathematics Education, 2024-2025  
Emma LaPlace, Program in Mathematics Education, 2024  
Jimmy Giff, Program in Mathematics Education, 2023-2024  
Kaori Yamamoto, Program in Mathematics Education, 2023  
Baldwin Mei, Program in Mathematics Education, 2022-2023  
Davidson Barr, Program in Mathematics Education, 2022  
Alyssa MacMahon, Program in Mathematics Education, 2021-2022  
Nasriah Morrison, Program in Mathematics Education, 2021  
Anisha Clarke, Program in Mathematics Education, 2020-2021  
Brian Darrow, Jr., Program in Mathematics Education, 2020  
Dyanne Baptiste, Program in Mathematics Education, 2019-2020  
Sarah Nelson, Program in Mathematics Education, 2019  
Paul Gray, Program in Mathematics Education, 2018-2019  
Patrick Galarza, Program in Mathematics Education, 2018  
Mara Markinson, Program in Mathematics Education, 2017-2018  
Elizabeth Wentworth, Program in Mathematics Education, 2017  
Brandon Milonovich, Program in Mathematics Education, 2016-2017  
Kimberly Barba, Program in Mathematics Education, 2016  
William McGuffey, Program in Mathematics Education, 2015-2016  
Beatriz Levin, Program in Mathematics Education, 2015  
Matthew DeGraaf, Program in Mathematics Education, 2014-2015  
Simone Salmon-Nembhard, Program in Mathematics Education, 2014

**Dissertation Committee, Sponsor**

Ed.D., Sponsor · Mine Cekin, Mathematics Education, “Integrating Combinatorics into Middle School Algebra: A Study of Teacher Practices” · Teachers College, Columbia University, New York, NY, Summer 2026  
Ph.D., Sponsor · Davidson Barr, Mathematics Education, “Exploring the factors influencing teachers’ use of proof and justification in the classroom” · Columbia University, New York, NY, Fall 2025  
Ed.D., Sponsor · Yuxi Chen, Mathematics Education, “Comparing students’ reasoning with function composition using a dynamic graphical representation to traditional representations” · Teachers College, Columbia University, New York, NY, Spring 2025  
Ph.D., Sponsor · Sarah Nelson, Mathematics Education, “Pedagogical moves and decision-making in undergraduate mathematics instruction” · Columbia University, New York, NY, Fall 2024  
Ed.D., Sponsor · Baldwin Mei, Mathematics Education, “In-service geometry teachers’ technology use and beliefs: Developments catalyzed by the COVID-19 pandemic” · Teachers College, Columbia University, New York, NY, Fall 2024  
Ph.D., Sponsor · Anthony Delgado, Mathematics Education, “Integration into the mathematics community: An exploratory interpretative phenomenological study based on mathematics high school research mentorships” · Columbia University, New York, NY, Fall 2024  
Ed.D., Sponsor · Zohreh Janinezhad, Mathematics Education, “Girls’ mathematical mindsets and gendered mathematical beliefs in an all-girls classroom” · Teachers College, Columbia University, New York, NY, Fall 2024

- Ph.D., Sponsor · Fernando Carnauba, Mathematics Education, “The difficulty and accessibility of combinatorics problems: Evidence from large-scale assessments and student interviews” · Columbia University, New York, NY, Fall 2023
- Ed.D., Sponsor · Elizabeth Wentworth, Mathematics Education, “Mathematics and music: The effects of an integrated approach on student achievement and affect” · Teachers College, Columbia University, New York, NY, Spring 2019
- Ph.D., Sponsor · Sunyoung Ban, Mathematics Education, “The influence of teaching instruction and learning styles on mathematics anxiety in the developmental mathematics classroom” · Columbia University, New York, NY, Spring 2019
- Ph.D., Sponsor · Patrick Galarza, Mathematics Education, “The effects of mathematical game play on the cognitive and affective development of pre-secondary students” · Columbia University, New York, NY, Fall 2018
- Ph.D., Sponsor · Beatriz Levin, Mathematics Education, “Gender gap in mathematics achievement in Brazil: Teachers’ implicit gender bias” · Columbia University, New York, NY, Fall 2018
- Ph.D., Sponsor · Kimberly Barba, Mathematics Education, “Mindset over matter: How does parent mathematical mindset relate to student mathematical experience?” · Columbia University, New York, NY, Fall 2018
- Ph.D., Sponsor · Brandie Waid, Mathematics Education, “Pre-service mathematics teacher beliefs and growth mindset assessment practices” · Columbia University, New York, NY, Spring 2018
- Ph.D., Sponsor · William McGuffey, Mathematics Education, “Insights from college algebra students’ reinvention of limit at infinity” · Columbia University, New York, NY, Spring 2018
- Ph.D., Sponsor · Mengmeng Cao, Mathematics Education, “An examination of three-dimensional geometry in high school curricula in the U.S. and China” · Columbia University, New York, NY, Fall 2017
- Ed.D., Sponsor · Vincent Bulone, Mathematics Education, “An investigation into post-secondary students’ understanding of combinatorial questions” · Teachers College, Columbia University, New York, NY, Spring 2017

### **Dissertation Committee, Second Reader**

- Ph.D. Committee Member, Second reader · Emma LaPlace, Mathematics Education, “Mathdramatics: Mathematicians in plays” · Columbia University, New York, NY, Spring 2025
- Ph.D. Committee Member, Second reader · Yiran Li, Mathematics Education, “Exploring acculturation strategies of mathematics faculty in two Kazakhstan universities: A case study” · Columbia University, New York, NY, Spring 2025
- Ed.D. Committee Member, Second reader · Salvatore Maimone, Mathematics Education, “Eliminating remedial mathematics: A case study of the design and implementation of a module mathematics curriculum” · Teachers College, Columbia University, New York, NY, Spring 2021
- Ed.D. Committee Member, Second reader · Lucretia Glover, Mathematics Education, “Teaching mathematics for social justice: How students in an all-girls independent school setting use mathematics to read and write the world” · Teachers College, Columbia University, New York, NY, Spring 2019
- Ed.D. Committee Member, Second reader · Bakary Sagna, Mathematics Education, “Effectiveness of remedial mathematics supplemental instruction: An urban community college study” · Teachers College, Columbia University, New York, NY, Spring 2019
- Ed.D. Committee Member, Second reader · Xingchi Lu, Mathematics Education, “A comparative study of the introduction of advanced placement and international baccalaureate courses in Chinese mathematics education” · Teachers College, Columbia University, New York, NY, Spring 2019

- Ed.D. Committee Member, Second reader · Bibi Khan, Mathematics Education, “The effectiveness of supplemental instruction and online homework in first semester calculus” · Teachers College, Columbia University, New York, NY, Spring 2018
- Ed.DCT. Committee Member, Second reader · Edward DePeau, Mathematics Education, “Mathematics A Regents examination: Performance differences between Russian federation students and United States students” · Teachers College, Columbia University, New York, NY, Fall 2016
- Ed.D. Committee Member, Second reader · Shereen Khan, Mathematics Education, “Mathematics proficiency of primary school students in Trinidad and Tobago” · Teachers College, Columbia University, New York, NY, Fall 2016
- Ed.D. Committee Member, Second reader · Kena Gibson, Mathematics Education, “Mathematics education in one special high school for mathematically talented students” · Teachers College, Columbia University, New York, NY, Fall 2016
- Ed.D. Committee Member, Second reader · Jessica Vialva, Mathematics Education, “Mathematics anxiety within an inquiry-based, developmental mathematics classroom” · Teachers College, Columbia University, New York, NY, Spring 2016
- Ph.D. Committee Member, Second reader · Elizabeth Brennan DeGraaf, Mathematics Education, “What makes a good problem? Perspectives of students, teachers, and mathematicians” · Columbia University, New York, NY, Spring 2015
- Ed.D. Committee Member, Second reader · Christa Quint, Mathematics Education, “A study of the efficacy of the flipped classroom model in a university mathematics classroom” · Teachers College, Columbia University, New York, NY, Spring 2015
- Ph.D. Committee Member, Second reader · Shalini Sudarsanan, Mathematics Education, “Keeping up with the times: How are teacher preparation programs preparing aspiring elementary teachers to teach mathematics under the new standards of today?” · Columbia University, New York, NY, Fall 2014

#### **Dissertation Committee, Other Member**

- Ph.D. Committee Member, Chairperson · Ishrat Ahmed, Mathematics Education, “Exploring Black female mathematics teachers’ experiences of teacher leadership identity and retention” · Columbia University, New York, NY, Spring 2026
- Ph.D. Committee Member, Chairperson · Victor Ashiara, Mathematics Education, “Mathematical identities of Black STEM majors” · Columbia University, New York, NY, Spring 2026
- Ph.D. Committee Member, Chairperson · Elizabeth Wilson, Mathematics Education, “Romanian mathematics education 1895-1945: A history through *Gazeta Matematica*” · Columbia University, New York, NY, Spring 2026
- Ed.D. Committee Member, Chairperson · Anne Uglum, Mathematics Education, “Volumes of solids of revolution: Exploring instrumentation schemes developed by calculus students” · Teachers College, Columbia University, New York, NY, Spring 2026
- Ph.D. Committee Member, Third reader · Alanna Gibbons, Mathematics Education, “Assessing pre-service elementary teachers’ use of mathematics’ discipline-specific language” · Columbia University, New York, NY, Fall 2024
- Ed.D. Committee Member, Chairperson · Armando Amador, Mathematics Education, “Adoption and diffusion of a learning management system as an instructional tool: A community college case study” · Teachers College, Columbia University, New York, NY, Fall 2024
- Ph.D. Committee Member, Chairperson · Nasriah Morrison, Mathematics Education, “Proof and possibility: Emerging mathematics conceptions, self-efficacy, and identity in the stories of contemporary Black mathematicians” · Columbia University, New York, NY, Spring 2024
- Ph.D. Committee Member, Chairperson · Yihua Shen, Mathematics Education, “Analyzing the national college entrance mathematics examinations in China in 1952-1965 and 1977-1984” · Columbia University, New York, NY, Fall 2023
- Ph.D. Committee Member, Outside reader · Colleen Oppenzato, Cognitive Science in Education, “Rebalancing fraction arithmetic practice” · Columbia University, New York, NY, Fall 2023

- Ph.D. Committee Member, Chairperson · Sonam Tobgye, Science Education, “Multi-compartment network model of science teacher education based on social constructivist principles: Proposing an analytic model for understanding science teacher education practices” · Columbia University, New York, NY, Fall 2023
- Ed.D. Committee Member, Chairperson · Yixiong Chen, Mathematics Education, “An analysis of covariational reasoning pedagogy for the introduction of derivative in selected calculus textbooks” · Teachers College, Columbia University, New York, NY, Spring 2023
- Ed.D. Committee Member, Chairperson · Chandra Mongroo, Mathematics Education, “Mathematics college readiness at a small parochial school” · Teachers College, Columbia University, New York, NY, Fall 2022
- Ph.D. Committee Member, Chairperson · Brian Darrow, Mathematics Education, “On mathematical expertise, inhibitory control, and facets of college students’ psychoeducational profile: An empirical investigation” · Columbia University, New York, NY, Fall 2022
- Ed.D. Committee Member, Chairperson · Alyssa MacMahon, Mathematics Education, “Secondary mathematics technology enhanced formative assessment: A theoretical framework and performance-based instrument” · Teachers College, Columbia University, New York, NY, Fall 2022
- Ph.D. Committee Member, Third reader · Vera Matoshi, Mathematics Education, “Integration of technology in mathematics education: The role of teacher preparation institutions” · Columbia University, New York, NY, Spring 2022
- Ed.D. Committee Member, Chairperson · Marc Yeung, Mathematics Education, “An analysis of Hong Kong secondary mathematics education: From the intended curriculum to the assessed curriculum” · Teachers College, Columbia University, New York, NY, Spring 2022
- Ph.D. Committee Member, External Examiner · Kaitlyn Serbin, Mathematics Education, “Prospective teachers’ knowledge of secondary and abstract algebra and their use of this knowledge while noticing students’ mathematical thinking” · Mathematics Department, Virginia Tech University, Blacksburg, VA, Summer 2021
- Ph.D. Committee Member, Outside reader · Yue Ma, Measurement and Evaluation, “Assessing student achievement in probability problem solving using collaboration process data: Development and use of a scoring rubric” · Columbia University, New York, NY, Spring 2021
- Ed.D. Committee Member, Chairperson · Margaret Chen, Mathematics Education, “An analysis of the redesigned SAT I-Mathematics: Perceptions of teachers, English proficient students, and English language learners” · Teachers College, Columbia University, New York, NY, Spring 2021
- Ph.D. Committee Member, Outside reader · Musa Elbulok, Measurement and Evaluation, “A cognitively diagnostic modeling approach to diagnosing misconceptions and subskills” · Columbia University, New York, NY, Fall 2020
- Ph.D. Committee Member, Chairperson · Mustapha Nadmi, Mathematics Education, “A significant step toward the development of modern algebra: Al-Samaw’al Ibn Yahya Al-Maghribi, a twelfth century mathematician” · Columbia University, New York, NY, Spring 2019
- Ph.D. Committee Member, Third reader · Moulay Aqil, Mathematics Education, “Morocco, multilingualism, cultural identity, and mathematics education post-French protectorate: A historical perspective” · Columbia University, New York, NY, Spring 2019
- Ph.D. Committee Member, Chairperson · O’Rita Johnson, Mathematics Education, “The impact of parent involvement on high-achieving females’ mathematics performance and decision to major in science, technology, engineering and mathematics” · Columbia University, New York, NY, Spring 2019
- Ed.D. Committee Member, Chairperson · Birgitta Corneille, Mathematics Education, “The Common Core State Standards in Mathematics and K-3 word problems in textbooks” · Teachers College, Columbia University, New York, NY, Spring 2019

- Ph.D. Committee Member, Third reader · Hong Yuan, Mathematics Education, “Modes of acquisition of Shanghai mathematics teachers’ pedagogical content knowledge within communities of practice” · Columbia University, New York, NY, Spring 2018
- Ed.D. Committee Member, Chairperson · Kanchan Sharma, Mathematics Education, “Effects of instructional videos and real-life mathematics activity on student achievement and attitude in a community college transitional mathematics course” · Teachers College, Columbia University, New York, NY, Spring 2018
- Ph.D. Committee Member, Chairperson · Laura Golnabi, Mathematics Education, “Mathematics self-efficacy and flow in developmental mathematics students” · Columbia University, New York, NY, Spring 2017
- Ed.D. Committee Member, Outside reader · Myra Luna-Lucero, Human Development, “Mistake detection videos: Integrating perspectives from motivation to enhance high school students’ math learning” · Teachers College, Columbia University, New York, NY, Spring 2017
- Ph.D. Committee Member, External examiner · Masomeh Jamshid Nejad, Mathematics Education, “Students’ understanding of transformations of sinusoidal functions” · Simon Fraser University, Vancouver, British Columbia, Spring 2017
- Ed.D. Committee Member, Chairperson · Nathaniel Stahl, Mathematics Education, “Winning ways for your educational plays: An analysis of students’ understanding of the concept of a winning strategy” · Teachers College, Columbia University, New York, NY, Fall 2016
- Ed.D. Committee Member, Outside reader · Grant Tedaldi, Art Education, “Harmonizing digital drawing practice within studio art pedagogy” · Teachers College, Columbia University, New York, NY, Spring 2016
- Ph.D. Committee Member, Chairperson · Yevgeniy Milman, Mathematics Education, “Effect of the curriculum on the instructional practice of the community college faculty in the developmental mathematics courses” · Columbia University, New York, NY, Spring 2016
- Ph.D. Committee Member, Outside reader · Spyridon Varthis, Science Education, “Students’ perceptions of blended learning and its effectiveness as a part of second year dental curriculum” · Columbia University, New York, NY, Spring 2016
- Ph.D. Committee Member, Outside reader · Patrick Ashby, Science Education, “Critical science education in a suburban high school chemistry class” · Columbia University, New York, NY, Fall 2015
- Ed.D. Committee Member, Chairperson · Elana Hagler Sichel, Mathematics Education, “Concepts of continuity in calculus: A look at how Algebra 1 and Algebra 2 shape students’ understanding of continuity” · Teachers College, Columbia University, New York, NY, Spring 2015
- Ed.D. Committee Member, Chairperson · Stephanie Quan, Mathematics Education, “The impact of stressful situations on mathematics anxiety and mathematics performance” · Teachers College, Columbia University, New York, NY, Spring 2015
- Ph.D. Committee Member, Outside reader · Alison Miller, Science Education, “Examining the relationship between physical models and students’ science practices” · Columbia University, New York, NY, Spring 2015
- Ed.D. Committee Member, Outside reader · Suzanne Zak, Music Education, “Examining the effect of asynchronous video on student learning and engagement in music e-learning” · Teachers College, Columbia University, New York, NY, Spring 2015
- Ed.D. Committee Member, Chairperson · Nazar Rabadi, Mathematics Education, “Overcoming difficulties and misconceptions in calculus” · Teachers College, Columbia University, New York, NY, Fall 2014
- Ph.D. Committee Member, Third reader · Nathan Alexander, Mathematics Education, “Structuring student beliefs in context: Identity, self-efficacy, and black student success in mathematics” · Columbia University, New York, NY, Fall 2014
- Ed.D. Committee Member, Outside reader · Carla Marie Becker, Urban and Minority Education, “African American high school students in a space of creative engagement: From can’t to can” · Teachers College, Columbia University, New York, NY, Spring 2014

**PROFESSIONAL AFFILIATIONS**

Mathematical Association of America  
National Council of Teachers of Mathematics  
Association of Mathematics Teacher Educators  
American Educational Research Association  
Association of Mathematics Teachers of New York State  
New York State Association of Mathematics Teacher Educators

**CERTIFICATIONS**

State of Texas Master Mathematics Teacher Certificate (8-12), valid for life  
State of Texas Educator Certificate, Secondary Mathematics (8-12), expired April 2016