

# SARAH K. BLEILER-BAXTER

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## EDUCATION AND ACADEMIC AWARDS

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### **Ph. D., Mathematics Education, 2012**

University of South Florida, Tampa, FL

Dissertation title: “Team-Teaching Experiences of a Mathematician and a Mathematics Teacher Educator: An Interpretative Phenomenological Case Study”

- University Presidential Fellowship recipient: 4-year full academic fellowship

### **M. A., Mathematics, 2008**

University of South Florida, Tampa, FL

Thesis title: “Orthogonal Filters and the Implications of Wrapping on Discrete Wavelet Transforms”

- University Presidential Fellowship recipient: 2-year full academic fellowship

### **B. S., Mathematics; Spanish (minor), 2006**

Seton Hall University, South Orange, NJ

- Valedictorian: Class of 2006
- Clare Boothe Luce Scholarship recipient: 4-year full academic scholarship
- Edward J. Bloustein Scholarship recipient: 4-year scholarship

## PUBLICATIONS

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Heath, A. L., & Bleiler-Baxter, S. K. (in press). Researching collaborative proving in real university classrooms: The role and utility of theoretical framing. In K. Weber & M. Savic (Eds.), *New Directions in University Proving: Honoring the Legacy of John and Annie Selden*.

Heath, A. L., Andrews, R., Kirby, J. E., & Bleiler-Baxter, S.K., (In press). The state of research on proof and proving at RUME conferences from 2018-2023: A systematic literature review. *Proceedings of the 26<sup>th</sup> Annual Conference on Research on Undergraduate Mathematics Education (RUME)*.

Heath, A. L., Bleiler-Baxter, S. K., Scott, F. C., James, O. T., Ayangbola, O. T., Gardner, G. E., & Rushton, G. T. (2023). Levels of reflection in strength-based and weakness-based STEM faculty peer-observation. *Proceedings of the 25<sup>th</sup> Annual Conference on Research on Undergraduate Mathematics Education (RUME)*, 972-977.

Bleiler-Baxter, S. K., Kirby, J. E., & Reed, S. D. (2023). Understanding authority in small-group co-constructions of mathematical proof. *Journal of Mathematical Behavior*, 70, 1-20. <https://doi-org.ezproxy.mtsu.edu/10.1016/j.jmathb.2022.101015>

Heath, A. L., Kirby, J. E., & Bleiler-Baxter, S. K. (2022). Group reflection on mathematical creativity in proving. *Proceedings of the 24<sup>th</sup> Annual Meeting of the Research in Undergraduate Mathematics Education*, 1054-1060.

Reed, S. D., Kirby, J. E., Bleiler-Baxter, S. K. (2021). Students’ examining and making sense of proofs by mathematical induction. *Research on Undergraduates in Mathematics Education (RUME) Reports*, 247-254.

Bleiler-Baxter, S. K., Pair, J. D., & Reed, S. D. (2021). Let’s create, not replicate: Supporting students as proof creators through the group proof activity. *Problems, Resources, and Issues in Mathematics Undergraduate Studies (PRIMUS)*, 31(7), 760-774.

- Bleiler-Baxter, S. K., Hart, J. D., & Wanner, C.A. (2021). Teaching TRIOs: Using peer observation to initiate department change. *Problems, Resources, and Issues in Mathematics Undergraduate Studies (PRIMUS)*, 31(3-5), 550-564.
- Otten, S., Bleiler-Baxter, S. K., Wambua, M. M., & Engledowl, C. (2020, Nov/Dec). Sharing authority in proof but not all at once. *The Oregon Mathematics Teacher*, 26-31.
- Bleiler-Baxter, S. K., Wanner, C. A., & Strayer, J. F. (2019). Because we love. *Mathematics Teacher*, 112(7), 496-502.
- Pair, J. D., Reed, S. D., & Bleiler-Baxter, S. K. (2019). Empowering students in learning proof: Balancing agency and authority. *Proceedings of the 2019 National Council of Teachers of Mathematics Research Conference*.
- Bleiler-Baxter, S. K., Reed, S. D., & Pair, J. D. (2019). Empowering students in learning proof: Leveraging the instructor's authority. *Proceedings of the 2019 Research in Undergraduates Mathematics Education (RUME) Conference*.
- Yee, S. P., Boyle, J. D., Ko, Y.-Y., & Bleiler-Baxter, S. K. (2018). Effects of constructing, critiquing, and revising arguments within university classrooms. *Journal of Mathematical Behavior*, 49, 145-162.
- Bleiler-Baxter, S. K., Stephens, D. C., Baxter, W. A., & Barlow, A. T. (2017). Modeling as a decision-making process. *Teaching Children Mathematics*, 24(1), 20-28.
- Bleiler-Baxter, S. K., & Pair, J. D. (2017). Engaging students in roles of proof. *Journal of Mathematical Behavior*, 47, 16-34.
- Otten, S., Bleiler-Baxter, S. K., & Engledowl, C. (2017). Authority and whole-class proving in high school geometry: The case of Ms. Finley. *Journal of Mathematical Behavior*, 46, 112-127.
- Bénéteau, C., Bleiler-Baxter, S. K., Kersaint, G., Krajcevski, M., & Thompson, D. R. (2017). Multiple perspectives on collaborative teaching: Mathematicians, mathematics teacher educators, and students. In L. West & M. Boston (Eds.), *Annual perspectives in mathematics education: Reflective and collaborative processes to improve mathematics teaching* (pp. 247-260). Reston, VA: National Council of Teachers of Mathematics.
- Yee, S. P., Ko, Y.-Y., Boyle, J. D., & Bleiler-Baxter, S. K. (2016). Constructing communal criteria for proof through critiquing the reasoning of others. In M. B. Wood, E. E. Turner, M. Civil, & J. A. Eli (Eds.), *Proceedings for the 38<sup>th</sup> Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 652-659). Tucson, AZ.
- Strayer, J. F., Hart, J. B., & Bleiler-Baxter, S. K. (2016). Kick-starting discussions with the flipped classroom. *Mathematics Teacher*, 109(9), 662-668. Radio broadcast related to this article: <http://www.mtsunews.com/strayer-hart-on-the-record-nov2016/>
- Ko, Y.-Y., Yee, S. P., Bleiler-Baxter, S. K., & Boyle, J. D. (2016). Empowering students' proof learning through communal engagement. *Mathematics Teacher*, 109(8), 618-624.

- Bleiler-Baxter, S. K., Barlow, A. T., & Stephens, D. C. (2016). Moving beyond context: Challenges in modeling instruction. In C. Hirsch (Ed.), *Annual perspectives in mathematics education: Mathematical modeling and modeling mathematics* (pp. 53-64). Reston, VA: National Council of Teachers of Mathematics.
- Strayer, J. F., Hart, J. B., & Bleiler, S. K. (2015). Fostering instructor knowledge of student thinking using the flipped classroom. *Problems, Resources, and Issues in Mathematics Undergraduate Studies (PRIMUS)*, 25(8), 724-735.
- Boyle, J. D., Bleiler, S. K., Yee, S. P., & Ko, Y.-Y. (2015). Transforming perceptions of proof: A four-part instructional sequence. *Mathematics Teacher Educator*, 4(1), 32-70.
- Pair, J. D., & Bleiler, S. K. (2015). Student perceptions of proof as communication in an inquiry-based course. *Proceedings of the 2015 NCTM Research Conference*. Retrieved from: <https://nctm.confex.com/nctm/2015RP/webprogram/Session33791.html>
- Bleiler, S. K., Ko, Y.-Y., Yee, S. P., & Boyle, J. D. (2015). Communal development and evolution of a course rubric for proof writing. In C. Suurtamm (Ed.), *Annual perspectives in mathematics education: Assessment to enhance learning and teaching* (pp. 97-108). Reston, VA: National Council of Teachers of Mathematics.
- Bleiler, S. K. (2015). Increasing awareness of practice through interaction across communities: The lived experiences of a mathematician and mathematics teacher educator. *Journal of Mathematics Teacher Education*, 18(3), 231-252.
- Bleiler, S. K., Baxter, W. A., Stephens, D. C., & Barlow, A. T. (2015). Constructing meaning: Standards for mathematical practice. *Teaching Children Mathematics*, 21(6), 336-344.
- Yee, S. P., Boyle, J. D., Ko, Y.-Y., & Bleiler, S. K. (2015). Empowering ownership of proof with communal proof-writing criteria. In M. Che & K. Adolphson (Eds.), *Proceedings for the 42<sup>nd</sup> Annual Meeting of the Research Council on Mathematics Learning* (pp. 33-41). Las Vegas, NV.
- Bénéteau, C., Bleiler, S. K., & Thompson, D. R. (2014). Promoting mathematical reasoning through critiquing student work. In K. Karp and A. R. McDuffie (Eds.), *Annual perspectives in mathematics education: Using research to improve instruction* (pp. 151-160). Reston, VA: National Council of Teachers of Mathematics.
- Bleiler, S. K., Thompson, D. R., & Krajcevski, M. (2014). Providing written feedback on students' mathematical arguments: Proof validations of prospective secondary mathematics teachers. *Journal of Mathematics Teacher Education*, 17, 105-127. Podcast interview related to this article: [http://mathed.podomatic.com/entry/2014-02-23T16\\_19\\_44-08\\_00](http://mathed.podomatic.com/entry/2014-02-23T16_19_44-08_00)
- Thompson, D. R., Kaur, B., Koyama, M., & Bleiler, S. K. (2013). A longitudinal view of mathematics achievement of primary students: Case studies from Japan, Singapore, and the United States. *ZDM: The International Journal on Mathematics Education*, 45(1), 73-89.
- Bleiler, S. K., & Thompson, D. R. (2012/2013). Multidimensional assessment of the Common Core. *Teaching Children Mathematics*, 19(5), 292-300.

- Thompson, D. R., Bénéteau, C., Kersaint, G., & Bleiler, S. K. (2012). Voices of mathematicians and mathematics teacher educators co-teaching prospective secondary teachers. In J. M. Bay-Williams (Ed.), *Professional collaborations in mathematics teaching and learning: Seeking success for all- 74<sup>th</sup> yearbook* (pp. 229-242). Reston, VA: National Council of Teachers of Mathematics.
- Bleiler, S. K. (2010). Integration of proof and reasoning in school mathematics: A guide for elementary school teachers. *Dimensions in Mathematics: Journal of the Florida Council of Teachers of Mathematics*, 29(2), 6-12.
- Bleiler, S. K., & Thompson, D. R. (2010). Dimensions of mathematics understanding: A longitudinal analysis of primary students' achievement in the United States. In Y. Shimizu, Y. Sekiguchi, & K. Hino (Eds.), *The 5<sup>th</sup> East Asia Regional Conference on Mathematics Education (EARCOME5): In search of excellence in mathematics education* (pp. 400-407). Tokyo, Japan: Inamoto Printing.
- Thompson, D. R., Kaur, B., & Bleiler, S. K. (2010). Using a multi-dimensional approach to understanding to assess primary students' mathematical knowledge. In Y. Shimizu, Y. Sekiguchi, & K. Hino (Eds.), *The 5<sup>th</sup> East Asia Regional Conference on Mathematics Education (EARCOME5): In search of excellence in mathematics education* (pp. 472-479). Tokyo, Japan: Inamoto Printing.
- Bleiler, S. K., & Saccoman, J. T. (2007). A correction in the formula for the number of spanning trees in threshold graphs. *Australasian Journal of Combinatorics*, 37, 205-213.
- Bleiler, S. K., & Saccoman, J. T. (2006). A surgery reducing the number of spanning trees for certain threshold graphs. *Congressus Numerantium*, 178, 15-31.

## GRANTS AWARDED (OR UNDER REVIEW)

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**Principal Investigator,** [REDACTED]

Proposal under review within the National Science Foundation IUSE program. Requested \$400,000.

**Principal Investigator,** [REDACTED]

Proposal under review within the National Science Foundation IUSE program. Requested \$1,334,669.

**Co-Principal Investigator, "Preparation and Refinement of Postdocs in STEM for Disciplinary-Based Education Research (PROPS for DBER)."** October 2023 – September 2026

Funded through the National Science Foundation Institutional Postdoctoral Fellowships program (Federal Award No. 2329405) for \$1,249,445.

**Principal Investigator (Subrecipient), "The Alliance of Students with Disabilities for Inclusion, Networking, and Transition Opportunities in STEM (TAPDINTO-STEM)."**

August 2021 - July 2026

Subaward funded through the National Science Foundation INCLUDES (Federal Award No. 2119902). Funded at MTSU for \$109,000. [Pass-through Entity Principal Investigator: Overtoun Jenda, Auburn University.]

**Principal Investigator (Subrecipient), "NSF INCLUDES: South East Alliance for Persons with Disabilities in STEM (SEAPD-STEM)."**

October 2016 - June 2022

Subaward funded through the National Science Foundation (Federal Award No. 1649344). Funded at MTSU for **\$16,622**. [Pass-through Entity Principal Investigator: Overtoun Jenda, Auburn University.]

**Principal Investigator, “Inclusive Pedagogy among STEM Faculty: A Professional Development Program for Becoming Aware and Culturally Responsive.”** July 2020 - June 2021

Funded through Tennessee Board of Regents, Student Engagement, Retention, & Success (SERS) Grants. Funded for **\$50,000**.

**Lead Facilitator, “Teaching Trios: Sharing Our Classrooms to Promote Faculty Reflection on Teaching and Learning.”** August 2017- September 2018

Funded through the Middle Tennessee State University Learning, Teaching and Instructional Technology Center (LT&ITC) program for Faculty Learning Communities. Project funded for **\$11,500** (joint funding from LT&ITC and College of Basic and Applied Sciences).

**Principal Investigator, “Inquiry-Based Learning in an Upper-Level Introduction to Mathematical Proofs Course”** January-August 2014

Funded through the MTSU Faculty Research and Creative Activity Committee, **\$8,190**.

**Co-principal Investigator, “Project IMPACT: Implementing Mathematical Practices and Content into Teaching.”** January-August 2014

Funded through the Tennessee Department of Education Math and Science Partnership Grant, **\$242,000**.

## CONFERENCE PRESENTATIONS

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Ko, Y.-Y., Bleiler-Baxter, S. K., & Kirby, J. E. (2024, February 22). *Learner vs. mathematical perspectives: Pre-service secondary mathematics teachers’ interpretations of roles of proof*. Poster session presented at the 26<sup>th</sup> Annual Conference on Research on Undergraduate Mathematics Education (RUME), Omaha, NE.

Kirby, J. E., Bleiler-Baxter, S. K., & Ko, Y.-Y. (2024, February 22). *How undergraduates make decisions when co-validating proofs*. Poster session presented at the 26<sup>th</sup> Annual Conference on Research on Undergraduate Mathematics Education (RUME), Omaha, NE.

Heath, A. L., Bleiler-Baxter, S. K., Kirby, J. E., & Webster, J. (2024, February 24). *The MAJORWISE survey study: Why students leave and stay in the mathematics major*. Poster session presented at the 26<sup>th</sup> Annual Conference on Research on Undergraduate Mathematics Education (RUME), Omaha, NE.

Heath, A. L., Andrews, R., Kirby, J. E., & Bleiler-Baxter, S. K. (2024, February 22). *The state of research on proof and proving at RUME conferences from 2018-2023: A systematic literature review*. Session presented at the 26<sup>th</sup> Annual Conference on Research on Undergraduate Mathematics Education (RUME), Omaha, NE.

Heath, A. L., & Bleiler-Baxter, S. K. (2024, January 12). *U.S. mathematics major retention and attrition: A survey study*. Poster session presented at the Southeastern STEM Education Research Conference, Murfreesboro, TN.

- Bleiler-Baxter, S. K., Rushton, G. T., Andrews, R., & Mallapragada, S. (2023, June 12). *Advancing cultural change in STEM departments through self-determination theory*. Poster session presented at the Transforming Institutions Conference. Minneapolis, MN.
- Ayangbola, O. T., Bleiler-Baxter, S. K., Scott, F. C., James, O. T., Heath, A. L., Gardner, G. E., & Rushton, G. T. (2023, April 20). *Reflections on inclusive pedagogy among STEM faculty during Teaching TRIOS Peer Observation Process*. Session presented at the 96<sup>th</sup> Annual National Association for Research in Science Teaching (NARST) International Conference. Chicago, IL.
- Heath, A. L., Bleiler-Baxter, S. K., Scott, F. C., James, O. T., Ayangbola, O. T., Gardner, G. E., & Rushton, G. T. (2023, February 23). *Levels of reflection in strength-based and weakness-based STEM faculty peer-observation*. Session presented at the 25<sup>th</sup> Annual Conference on Research on Undergraduate Mathematics Education (RUME), Omaha, NE.
- Ayangbola, O. T., Scott, F. C., Bleiler-Baxter, S. K., James, O. T., Heath, A. L., Gardner, G. E., & Rushton, G. T. (2023, January 14). *Faculty reflections on inclusive pedagogy within STEM classrooms*. Session presented at the 17<sup>th</sup> Annual Southeastern STEM Education Research Conference (SSERC), Cookeville, TN.
- Heath, A. L., Bleiler-Baxter, S. K., Scott, F. C., Ayangbola, O. T., James, O. T., Rushton, G. T., & Gardner, G. E. (2023, January 14). *Strength- and weakness-based reflection among STEM faculty*. Session presented at the 17<sup>th</sup> Annual Southeastern STEM Education Research Conference (SSERC), Cookeville, TN.
- Kirby, J. E., Reed, S. D., & Bleiler-Baxter, S. K. (2022, November 19). *What undergraduate students make decisions about when collaboratively proving*. Poster presented at the 44<sup>th</sup> Annual Psychology of Mathematics Education- North America (PME-NA), Nashville, TN.
- Heath, A. L., Bleiler-Baxter, S. K., & Kirby, J. E. (2022, November 18). *Creativity in proving: Implementing a group reflection activity*. Poster presented at the 44<sup>th</sup> Annual Psychology of Mathematics Education- North America (PME-NA), Nashville, TN.
- Ayangbola, O. T., Scott, F. C., Bleiler-Baxter, S. K., James, O., Heath, A. L., Gardner, G. E., & Rushton, G. T. (2022, October 20). *Integrating inclusive pedagogy in STEM classrooms: Faculty reflections*. Session presented at the Tennessee Board of Regents' We All Rise Conference, Murfreesboro, TN.
- Heath, A. L., Bleiler-Baxter, S. K., & Kirby, J. E. (2022, September 26). *Adapting a mathematical creativity reflection tool for group use: A project overview*. Poster presented at the 12<sup>th</sup> International group for Mathematical Creativity and Giftedness Conference (IGMCG), Las Vegas, NV.
- Gardner, G. E., James, O., Bleiler-Baxter, S. K., Rushton, G. T., Scott, F., Heath, A. L., & Ayangbola, O. T. (2022, March 29). *Faculty awareness and responsiveness to inclusivity in STEM classrooms*. Session presented at the National Association for Research in Science Teaching (NARST) Annual Conference, Vancouver, British Columbia, Canada (Remote).
- Bleiler-Baxter, S. K., Heath, A. L., James, O., Scott, F., Ayanbola, O. T., Gardner, G. E., & Rushton, G. T. (2022, February 24). *Strength- and weakness-based faculty peer observation in undergraduate STEM instruction*. Poster session presented at the Research in Undergraduate Mathematics Education (RUME) Conference, Boston, MA (Remote).

- Heath, A. L., Bleiler-Baxter, S. K., & Kirby, J. E. (2022, February 26). *Group reflection on mathematical creativity in proving*. Session presented at the Research in Undergraduate Mathematics Education (RUME) Conference, Boston, MA.
- Kirby, J. E., Bleiler-Baxter, S. K., Reed, S. D. (2022, February 24). *Authority manifestations in small-group proving*. Poster session presented at the Research in Undergraduate Mathematics Education (RUME) Conference, Boston, MA (Remote).
- Reed, S. D., Kirby, J. E., & Bleiler-Baxter, S. K. (2022, February 24). *Students in an Introduction to Proofs course recognizing when they are 'stuck.'* Poster session presented at the Research in Undergraduate Mathematics Education (RUME) Conference, Boston, MA (Remote).
- Gardner, G., E. James, O., Bleiler-Baxter, S. K., Rushton, G. T., Scott, F., Heath, A. L., & Ayangbola, O. T. (2022, January 14). *Faculty awareness of inclusivity and diversity needs within STEM classrooms*. Session presented at the Southeastern STEM Education Research Conference, Murfreesboro, TN.
- Kirby, J. E., Bleiler-Baxter, S. K., Reed, S. D. (2022, January 14). *Sources of authority for mathematics students in an introduction to proof course*. Session to be presented at the Southeastern STEM Education Research Conference, Murfreesboro, TN.
- Bleiler-Baxter, S. K. (2022, January 13, Invited). *Early Career Panel*. Served as a panelist on the Early Career Panel for the Southeastern STEM Education Research Conference, Murfreesboro, TN.
- Heath, A. L., Bleiler-Baxter, S. K., & Kirby, J. E. (2022, January 13). *Group reflection on mathematical creativity in proving*. Session presented at the Southeastern STEM Education Research Conference, Murfreesboro, TN.
- Ayangbola, O. T., Scott, F., Bleiler-Baxter, S. K., Gardner, G. E., Rushton, G., James, O., & Heath, A. L. (2022, January 13). *Building community and creating a space for vulnerability in discussion of inclusive pedagogy among STEM faculty*. Poster session presented at the Southeastern STEM Education Research Conference, Murfreesboro, TN.
- Bleiler-Baxter, S. K., Gardner, G. E., Rushton, G. T., James, O., Scott, F., Heath, A. L., & Ayanbola, O. T. (2021, November 10). *Inclusive pedagogy among STEM faculty: A professional development program for becoming aware and culturally responsive*. Session presented at the Tennessee Board of Regents' Access and Diversity Grant Spotlight Series Fall 2021, Virtual (Remote).
- Kirby, J. E., Reed, S. D., & Bleiler-Baxter, S. K. (2021, August 7). *Student understanding of mathematical induction in an online setting*. Session presented at the MAA Mathfest Conference, Virtual (Remote).
- Bleiler-Baxter, S. K., Gardner, G. E., Rushton, G. T., James, O., Scott, F., & Heath, A. L. (2021, August 6). *Using Teaching TRIOs to support faculty awareness and responsiveness to inclusivity in mathematics and science classrooms*. Session presented at the MAA Mathfest Conference, Virtual (Remote).
- Ozen, D. Y., Heath, A. L., Kirby, J. E., & Bleiler-Baxter, S. K. (2021, August 4). *Inquiry-based instructional practices in remote settings*. Session presented at the MAA Mathfest Conference, Virtual (Remote).
- Kirby, J. E., Heath, A. L., Ozen, D. Y., & Bleiler-Baxter, S. K. (2021, May 11). *Lessons learned teaching MATH 1410 remotely*. Session presented at the Tennessee Mathematics for Elementary Education

and Tennessee Science for Elementary Education Annual Joint Conference, Austin Peay University, Clarksville, TN.

- Gardner, G. E., Bleiler-Baxter, S. K., Rushton, G. T., James, O., Scott, F., & Heath, A. L. (2021, March 3). *Teaching TRIOS: A STEM faculty development program in inclusive pedagogy*. Poster session presented at X-DBER Conference, Lincoln, NE (Remote).
- Kirby, J., Reed, S. D., & Bleiler-Baxter, S. K. (2021, January 14). *Understanding authority in small-group co-constructions of mathematical proof*. Session presented at the 15<sup>th</sup> Annual Tennessee STEM Education Research Conference, Murfreesboro, TN (Remote).
- Bleiler-Baxter, S. K., Strayer, J. F., & Kirby, J. E. (2020, January 18). *Teaching TRIOS: A peer observation model for sharing teaching practice and initiating department change*. Session presented at the Joint Mathematics Meetings, Denver, CO.
- Bleiler-Baxter, S. K., & Wanner, C. A. (2019, October 3). *Sharing our classrooms: Professional learning through reflective peer observation*. Session presented at the National Council of Teachers of Mathematics Regional Conference, Nashville, TN.
- Wanner, C. A., & Bleiler-Baxter, S. K. (2019, October 3). *Integrating mathematics and language arts: Writing short stories with fractions*. Session presented at the National Council of Teachers of Mathematics Regional Conference, Nashville, TN.
- Bleiler-Baxter, S. K., & Wanner, C. A. (2019, May 7). *Creative writing and fractions: Bridging content and context*. Session presented at the Tennessee Mathematics/Science for Elementary Education Conference, Cookeville, TN.
- Pair, J. D., Reed, S. D., & Bleiler-Baxter, S. K.. (2019, April 2). *Empowering students in learning proof: Balancing agency and authority*. Session presented at the National Council of Teachers of Mathematics (NCTM) Research Conference, San Diego, CA.
- Bleiler-Baxter, S.K. (2019, March 8, **Invited**). *Critiquing peers' arguments: Learning in an Introduction to Proof course*. Session presented at the Mathematical Association of America Southeastern Section Conference. Cleveland, TN.
- Bleiler-Baxter, S. K., Reed, S. D., & Pair, J. D. (2019, February 28). *Empowering students in learning proof: Leveraging the instructor's authority*. Session presented at the Research in Undergraduates Mathematics Education (RUME) Conference, Oklahoma City, OK.
- Bleiler-Baxter, S. K., Reed, S. D., & Pair, J. D. (2019, February 15). *Supporting proof learners in the dance of agency: The role of instructor authority*. Session presented at the 13<sup>th</sup> Annual Tennessee STEM Education Research Conference, Murfreesboro, TN.
- Wanner, C. A., & Bleiler-Baxter, S. K. (2019, February 14). *Reflective dialogue: A theoretical framework for studying Teaching Trios*. Poster session presented at the 13<sup>th</sup> Annual Tennessee STEM Education Research Conference, Murfreesboro, TN.
- Bleiler-Baxter, S. K., Wanner, C. A., & Gardner, G. E. (2018, November 2). *Sharing our classrooms: Reflective observations on teaching and learning through Teaching Trios*. Session presented at the Tennessee Science Teachers Association Annual Meeting, Murfreesboro, TN.



- Wanner, C.A., Chappell, M., Reed, S. D., & Bleiler-Baxter, S. K. (2018, May 14). *Students know their “places,” but not their “values.”* Session presented at the Tennessee Mathematics/Science for Elementary Education Conference, Knoxville, TN.
- Bleiler-Baxter, S. K., Reed, S. D., Wanner, C. A., & Chappell, M. (2018, May 14). *Elementary mathematics is complex: Convincing preservice teachers.* Session presented at the Tennessee Mathematics/Science for Elementary Education Conference, Knoxville, TN.
- Bleiler-Baxter, S. K., & Pair, J. D. (2017, March 31). *Roles of proof: Activities that are lasting.* Poster session presented at the Middle Tennessee State University Scholar’s Day, Murfreesboro, TN.
- Pair, J. D., & Bleiler-Baxter, S. K. (2017, February 24). *Considerations for explicit and reflective teaching of the roles of proof.* Session presented at the 20<sup>th</sup> Annual Conference on Research in Undergraduate Mathematics Education, San Diego, CA.
- Pair, J. D., & Bleiler-Baxter, S. K. (2017, February 3). *How undergraduate students understand the roles of proof in mathematics: Implications for explicit and reflective teaching.* Session presented at the 11<sup>th</sup> Annual Tennessee STEM Education Research Conference, Murfreesboro, TN.
- Yee, S. P., Ko, Y.-Y., Boyle, J. D., & Bleiler-Baxter, S. K. (2016, November 4). *Constructing communal criteria for proof through critiquing the reasoning of others.* Session presented at the 38<sup>th</sup> Annual Conference of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA), Tuscon, AZ.
- Bleiler-Baxter, S. K., & Pair, J. D. (2016, September 23). *Coordinating cooperative creation: The group proof activity.* Session presented at the Tennessee Mathematics Teachers Association State Conference, Murfreesboro, TN.
- Tessema, A. A., & Bleiler-Baxter, S. K. (2016, September 23). *Making trigonometry interactive with support of Geogebra.* Session presented at the Tennessee Mathematics Teachers Association State Conference, Murfreesboro, TN.
- Bénéteau, C., Bleiler-Baxter, S. K., Kersaint, G., Krajevski, M., & Thompson, D. R. (2016, July 29). *Navigating co-teaching: Perspectives from mathematicians, mathematics educators, and students.* Session presented at the 13<sup>th</sup> International Congress on Mathematical Education (ICME13), Hamburg, Germany.
- Yee, S. K., Ko, Y.-Y., Bleiler-Baxter, S. K., & Boyle, J. D. (2016, April 12). *Constructing and critiquing arguments: Effect of an instructional sequence.* Session presented at the National Council of Teachers of Mathematics Research Conference, San Francisco, CA.
- Otten, S., Engeldowl, C., & Bleiler-Baxter, S. K. (2016, April 8). *Authority and whole-class proving in a high school geometry class.* Session presented at the Annual Meeting of the American Educational Research Association, Washington, DC.
- Ko, Y.-Y., Yee, S. P., Boyle, J. D., Bleiler-Baxter, S. K., Rumsey, C., Whitacre, I., & Lesseig, K. (2016, January 29). *Supporting teachers’ capabilities to engage students in constructing viable arguments and critiquing others’ reasoning.* Symposium presented at the Association of Mathematics Teacher Educators 20<sup>th</sup> Annual Conference, Irvine, CA.

- Ko, Y.-Y., Yee, S. P., Boyle, J. D., & Bleiler-Baxter, S. K. (2015, December 12). *Shift in arguments: Effect of an instructional sequence*. Session presented at 31st Annual International Conference of Association of Science Education, Kenting, Taiwan.
- Baxter, W. A., Stephens, D. C., & Bleiler-Baxter, S. K. (2015, November 20). *Unpacking the “model with mathematics” standard for mathematical practice*. Session presented at the National Council of Teachers of Mathematics Regional Conference, Nashville, TN.
- Bleiler-Baxter, S. K., & Pair, J. D. (2015, November 20). *Transitioning to proof: Activities that promote learning from one another*. Session presented at the National Council of Teachers of Mathematics Regional Conference, Nashville, TN.
- Yee, S. P., Boyle, J. D., Bleiler-Baxter, S. K., & Ko, Y.-Y. (2015, November 20). *Making proof count: Empowering proof education through communal criteria*. Session presented at the National Council of Teachers of Mathematics Regional Conference, Nashville, TN.
- Strayer, J. F., Hart, J. B., & Bleiler-Baxter, S. K. (2015, November 19). *Supporting classroom discourse with the flipped classroom*. Session presented at the National Council of Teachers of Mathematics Regional Conference, Nashville, TN.
- Bleiler-Baxter, S. K., & Pair, J. D. (2015, October 23). *Transitioning to proof: Activities that promote learning from one another*. Session presented at the National Council of Teachers of Mathematics Regional Conference, Atlantic City, NJ.
- Bleiler, S. K., & Pair, J. D. (2015, June 26). *Co-constructing a group proof*. Session presented at the Legacy of R.L. Moore Conference, Austin, TX.
- Boyle, J. D., Bleiler, S. K., Ko, Y.-Y., and Yee, S. P. (2015, April 17). *What counts? Developing a communal classroom criteria of proof*. Session presented at the National Council of Teachers of Mathematics Annual Meeting, Boston, MA.
- Boyle, J. D., Bleiler, S. K., Yee, S. P., and Ko, Y.-Y. (2015, April 14). *Constructing viable arguments and critiquing the reasoning of others: Where to start?* Session presented at the National Council of Supervisors of Mathematics Annual Meeting, Boston, MA.
- Pair, J. D., & Bleiler, S. K. (2015, April 13). *Student perceptions of proof as communication in an inquiry-based course*. Session presented at the National Council of Teachers of Mathematics Research Conference, Boston, MA.
- Yee, S. P., Boyle, J. D., Ko, Y.-Y., & Bleiler, S. K. (2015, February 28). *Empowering ownership of proof with communal proof-writing criteria*. Session presented at the 42<sup>nd</sup> Annual Meeting of the Research Council on Mathematics Learning, Las Vegas, NV.
- Pair, J. D., & Bleiler, S. K. (2015, February 20). *Partial unpacking and the use of truth tables in an inquiry-based transition to proofs course*. Session presented at the 18<sup>th</sup> Annual Conference on Research in Undergraduate Mathematics Education, Pittsburgh, PA.

- Bleiler, S. K., & Pair, J. D. (2015, February 19). *Roles of proof in an undergraduate inquiry-based transition to proof course*. Session presented at the 18<sup>th</sup> Annual Conference on Research in Undergraduate Mathematics Education, Pittsburgh, PA.
- Ko, Y-Y., Yee, S. P., Bleiler, S. K., & Boyle, J. D. (2015, February 12). *Creating classroom-developed criteria for what counts as proof*. Session presented at the Association of Mathematics Teacher Educators 19<sup>th</sup> Annual Conference, Orlando, FL.
- Bleiler, S. K., & Pair, J. D. (2015, February 6). *Engagement in roles of proof within an inquiry-based transition-to-proof course*. Session presented at the Tennessee STEM Education Research Conference, Murfreesboro, TN.
- Pair, J. D., & Bleiler, S. K. (2014, November 6). *Student perceptions of the systematization role of proof*. Session presented at the Mid-South Educational Research Association Annual Meeting, Knoxville, TN.
- Stephens, D. C., Baxter, W. A., & Bleiler, S. K. (2014, September 27). *Model with mathematics: Three key decisions*. Session presented at Tennessee Mathematics Teacher Association Annual Meeting, Knoxville, TN.
- Yee, S. P., Ko, Y-Y., Bleiler, S. K., & Boyle, J. D. (2014, July 16). *Communal assessment of proof: Undergraduates' development of proof-writing criteria*. Poster session presented at the Joint Meeting of the International Group for the Psychology of Mathematics Education (PME 38), Vancouver, Canada.
- Bleiler, S. K., Ko, Y-Y., Boyle, J. D., & Yee, S. P. (2014, June 19). *Developing communal understanding of proof-writing criteria*. Session presented at the Legacy of R.L. Moore Conference, Denver, CO.
- Barlow, A. T., Bleiler, S. K., Stephens, D. C., Gerstenschlager, N., & Baxter, W. A. (2014, April 8). *Project IMPACT: Supporting elementary teachers' understanding of CCSSM through demonstration lessons*. Session presented at the National Council of Supervisors of Mathematics Annual Meeting, New Orleans, LA.
- Ko, Y-Y, Yee, S. P., Boyle, J. D., & Bleiler, S. K. (2014, February 5). *Developing a communal understanding of criteria for proof-writing*. Poster session presented at the STaR Pre-session of the AMTE Annual Conference, Irvine, CA.
- Bleiler, S. K. (2014, January 16). *Evaluating peers' arguments as the catalyst for learning in an introduction to proofs course*. Session presented at the Joint Mathematics Meetings, Baltimore, MD.
- Bleiler, S. K., Boyle, J. D., Ko, Y-Y., & Yee, S. P. (2014, January 16). *Communal assessment of proof: Undergraduates' development of proof-writing criteria*. Session presented at the Joint Mathematics Meetings, Baltimore, MD.
- Stephens, D. C., Bleiler, S. K., & Baxter, W. A. (2014, January 16). *A mathematician's foray into the Common Core State Standards (for Mathematical Practice): A question of interpretation?* Session presented at the Joint Mathematics Meetings, Baltimore, MD.
- Bleiler, S. K. (2013, June 7). *Crossing community boundaries: The team-teaching experiences of a mathematician and mathematics teacher educator*. Session presented at the Mathematics Teacher Education Partnership (MTEP) Conference, St. Louis, MO.

- Yantz, J., & Bleiler, S. K. (2013, May 14). *Mathematical learning histories of teacher candidates and the Common Core State Standards*. Session presented at the Joint Meeting of the Tennessee Mathematics for Elementary Education and Tennessee Science for Elementary Education Annual Conference, Pellissippi State Community College, Knoxville, TN.
- Bleiler, S. K., Thompson, D. R., & Krajcevski, M. (2013, April 16). *Strengths and weaknesses of preservice secondary teachers' proof validation*. Poster session presented at the National Council of Teachers of Mathematics Research Pre-session, Denver, CO.
- Bleiler, S. K. (2013, February 21). *Crossing community boundaries: Collaboration between mathematicians and mathematics educators*. Session presented at the 16<sup>th</sup> Annual Conference on Research in Undergraduate Mathematics Education, Denver, CO.
- Bleiler, S. K. (2013, January 26). *Team-teaching experiences of a mathematician and mathematics teacher educator: An interpretative phenomenological case study*. Session presented at the Association of Mathematics Teacher Educators 17<sup>th</sup> Annual Conference, Orlando, FL.
- Bleiler, S. K., Thompson, D. R., Krajcevski, M. (2013, January 10). *Lessons learned from a teaching experiment focused on proof validation*. Session presented at the Joint Mathematics Meetings, San Diego, CA.
- Bleiler, S. K. (2012, September 21). *Multidimensional assessment of the Common Core State Standards*. Session presented at the Tennessee Mathematics Teacher Association Annual Meeting, Cookeville, TN.
- Bleiler, S. K., & Thompson, D. R. (2012, April 26). *Classroom assessment of the Common Core: A multidimensional approach*. Session presented at the National Council of Teachers of Mathematics Annual Meeting and Exposition, Philadelphia, PA.
- Bleiler, S. K., & Kersaint, G. (2012, April 24). *Team-teaching experiences of a mathematician and a math teacher educator*. Session presented at the National Council of Teachers of Mathematics Research Pre-session, Philadelphia, PA.
- Bleiler, S. K., & Thompson, D. R. (2012, February 10). *Validating proofs: A teaching experiment with prospective secondary mathematics teachers*. Session presented at the Association of Mathematics Teacher Educators 16<sup>th</sup> Annual Conference, Fort Worth, TX.
- Bleiler, S. K. (2011, October 21). *Validating proofs: Students' use of inductive and deductive reasoning*. Gallery workshop presented at the National Council of Teachers of Mathematics Regional Meeting, Atlantic City, NJ.
- Bleiler, S. K., & Thompson, D. R. (2011, October 14). *Multidimensional understanding of the Common Core Standards: A tool for assessment*. Session presented at the Florida Council of Teachers of Mathematics Annual Meeting, Jacksonville, FL.
- Bleiler, S. K. (2011, April 15). *"Show your work!": Why this isn't enough with Wolfram | Alpha*. Session presented at the National Council of Teachers of Mathematics Annual Meeting and Exposition, Indianapolis, IN.
- Bleiler, S. K., Kersaint, G., & Krajcevski, M. (2011, January 9). *Differing views on assessment: Two instructors' strategies for modeling assessment techniques for prospective secondary mathematics teachers in an upper level team-taught geometry course*. Session presented at the Joint Mathematics Meetings, New Orleans, LA.

- Bleiler, S. K. (2010, October 1). *Wolfram|Alpha, a computational website: What effects will it have in your classroom?* Session presented at the Florida Council of Teachers of Mathematics Annual Meeting, Orlando, FL.
- Bleiler, S. K., & Thompson, D. R. (2010, August). *Dimensions of mathematics understanding: A longitudinal analysis of primary students' achievement in the United States.* Symposium session presented at the 5<sup>th</sup> East Asia Regional Conference on Mathematics Education, Tokyo, Japan. (Paper actually presented by D. R. Thompson.)
- Thompson, D. R., Kaur, B., & Bleiler, S. K. (2010, August). *Using a multi-dimensional approach to understanding to assess primary students' mathematical knowledge.* Symposium session presented at the 5<sup>th</sup> East Asia Regional Conference on Mathematics Education, Tokyo, Japan. (Paper actually presented by D. R. Thompson and B. Kaur.)
- Bleiler, S. K., & Thompson, D. R. (2010, April 20). *A longitudinal analysis of elementary school achievement on four dimensions.* Poster session presented at the National Council of Teachers of Mathematics Research Pre-session, San Diego, CA.
- Bleiler, S. K. (2009, October 8). *Dimensions of mathematics understanding: A longitudinal analysis of elementary students' achievement.* Poster session presented at the Graduate Student Research Symposium, University of South Florida, Tampa, FL.
- Bleiler, S. K. (2009, August 6). *Orthogonal filters and the implications of wrapping on discrete wavelet transformations.* Poster session presented at the Mathematical Association of America Mathfest meeting, Portland, OR.
- Bleiler, S. K. (2006, April 8). *A correction in the formula for the number of spanning trees in threshold graphs.* Poster session presented at the Garden State Undergraduate Mathematics Conference, Georgian Court College, Lakewood, NJ.
- Bleiler, S. K. (2006, April 2-4). *Mathematical modeling of molecular evolution by means of DNA analysis.* Poster session presented at the Petersheim Academic Exposition, Seton Hall University, South Orange, NJ.
- Bleiler, S. K. (2006, February 4). *A surgery reducing the number of spanning trees for certain threshold graphs.* Session presented at the Nebraska Conference for Undergraduate Women in Mathematics, University of Nebraska, Lincoln, NE.
- Bleiler, S. K., DiLauri, J., Michniewicz, R., & Sunshine, L. (2005, April 2-5). *An extension of Turan's theorem to multigraphs.* Poster session presented at the Petersheim Academic Exposition, Seton Hall University, South Orange, NJ.
- Bleiler, S. K. (2005, April 2). *Lower bounds for spanning trees in multigraphs.* Session presented at the Garden State Undergraduate Mathematics Conference, Middlesex County College, Edison, NJ.

## TEACHING

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**Middle Tennessee State University, Murfreesboro, TN**  
**Associate Professor, Mathematics Department**

2018-Present

Graduate courses:

Instructor of “SPSE 7180: Qualitative Evaluation and Research Methods.” This course is intended for doctoral students in the Mathematics and Science Education Ph.D. program. The course is intended to provide an overview of qualitative research and evaluation methods. Topics to be covered include frameworks and methodologies for qualitative research, design of qualitative studies, considerations for qualitative observations and interviews, data analysis procedures, and strategies for enhancing quality and credibility of qualitative research. (*Spring 2022, Summer 2015*)

Instructor of “MATH/MSE 7310: Theoretical Frameworks in Mathematics Education.” This course aims to develop Mathematics and Science Education (MSE) Mathematics Education students’ understanding of prevalent theoretical frameworks in mathematics and science education research. Such understanding includes a knowledge of these prevalent frameworks and their historical uses in mathematics and science education research, with an emphasis on the ways frameworks are used across studies. This understanding must also attend to the different roles frameworks play in conducting a coherent study and the ways frameworks connect the parts of the research process. (*Summer 2023, Summer 2022 (Independent Study), Summer 2021 (remote), Summer 2019*)

Instructor of “MATH 7340: History, Curriculum, and Policy in Mathematics Education.” This course is designed to explore history in mathematics education with a focus on curriculum development and policy development. The major factors that influence the development of curriculum and policy will be discussed. (*Spring 2020 (half-remote)*)

Instructor of “MSE/MOBI/COMS 7654: Seminar on Obtaining a Job in Higher Education.” This seminar is intended for doctoral students in the College of Basic and Applied Sciences. The course provides insight into and strategies for the academic job search. Topics to be covered include roles and responsibilities in academic positions, differing faculty employment contexts, when and where to look for job advertisements, how to prepare job search documents, interviewing strategies, cultural/diversity issues within the job search process, and negotiating an academic position. (*Summer 2019, Summer 2016, Spring 2013*)

Instructor of “MSE 7001: Residency Seminar I” and “MSE 7002: Residency Seminar II.” These courses are designed to support MSE students in establishing a common vision regarding Ph.D. values, and to spur MSE student progress in completing program requirements. Doctoral students will be immersed in a scholarly community that will promote a culture of academic scholarship. Frequent collaboration and interactions with peers and program faculty will provide students with opportunities to grow as scholars in mathematics and science education. (*Spring 2018, Fall 2017*)

Instructor of “MATH 6900: Research in Mathematics Education.” This course is the only designated research course required in the MST program. Thus, it is designed to provide students with an awareness of current theory and research in the educational arena and of methods of conducting research in the field of mathematics education. (*Fall 2016*)

Instructor of “MSE 7840: Special Topics—Teacher Education.” This special topics course is intended for doctoral students in the Mathematics and Science Education Ph.D. program. The course is intended to provide an overview of the theory, research, and practice related to mathematics and science teacher education. (*Spring 2016*)

Instructor of “MSE 7840: Special Topics—Collaborative and Cooperative Learning.” This special topics course is intended for doctoral students in the Mathematics and Science Education Ph.D. program. The course is intended to provide an overview of the theory, research, and practice related to collaborative and cooperative learning in mathematics and science education. (*Spring 2014*)

#### Undergraduate courses:

Instructor of “MATH 1410: Concepts and Structure of Elementary School Mathematics.” This course provides an Algebra-based study of school mathematics in keeping with the recommendations of the National Council of Teachers of Mathematics. Tools for problem solving, set theory, functions, number theory, and examinations of number systems from counting numbers to irrational numbers are explored. (*Spring, 2024, Fall 2023, Fall 2022, Spring 2022, Fall 2021, Spring 2021 (remote), Fall 2020 (remote), Spring 2019, Spring 2018, Spring 2017, Fall 2015, Fall 2014, Spring 2013*)

Instructor of “MATH 3460: Foundations of Higher Mathematics.” This course supports students in their understanding of the language of mathematics, set theory and proof, relations and functions, number systems, mathematical structures. It focuses on the transition from lower-division study to upper-division study by actively engaging the student in problem solving, mathematical reasoning, and both informal and technical writing. (*Fall 2023, Fall 2021, Spring 2021 (remote), Fall 2020 (remote), Spring 2020 (half-remote), Spring 2019, Spring 2017, Fall 2016, Summer 2016, Spring 2016, Fall 2015, Spring 2015, Spring 2014, Fall 2013*)

Instructor of “MATH 4620: History and Philosophy of Mathematics.” This course focuses on the character of mathematical thought by way of mathematical problems that have occupied the outstanding mathematicians of Babylon, Egypt, Greece, China, the Renaissance, and modern times paralleled with a study of three schools of mathematical philosophy: intuitionism, logicism, and formalism. (*Fall 2019*)

Instructor of “MATH 3320: Teaching Mathematics in Grades 5-8.” This course provides prospective middle and high school teachers with knowledge of the major goals, current developments, and instructional procedures that are critical in the teaching of middle school mathematics. (*Spring 2016, Fall 2015, Spring 2015, Fall 2014, Fall 2013, Spring 2013, Fall 2012*)

Instructor of “MATH 1420: Informal Geometry.” This course provides a geometry-based study of school mathematics for prospective elementary teachers. The course focus is on increasing students’ content knowledge of geometry and measurement concepts taught within a problem-solving context. (*Fall 2012*)

#### **University of South Florida, Tampa, FL**

**Instructor, Secondary Education Department**

Fall 2010 - Fall 2011

Instructor of “MAE 4551: Reading the Language of Mathematics.” This course provides the prospective secondary mathematics teacher the opportunity to develop concepts, skills, and instructional procedures for effectively integrating communication (reading, writing, listening, and speaking) into the mathematics curriculum. (*Fall 2011*)

Instructor of “MAE 4310: Teaching Elementary School Mathematics I (K-6).” This course focuses on the content, methods, and materials for teaching elementary school mathematics, with particular

emphasis on problem solving, whole number concepts, and rational number concepts. (*Spring 2011, Fall 2010*)

**Computer Science Instructor/Course Development** Summer 2008, Summer 2009

Instructor at the Center for Mathematical Services in a summer program for advanced middle school and high school students. Self-developed course using Mathematica to help students gain a deeper understanding of algebraic and statistical concepts.

**Hillsborough Community College, Tampa, FL**

**Adjunct Instructor, Mathematics Department** Summer 2007

Instructor of two sections of Pre-Algebra (MAT 0012).

**Seton Hall University, South Orange, NJ**

**Tutor, Mathematics Department** Fall 2002-Spring 2004

Facilitated the transition of incoming freshmen in new courses. Tutored students in Developmental Math I and II, Intermediate Algebra I and II, Pre-Calculus, Calculus I and II, Honors Calculus I, II, and III.

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**OTHER SCHOLARLY EXPERIENCE**

**Member, Advisory Board, National Science Foundation** Fall 2019 - Fall 2022  
**Third National Conference on Doctoral Programs in Mathematics Education**

University of Nevada Las Vegas

Invited to serve on advisory board for the NSF funded “Third National Conference on Doctoral Programs in Mathematics Education,” under the direction of co-PIs Dr. Robert Reys (University of Missouri) and Dr. Jeff Shih (University of Nevada Las Vegas). Conference occurred Fall 2022 in Las Vegas, NV.

**Participant, “Works-In-Progress Writer’s Collaborative”** 2019-2020  
**Faculty Learning Community**

Learning, Teaching, and Instructional Technology Center, MTSU, Murfreesboro, TN

Applied and was selected as a participant in the “Works-In-Progress Writer’s Collaborative” faculty learning community, facilitated by Dr. Kate Pantelides, English Department, MTSU. This group of interdisciplinary faculty met together regularly throughout the 2019-2020 academic year to set writing goals, share academic writing samples, and provide/seek feedback on manuscripts.

**Participant, MPWR Program** Spring 2018  
San Diego, CA

Invited to participate in the Mentoring & Partnerships for Women in RUME (MPWR) seminar preceding the Research in Undergraduate Mathematics Education (RUME) conference in February, 2018. This event is designed to support women at all career stages in networking and increasing involvement with the RUME community.



**Participant, AMTE's STaR Program** Summer 2013  
Park City, UT

Applied and was selected as a fellow in the Service, Teaching, and Research (STaR) program for early career mathematics educators, a program initiated through a grant from the National Science Foundation. It included a 5-day summer institute, academic year networking via electronic means, and a follow-up session in conjunction with the annual meeting of the Association of Mathematics Teacher Educators (AMTE).

**Participant, EDGE Program** Summer 2006  
New College, Sarasota, FL

Applied and was selected for participation in the Enhancing Diversity in Graduate Education (EDGE) program, an NSF-funded preparation program for women entering graduate programs in mathematics. The program consisted of two core courses in Real Analysis and Algebra/Linear Algebra, minicourses in specialized areas of mathematics research, guest lectures, problem sessions, and the formation of professional networks and mentoring relationships.

**Research Assistant, Center for Discrete Mathematics and Theoretical Computer Science (DIMACS)/Center for Discrete Mathematics, Theoretical Computer Science and Applications (DIMATIA)** Summer 2005

Rutgers University, Piscataway, NJ/Charles University, Prague, Czech Republic  
Applied and was selected for participation in the Summer 2005 DIMACS Research Experience for Undergraduates (REU) at Rutgers University.

Conducted research in graph theory under the advisement of Dr. Vadim Lozin (RUTCOR).

Applied and was selected for participation in the DIMATIA Research Experience for Undergraduates at Charles University.

**Research Assistant, Mathematics Department** Fall 2004-May 2006  
Seton Hall University, South Orange, NJ

Worked under the advisement of Dr. John T. Saccoman in mathematics research in the field of graph theory.

## SERVICE

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### Professional Service:

**Regional Chair, Tennessee High School Mathematics Contest** 2012-Present

**Member of Editorial Board** Spring 2014-Present  
*The Mathematician Educator (formerly, The Mathematics Educator)*  
International Mathematics Education Journal, Singapore

**Writing Mentor MTLT** Summer 2020  
Mathematics Teacher: Learning and Teaching PK–12 (MTLT)—mentoring first time MTLT writers to support moving their manuscripts forward for publication. See following link for an interview related to my role as writing mentor:  
<https://nctm.wistia.com/medias/0husyf3gd9>

**NSF Grant Proposal Reviewer DRK-12 Program** Spring 2020

**Secretary, Tennessee Association of Mathematics Teacher Educators (TAMTE)** 2014-2017

### **Manuscript Reviewer**

- Mathematics Teacher: Learning and Teaching PK–12 (MTLT) (Fall 2019-Present)
- PRIMUS (Summer 2015-Present)
- Journal of Mathematics Teacher Education (Fall 2014-present)
- The Mathematician Educator (formerly The Mathematics Educator) (Singapore) (Spring 2014-present)
- NCSM Journal of Mathematics Education Leadership (Spring 2012-Present)
- ZDM: The International Journal on Mathematics Education (Spring 2012-Present)
- Teaching Children Mathematics (Fall 2015- Spring 2019)
- Mathematics Teacher (Fall 2008-Spring 2019)

### **Conference Proposal Reviewer**

- Research on Undergraduates in Mathematics Education (RUME) (2015- Present)
- Psychology of Mathematics Education- North America (PME-NA) (2016)
- AMTE Annual Conference (2012, 2013)

### **NCATE Program Reviewer**

Fall 2012

### **Conference Volunteer**

- Grant-Writing Lunch Table Mentor, RUME Conference, February 2024
- Session Facilitator, SSERC Conference, January 2024
- NCTM Research Conference (presider, Interactive Paper Session), April 15, 2015
- NCTM annual conference (AMTE exhibit hall booth representative), April 19, 2013
- AMTE annual conference (leader/facilitator of Luncheon Discussion Table on topic of “Connecting with Mathematics Teacher Educators in Institutions with Large Teaching Loads”), Orlando, FL, January 24, 2013
- Conference on Research on the Enacted Mathematics Curriculum (note taker), Tampa, FL, November 4-6, 2010
- NCTM annual conference (news distribution), San Diego, CA, April 22, 2010
- AMTE annual conference (front desk), Orlando, FL, February 5-7, 2009
- Knotting Mathematics and Art: Conference in Low Dimensional Topology (conference organizer and coordinator), Tampa, FL, November 1-4, 2007

### **University Service:**

<b>Member, Quest 2025 Priority #1 Working Group, University</b>	Spring 2023- Present
<b>Member, Mentoring Committee for Math Majors, Math Dept.</b>	Fall 2022- Present
<b>Faculty Advisor, MTSU Students for Life, University</b>	Fall 2022- Present
<b>Member, Tenure and Promotion Committee, Math Dept.</b>	2019-Present
<b>Member, Mathematics Education Curriculum Group, Math Dept.</b>	2012-Present

Judge, Scholar's Day, College of Basic and Applied Sciences	Spring 2024
Chair, Search Committee for Full-Time Temporary positions, Math Dept.	Spring 2024
Member, Community Engagement Advisory Group, University	Spring 2023- Spring 2024
Member, University Relations Committee, University	Fall 2022 – Fall 2023
Associate Director, Tennessee STEM Education Center	Summer 2020- Summer 2023
Chair, Search Committee for Full-Time Temporary positions, Math Dept.	Summer 2023
Chair, Search Committee for Full-Time Temporary positions, Math Dept.	Summer 2022
Member, Search Committee TSEC Associate Director	Fall 2021- Spring 2022
Member, Search Committee for Full-Time Temporary positions, Math Dept.	Summer 2021
Judge, Scholar's Day, College of Basic and Applied Sciences	Spring 2021
Chair, Remote Teaching Task Force, Math Dept.	Summer 2020
Host, Book Club on Culturally Responsive Teaching, CBAS	Summer 2020
Member, Actuarial Sciences Program Review Committee	Spring 2020
Member, Search Committee for Full-Time Temporary positions, Math Dept.	Summer 2019
Associate Director, Mathematics and Science Education Ph.D. Program	2019-2020
Member, Undergraduate Program Policy Committee, Math Dept.	2019-2020
Chair, Committee on Teaching Advancement, Math Dept.	2014-2019
Member, College of Basic and Applied Science Committee on Teaching	2018-2019
Interim Director, Mathematics and Science Education Ph.D. Program	2017-2018
Chair, College of Basic and Applied Science Committee on Teaching	2016-2018
Member, Search Committee for Full-Time Temporary positions, Math Dept.	Summer 2017
Member, Search Committee for Full-Time Temporary positions, Math Dept.	Summer 2016
Member, Search Committee for Mathematics Education position, Math Dept.	2015-2016
Faculty Sponsor, Pi Mu Epsilon (Tennessee Gamma Chapter, MTSU)	2012-2014
Member, Tenure and Promotion Guidelines Committee, Math Dept.	2013-2014

**Member, Course Redesign Committee (MATH 1730), Math Dept.** 2013-2014

**Member, Undergraduate Program Policy Committee, Math Dept.** 2012-2013

**Community Service:**

**Evaluator, Middle Tennessee STEM Expo** April 11, 2018; April 5, 2023  
The STEM Expo showcases original projects presented on posters by middle (5th - 8th) and high school students from across middle Tennessee. I served as an evaluator of student posters.

**Supervisor, Club MARVEL** November 10, 2012; November 16, 2013; November 14, 2014  
Supervised pre-service teacher candidates (enrolled in MATH 3320) as they taught mathematics lessons to at-risk student participants of Club MARVEL from Murfreesboro City Schools.

**Instructor, Camp PRISM** June 3, 2013; May 28 and June 3, 2014

- A(May 28 and June 3, 2014) Collaborated with Dr. Chris Stephens and Mr. Wesley Baxter to co-plan and implement a lesson (titled, "A Day at the Theme Park") to engage middle grades students in modeling with mathematics.
- (June 3, 2013) Collaborated with Dr. Jeremy Strayer to co-plan and implement a lesson to help middle grades students in Camp PRISM (from Murfreesboro City Schools) gain a deeper understanding of the mean in statistics. See MTSU news video at <http://www.youtube.com/watch?v=AnRTpswPrLU>

**Tutor, Suncoast Area Teacher Training Tutor-a-Bull Program** Fall, 2010  
Tutored seventh and eighth grade students in a local middle school in mathematics.

**After School Math Club Supervisor/Tutor** Spring, 2010

**University Area Community Center, Tampa, FL**

Assisted Dr. Vomvoridi-Ivanovic in the After School Math Club for elementary students (grades K-5). Responsibilities included supervision of pre-service elementary teachers and tutoring/teaching mathematics to elementary school students.

**Volunteer/Student Teacher** January-June, 2009

**Greco Middle School, Temple Terrace, FL**

Assisted classroom teachers with instruction of eighth grade mathematics.

**AWARDS**

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**CBAS Teaching Excellence Award** 2019  
College of Basic and Applied Sciences, Middle Tennessee State University

**Faculty of the Year Award** 2018  
Mathematics and Science Education Ph.D. Program, Middle Tennessee State University

**MEDIA APPEARANCES AND INTERVIEWS**

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**Mentoring for NCTM's Mathematics Teacher: Learning and Teaching PK-12** April 14, 2021  
National Council of Teachers of Mathematics, <https://nctm.wistia.com/medias/0husyf3gd9>

- MTSU True Blue Preview: Mathematics and Science Education, Ph.D.** March 6, 2018  
MTSUNEWS, <https://www.youtube.com/watch?v=pFssaRWUGnM>
- Math Ed Podcast Episode 1404: Sarah Bleiler** February 23, 2014  
Hosted by Dr. Sam Otten,  
[https://www.podomatic.com/podcasts/mathed/episodes/2014-02-23T16\\_19\\_44-08\\_00](https://www.podomatic.com/podcasts/mathed/episodes/2014-02-23T16_19_44-08_00)
- MTSU Assists City Schools with Camp PRiSM (+VIDEO)** June 25, 2013  
MTSUNEWS, <https://mtsunews.com/mtsu-assists-city-schools-with-camp-prism-2013/>