

Courtney K. Baker

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EDUCATION

- 2014 Ph.D **George Mason University** - Fairfax, VA
Specialization: Mathematics Education Leadership
Secondary Concentration: Teaching and Teacher Education
Dissertation: *A Case Study of Novice Teachers' Mathematics Problem Solving Beliefs and Perspectives*
Dissertation Chair: Margret Hjalmarson
- 2008 M. A. **George Mason University** - Fairfax, VA
Endorsement: K-8 Mathematics Specialist Leader
Thesis: *Incorporating Problem Solving in Kindergarten Classrooms*
- 2004 **George Mason University** - Fairfax, VA
PK-6 Elementary Education License
- 2002 B.S. **Virginia Polytechnic Institute & State University** - Blacksburg, VA
Animal and Poultry Science
Emphasis: Equine Science

ACADEMIC POSITIONS

- Fall 2019-Present **George Mason University** – Fairfax, VA
College of Education & Human Development
Assistant Professor (Tenure-Track), Mathematics Education Leadership
- Fall 2014-Summer 2019 **George Mason University** – Fairfax, VA
College of Education & Human Development
Assistant Professor (Term), Mathematics Education Leadership
- Fall 2016-Present **George Mason University** – Fairfax, VA
College of Education & Human Development
Academic Program Coordinator, Mathematics Education Leadership
- Fall 2009-Summer 2014 **George Mason University** – Fairfax, VA
College of Education & Human Development
Adjunct Faculty
- Fall 2009-Spring 2013 **George Mason University** – Fairfax, VA
College of Education & Human Development
Graduate Research Assistant

PROFESSIONAL POSITIONS

- June 2019-July 2019 **Virginia Commonwealth University** – Richmond, VA

	Consultant for Mathematics Teacher Leader Professional Development Design
August 2018-March 2019	Middleburg Community Charter School – Middleburg, VA Professional Development Facilitator & Consultant for K-5 Educators
July 2015-Present	Manassas City Public Schools – Manassas, VA Professional Development Facilitator for Mathematics Coaches
2011-2014	Virginia Run Elementary School – Centreville, VA Mathematics Resource Teacher
2012-2014	Fairfax County Public Schools – Fairfax, VA Teacher Intervention Team Program Consultant
2009-2011	Clearview Elementary School – Herndon, VA Mathematics Consultant
2006-2009	Eagle View Elementary School – Fairfax, VA Second & Fourth Grade Teacher
2004-2006	Parklawn Elementary School – Fairfax, VA Fourth Grade Teacher

RESEARCH INTERESTS

- Development of mathematics specialists, coaches, and teacher leaders
- Model-eliciting activities
- Self-study methodology
- Synchronous online teaching; specializing in leadership
- Design-based implementation research w/ district partnerships
- STEM integration and problem-based learning

RESEARCH AND SCHOLARSHIP

Peer-Reviewed Research Articles

- Baker, C. & Knapp, M.** (2019). The decision-making protocol for mathematics coaching: Addressing the complexity of coaching with intentionality and reflection. *Mathematics Teacher Educator*, 7(2), 27-43.
- Baker, C. & Hjalmarson, M.** (2019). Designing purposeful interactions to advance synchronous learning experiences. *International Journal of Web-based Learning and Teaching Technologies*, 14(1), 1-16.
- Baker, C. K., Galanti, T. M.***, Graham, J.#, Hayden, K.* & Bailey, P. (2018). From book club to professional learning community: Empowering a network of mathematics specialists. *School University Partnerships*, 11(4), 48-63.
- Baker, C. K. & Galanti, T. M.*** (2017). Integrating STEM in K-8 classrooms using model-eliciting activities: Responsive professional development for mathematics teacher leaders. *International Journal of STEM Education*, 4(10). doi:10.1186/s40594-017-0066-3

*co-author/presenter is a current or former student

co-author/presenter is a K-12 school district partner

Groth, L.A., Parker, A., Parsons, S.A., Sprague, D., Brown, E. L., **Baker, C.** & Suh, J. (2017). George Mason University's elementary PDS program: Embracing innovation. *School-University Partnerships: The Journal of the National Association for Professional Development Schools*, 10(1), 3-5.

Peer-Reviewed Practitioner Articles

Baker, C. & Wallace, A (2019). Notes from the field: A mathematics teaching and learning resource bar none. *Virginia Mathematics Teacher*, 45(2). Retrieved from <http://www.vctm.org/VMT-Spring-2019>

Baker, C., Knapp, M., & Galanti, T. M.* (2018). Principles to actions: Coaches engage. *Teaching Children Mathematics*, 25(1), 36-45.

Baker, C. & Wills, T. (2012). Technology from the Classroom: Have you used a glog yet? *Teaching Children Mathematics*, 19(5), 324-327.

Referred Book Chapters

Hjalmarson, M., Holincheck, N., **Baker, C.**, & Galanti, T.* (in press). Modeling in STEM learning. In M. Mohr-Schroeder and T. Moore (Eds.). *Handbook of Research on STEM Education* (pp. TBD). Charlotte, NC: Association of Mathematics Teacher Educators.

Baker, C. K., Bitto, L., Wills, T., Galanti, T. M.*, & Eatmon, C.* (2018). Developing teacher leaders through self-study: A mathematics education field experience. In Hodges, T. E., & Baum, A. (Eds.). *Handbook of Research on Teacher Education* (pp. 635-658). Hershey, PA: IGI Global.

Gallagher, M. A., Parsons, S. A., Parker, A. K., Groth, L., Brown, E. L., **Baker, C.**, & Suh, J. M. (2018). The importance of collaboration: Embedding courses in clinical practice. In K. Zenkov & K. Pytash (Eds.), *Clinical experiences in teacher preparation: Critical, project-based interventions in diverse classrooms*. New York, NY: Routledge.

Suh, J. M., Birkhead, S.* **Baker, C.**, Frank, T., & Seshaiyer, P. (2017). Leveraging Coach-Facilitated Professional Development to Create Teacher Networks for Enhancing Professional Practice. In L. West & M. Boston (Eds.), *Annual Perspectives in Mathematics Education: Reflective and Collaborative Processes to Improve Mathematics Teaching* (89-100). Reston, VA: National Council of Teachers of Mathematics.

Suh, J. M., Sprague, D. R., & **Baker, C. K.** (2016). Transforming mathematics teacher knowledge in the digital age through iterative design of course-based projects. In Niess, M., Driskell, S., & Hollebrands, K. (Eds.), *Handbook of Research on Transforming Mathematics Teacher Education in the Digital Age* (190-214). Hershey, PA: IGI Global.

Invited Book Chapters

Baker, C., Bailey, P., Larsen, S., & Galanti, T.* (2017). A critical analysis of emerging high-leverage practices for mathematics specialists. In M. McGatha and N. Rigelman (Eds.). *Elementary Mathematics Specialists* (pp.183-192). Charlotte, NC: Association of Mathematics Teacher Educators.

Baker, C. K., Bailey, P., Hjalmarson, M. A, & King, L.* (2017). Mentoring mathematics

teacher leaders: Guiding the transition from classroom teacher to agent of change. In Kent, A.M., & Green, A.M. (Eds.). *Across the Domains: Examining Best Practices in Mentoring Public School Educators* (pp.189-202). Charlotte, NC: Information Age Publishing.

Invited Blog Post

Baker, C. (April, 2017). When teacher candidates “do the math” with Exemplars. [blog post]

Retrieved from:

https://www.exemplars.com/blog/education/2607?utm_source=Master+Subscription+List&utm_campaign=ccb72d611b-20170427-anchorpaper-blog-A-B-PSCC&utm_medium=email&utm_term=0_bef865cbab-ccb72d611b-96728469

Social Media Publications

Invited Podcasts

Baker, C. & Knapp, M. (August, 2019). The Decision-Making Protocol for Mathematics Coaching: Addressing the Complexity of Coaching With Intentionality and Reflection. *Mathematics Teacher Educator Podcast*.

Invited Twitter Chats

Baker, C. & Knapp, M. (September, 2018). Coaches engage with *Principles to Actions*. *Teaching Children Mathematics* Twitter Chat for Featured Articles.

SPONSORED RESEARCH ACTIVITIES

Funded Grants

C. Baker (PI), M. Hjalmanson, N. Holincheck, & J. Nelson. *Model-eliciting activity design considerations to achieve K-8 STEM integration*. (02/01/2019 – 06/30/2020). George Mason University, College of Education SEED Grant. Award Amount \$7,428.00.

C. Baker (PI), M. Hjalmanson, N. Holincheck, & J. Nelson. *Model-eliciting activity design considerations to achieve STEM integration*. (01/26/2018 – 06/30/2019). George Mason University, College of Education SEED Grant. Award Amount \$8,392.00.

Research Associate and Faculty. (With P. Seshaiyer, J. Suh, & T. Frank) *Transitions: Transforming mathematics instruction through mathematical modeling, algebraic thinking, and proportional reasoning, teaching and assessing*. (03/01/2015 – 09/30/2018). Virginia Department of Education. Award Amount \$711,114.

Research Associate and Faculty. (With P. Seshaiyer, J. Suh, & T. Frank) *Developing rational numbers and proportional reasoning through math modeling and performance-based assessments: Teaching and assessing Virginia’s 2009 6-8 mathematics standards of learning*. (03/01/2014 – 09/30/2015) Virginia Department of Education. Award Amount \$211,456.

Submitted Grants Under Review

C. Baker (PI), T. Frank (co-PI), & T. Galanti (co-PI). *Halting the Hyper-acceleration of Algebra I to Grade 7 or Earlier*. National Science Foundation, Discovery Research K-12 Education Program. \$99,564. Submitted November 2019.

Advisory Boards

Advisory Board Member. Ellington, A. (PI), Trinter, C. (Co-PI), & Whitenack, J (Co-PI). *The*

Virginia mathematics specialist initiative: An online program to prepare K-8 mathematics teacher leaders for high-needs school districts. (05/01/2017 – 04/30/2022). National Science Foundation: Robert Noyce Scholarship Program. Award Amount \$1,499,991.

Grants Unfunded

- T. Frank (co-PI) & **C. Baker (co-PI)**. *Exploring issues in Algebra 1 hyperacceleration*. National Science Foundation, Discovery Research K-12 Education Program. \$99,546. Submitted October 2018.
- N. Holincheck (PI), **C. Baker (co-PI)**, & M. Hjalmarson (co-PI). *Developing K-6 STEM teacher leaders: Teaching computational thinking through model-eliciting activities*. National Science Foundation, Discovery Research K-12 Education Program. \$3,944,014. Submitted November 2018.
- N. Holincheck, **C. Baker (co-PI)**, N. Tryfona, B. Bannan, & C. Edwards. *STEM+C educator corps: Engaging with teachers, teacher educators and curriculum to integrate data science and computational thinking in K-8 STEM education*. National Science Foundation, STEM+Computing K-12 Education Program. \$6,815,040. Submitted July 2018.
- C. Baker**. *CAREER: Moving the "M" in STEM forward with model- eliciting activities and school-based leadership*. National Science Foundation, CAREER Program. \$772,969. Submitted July 2017.
- C. Baker** & A. Gilbert. *SEISMIC: Sustained Engagement and Inquiry of STEM through Mathematics Instructional Coaching*. National Science Foundation, Discovery Research K-12 Education Program. \$443,444. Submitted November 2015.

HONORS, AWARDS & RECOGNITIONS

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| 2020 | Spotlight Speaker for the 2020 National Council of the Supervisors of Mathematics National Conference |
| 2019 | George Mason University Online Teacher of Distinction |
| 2019 | Spotlight Speaker for the 2019 National Council of the Supervisors of Mathematics National Conference |
| 2019 | Leadership Exchange Facilitator for the 2019 National Council of the Supervisors of Mathematics National Conference |
| 2015 | Research on Teacher Induction Outstanding Dissertation Award: Second Place
American Educational Research Association |
| 2015 | Online Teaching Initiative Essentials Completion Badge |
| 2008 | Academic Award for Mathematics Education Leadership
George Mason University – Fairfax, VA |

PRESENTATIONS

Refereed Presentations

- Baker, C.**, Galanti, T.* , Bitto, L., Wills, T. & Eatmon, C. C.* (2019, November). Acquiring a stance on equity and social justice within an online mathematics specialist program. In Otten, S., de Arujo, Z., Candela, A., & Munter, C. (Eds.), *Proceedings of the 41st annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 632-640). St. Louis, MO: University of Missouri.
- Baker, C.**, Kraft, T.* , & Galanti, T* . (2019, November). More than doing a “good job”: Coaching for meaningful engagement with model-eliciting activities. In Otten, S., de Arujo, Z., Candela, A., & Munter, C. (Eds.), *Proceedings of the 41st annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 655-659). St. Louis, MO: University of Missouri.
- Eatmon, C. C.* , **Baker, C.**, Morrow-Leong, K., Wills, T. (2019, November). Number talks as a high-leverage method to foster equity in diverse classrooms. In Otten, S., de Arujo, Z., Candela, A., & Munter, C. (Eds.), *Proceedings of the 41st annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 665-670). St. Louis, MO: University of Missouri.
- Bradey, C., McLean, J., Jung, H., Dominguez, A., **Baker, C. K.**, & Glancy, A. (2019, November). Models and modeling working group. In Otten, S., de Arujo, Z., Candela, A., & Munter, C. (Eds.), *Proceedings of the 41st annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 2026-2036). St. Louis, MO: University of Missouri.
- Baker, C. K.**, & Bitto, L. (2019, April). A self-study of mathematics teacher educators in a blended mathematics specialist program. Paper presented at the Annual Meeting of the American Educational Research Association, Toronto, Canada.
- Bolyard, J., & **Baker, C. K.** (2019, April). Examining the work of mathematics specialist or teacher leaders through agency, agenda and positioning. Paper presented at the Annual Meeting of the American Educational Research Association, Toronto, Canada.
- Baker, C.**, Knapp, M., Hjalmarson, M., Rigelman, N., Bailey, P., & McGatha, M. (2017, October). Developing a research agenda of mathematics teacher leaders and their preparation and professional development experiences. In Galindo, E. B., Newton, J., Stump, S., & Kastberg, S. (Eds.), *Proceedings of the 39th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1489-1496). Indianapolis, IN: Purdue University.
- Baker, C.**, Galanti, T.* , & Birkhead, S.* (2017, October). STEM and model-eliciting activities: Responsive professional development for K-8 mathematics coaches. In Galindo, E. B., Newton, J., Stump, S., & Kastberg, S. (Eds.), *Proceedings of the 39th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 439-446). Indianapolis, IN: Purdue University.
- Baker, C.**, Knapp, M., & Galanti, T.* (2017, October). Decision-making protocol for mathematics coaching: Connecting research to practice. In Galindo, E. B., Newton, J., Stump, S., & Kastberg, S. (Eds.), *Proceedings of the 39th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 535). Indianapolis, IN: Purdue University.

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- Baker, C. K.**, Hjalmanson, M. A., Bailey, P. & King, L.* (2017, April). Mentoring mathematics teacher leaders: Guiding the transition from classroom teacher to agent of change. Paper presented at the Annual Meeting of the American Educational Research Association, San Antonio, TX.
- Baker, C.**, Galanti, T. *, Suh, J. M., Seshaiyer, P. & Frank, T. (2016, November). Identifying barriers to teacher growth in implementing problem solving by reflecting on lesson study. In Wood, M. B., Turner, E. E., Civil, M., & Eli, J. A. (Eds.), *Proceedings of the 38th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 355-358). Tucson, AZ: The University of Arizona.
- Suh, J. M., Birkhead, S.* , Seshaiyer, P., Frank, T., & **Baker, C.** (2016, November). The use of coach facilitated professional development to deepen algebraic thinking across the transition grades. In Wood, M. B., Turner, E. E., Civil, M., & Eli, J. A. (Eds.), *Proceedings of the 38th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 442). Tucson, AZ: The University of Arizona.
- Parker, A. K., Parsons, S. Groth, L., Sell, C., Brown, E. L., **Baker, C.**, & Gallagher, M. (2016, February). School-based teacher preparation: Collaborating with PK-6 partners to reconceptualize methods courses and field experiences. Paper presented at the annual meeting of the Association of Teacher Educators, Chicago, IL.
- Baker, C. K.**, Hjalmanson, M. A., Reybold, L. E., & Suh, J.M. (2015, April). The impact of beliefs and background on mathematical problem solving. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.
- Baker, C. K.**, Hjalmanson, M. A., & Reybold, L. E. (2013, April). The impact of beliefs and background on a first year teacher's problem solving. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.

CONFERENCES

International Conferences

- Hjalmanson, M.A. & **Baker, C. K.** (2016, July). Synchronous online courses for mathematics teacher leaders. Presented at the 13th International Congress on Mathematical Education, Hamburg, Germany.

Invited National Conferences and Institutes

- Baker, C. K.**, & Knapp, M. (2018, April). Math Coaches Enact *Principles to Actions*: Intentionally Balancing Content and Context to Make Instructional Shifts. Invited Pre-Session Workshop Presented at the 50th Annual Meeting of the National Council of Supervisors of Mathematics, Washington, D.C.
- Baker, C.** & Knapp, M. (2017, June). The Decision-Making Protocol for Mathematics Coaches: Advancing your practice and school mathematics program. Presented at the National Mathematics Coaching Conference, Farmington, ME.
- Baker, C. K.** & Ward, J. (2016, July). Base ten and place value: K-2. Presented at the National Council of Teachers of Mathematics Connecting Numbers and Operations in the Classroom Institute, Denver, CO.

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Baker, C. K. & Ward, J. (2016, July). Addition and subtraction: K-2. Presented at the National Council of Teachers of Mathematics Connecting Numbers and Operations in the Classroom Institute, Denver, CO.

Baker, C. K. & Ward, J. (2015, July). Base ten and place value: K-2. Presented at the National Council of Teachers of Mathematics Connecting Numbers and Operations in the Classroom Institute, Chicago, IL.

Bailey, P., Hjalmarson, M., **Baker, C.**, Bolyard, J., King, L*. (2015, May). Ideal and Reality, Needs and Support: Math Specialist Identity. Presentation at AMTE Elementary Mathematics Specialists Research Conference. Waukesha, WI

Baker, C. K. & Ward, J. (2015, July). Addition and subtraction: K-2. Presented at the National Council of Teachers of Mathematics Connecting Numbers and Operations in the Classroom Institute, Chicago, IL.

National Conferences & Institutes

Hjalmarson, M., **Baker, C.**, Holincheck, N., Galanti, T., & Nelson, J. (2019, October). Designing a transdisciplinary model-eliciting activity: Questions and challenges. Presented at the National STEM Education Research Summit, Raleigh, NC.

Baker, C., & Knapp, M. (2019, April). The Decision-making protocol for mathematics coaching: Apply high-leverage practices and advocate change. Presented at the National Council of Teachers of Mathematics Conference, San Diego, CA.

Baker, C. K., Knapp, M., & Rigelman, R. (2019, April). Practice makes perfect: Developing an effective mathematics practice through intentionally planned rehearsals. Presented at the 51st Annual Meeting of the National Council of Supervisors of Mathematics, San Diego, CA.

Baker, C., Bitto, L., Wills, T., Galanti, T.*, & Eatmon, C.* (2019, February). Developing leaders through self-study research: An analysis of field experiences in a mathematics specialist program. Presented at the Association of Mathematics Teacher Educators National Conference, Orlando, FL.

Knapp, M., **Baker, C.**, Rigelman, N., Larsen, S., Flessner, C., & Gibbons, G. (2019, February). Rehearsals as tools for mathematics teacher leader professional learning. Presented at the Association of Mathematics Teacher Educators National Conference, Orlando, FL.

Knapp, M., **Baker, C. K.**, & Hayden, K.* (2018, April). The Decision-making protocol for mathematics coaching: A tool to empower mathematics teacher leaders in supporting equitable teaching practices. Presented at the 50th Annual Meeting of the National Council of Supervisors of Mathematics, Washington, D.C.

Baker, C. K., Bailey, P., & Galanti, T.* (2017, April). From book club to professional learning community: Transforming and sustaining coaching capacity. Presented at the 49th Annual Meeting of the National Council of Supervisors of Mathematics, San Antonio, TX.

Larsen, S., Bailey, P., & **Baker, C.** (2017, April). Professional development for elementary mathematics specialists: Supporting research-based principles and practices. Presented at 2017 National Council of Supervisor of Mathematics Annual Conference, San Antonio, TX.

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co-author/presenter is a K-12 school district partner

- Galanti, T.* & **Baker, C.** (2017, April). Integrating the “M” in STEM through coaching and model-eliciting activities. Session presented at the 2017 National Council of Teachers of Mathematics Research (NCTM-R) Annual Meeting, San Antonio, TX.
- Baker, C.**, Larsen, S., Bailey, P., Galanti, T.* (2017, February). A critical analysis of emerging high-leverage practices for mathematics specialists. Presented at the Association of Mathematics Teacher Educators National Conference, Orlando, FL.
- Suh, J. M., **Baker, C.K.**, King, L.*, Galanti, T.*, Birkhead, S.*, Frank, T. & Seshaiyer, P. (June, 2016). Differentiating PD for mathematics specialists through Lesson Study collaborative networks and video coaching. Presented at the Virginia Mathematics Specialists Institute, Richmond, VA.
- Bailey, P., **Baker, C.**, & Larsen, S. (2016, April). Supporting mathematics specialists: Identification and development of high-leverage practices. Presented at the National Council of Teachers of Mathematics Research Conference, San Francisco, CA.
- Sprague, D., **Baker, C.**, & Suh, J. (2016, March). From self-study to collaboration: Working together to redesign the technology course. Presented at the National Association of Professional Development Schools Conference, Washington, D.C.
- Bailey, P., **Baker, C.**, Hjalmarson, M., Bolyard, J. & King, L.* (2016, January). I am a math specialist: Now what? Presented at the Association of Mathematics Teacher Educators National Conference, Irvine, CA.
- Sell, C. R., Groth, L., **Baker, C.**, Parker, A. K., & Parsons, S. (April 2015). Purposeful exploration of video-coding (Edthena) in an elementary teacher preparation program. Presentation at the annual meeting of the Association of Teacher Educators of Virginia (ATE-VA), Roanoke, VA.
- Baker, C. K. (2011, October). Student invented mathematics: Promoting critical thinking of computation through problem-based assessments. Presented at the National Council of Teachers of Mathematics National Conference, Atlantic City, NJ.
- Hott, B. L. & **Baker, C. K.** (2011, April). Using the concrete-representational-abstract method to teach measurement. Presented at the Council for Exceptional Children Annual Convention, National Harbor, MD.
- Baker, C. K.** & Suh, J.M. (2011, January). Content-focused coaching with pre-service teachers. Presented at the Association of Mathematics Teacher Educators National Conference, Irvine, CA.

Local, State & Regional Conferences

- Baker, C.** (2019, September). Tired of reactive coaching? Try proactive coaching! Presented at the Virginia Council of Mathematics Specialists 8th Annual Conference, Fredericksburg, VA.
- Baker, C.**, & Knapp, M. (2019, September). The Decision-making protocol for mathematics coaching: Advocating change through research-based practices. Presented at the National Council of Teachers of Mathematics Regional Conference, Boston, MA.
- Baker, C. (2019, May). Mathematics teacher leader rehearsals for equity: Reframing our thinking. Presented at the Loudoun County Public Schools Mathematics Chair and Subject Area Leadership Team Meeting, Ashburn, VA.

- Baker, C. (2019, April). Developing a collaborative vision for mathematics instruction. Presented at the Mathematics Specialist Mentoring Workshop for Virginia Commonwealth University Noyce Fellows, Richmond, VA.
- Baker, C.**, Escaboar, M.#, & Barnhill, K.# (2019, March). Model-eliciting activities and STEM integration in the primary grades. Presented at the Virginia Council of Teachers of Mathematics Conference, Farmington, VA.
- Baker, C.**, & Knapp, M. (2019, March). Advocate for math: Intentional collaboration with other instructional leaders. Presented at the Virginia Council of Teachers of Mathematics Conference, Farmington, VA.
- Baker, C.**, Speaks, J.#, Metcalf, J.#, March, A.#, Collins, K.#, Charnley, K.#, & Singletary, R.# (2019, March). Keep math at the center of STEM integration via model-eliciting activities. Presented at the Virginia Council of Teachers of Mathematics Conference, Farmington, VA.
- Baker, C.**, Wallace, C.#, & Teets, A.# (2019, March). Using clinical interviews to guide instruction. Presented at the Virginia Council of Teachers of Mathematics Conference, Farmington, VA.
- Stamberg, B.* & **Baker, C.** (2019, March). I don't understand! What do they want me to do? Connecting representations. Presented at the Virginia Council of Teachers of Mathematics Conference, Farmington, VA.
- Knapp, M. & **Baker, C.** (2018, November). The decision-making protocol for mathematics coaching: A tool to empower mathematics teacher leaders. Presented at the National Council of Teachers of Mathematics Regional Conference, Seattle, VA.
- Baker, C.** & Knapp, M. (2018, September). Working with administrators: Intentionally planning advocacy. Presented at the Virginia Council of Mathematics Specialists 7th Annual Conference, Fredericksburg, VA.
- Baker, C.** & Knapp, M. (2018, March). Intentionally move instruction forward: Balancing content, context & *Principles to Actions*. Session presented at the Virginia Council of Teachers of Mathematics Annual Conference.
- Graham, J.#, Baker, M.#, Huntley, K.#, Marsh, A.#, Flake, S.#, & **Baker, C.** (2018, March). Model-eliciting activities: Maintaining a math focus in STEM integration. Session presented at the Virginia Council of Teachers of Mathematics Annual Conference.
- Baker, C.** & Knapp, M. (2018, February). Enhancing your coaching practice: The decision-making protocol for mathematics coaching. Presented at the Fairfax County Public Schools Elementary Mathematics Resource Teacher Meeting, Fairfax, VA.
- Baker, C.**, Hayden, K.*, & Willerth, S.* (2017, September). The decision-making protocol for mathematics coaching: Enhancing mathematics coaching and intentionally enacting Principles to Actions. Presented at the Virginia Council of Mathematics Specialists 6th Annual Conference, Culpepper, VA.
- Suh, J., Birkhead, S.*, Galanti, T.*, Freeman, P., Gillen, L., **Baker, C.**, Frank, T., & Seshiayer, P. (2017, September). Coaching for powerful math classrooms using problems to unpack the learning trajectories. Presented at the Virginia Council of Mathematics Specialists 6th Annual Conference, Culpepper, VA.

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- Wills, T. & **Baker, C.** (2017, September). Strategies to make online teaching better than face to face. Presented at the annual George Mason University Innovations of Teaching and Learning Conference, Fairfax, VA.
- Baker, C.** & Galanti, T.* (2017, March). Process as product: STEM integration through model-eliciting activities. Session presented at the Virginia Council of Teachers of Mathematics Annual Conference.
- Baker, C.**, Galanti, T.*, Eaglen, A.*, Clovis, J.*, Krajieski, B.*, Miknis, A.*, Suh, J., Seshaiyer, P., & Frank, T. (2017, March). Making instructional shifts: Targeted professional development on coaching. Session presented at the Virginia Council of Teachers of Mathematics Annual Conference.
- Frank, T., Farmer, R.*, Tripathi, A.*, Suh, J., **Baker, C.**, & Seshaiyer, P. (2017, March). Broadening participation for English learners in mathematics. Session presented at the Virginia Council of Teachers of Mathematics Annual Conference.
- Seshaiyer, P., Suh, J., **Baker, C.**, Frank, T., Birkhead, S.*, Galanti, T.*, Burrell, E.*, Taylor, E.*, & Wiseman, B.* (2017, March). Ducks and sheep to minotaurs and pegasi: Algebraic thinking grades 2-11. Session presented at the Virginia Council of Teachers of Mathematics Annual Conference.
- Baker, C. K.** & Galanti, T. M.* (2016, October). Implementing MEAs to achieve STEM integration. Presented at the 5th annual Virginia Military Institute STEM Education Conference, Lexington, VA.
- Smucny, D., **Baker, C. K.**, & Tripathy, M. (2016, September). Teaching strategies to promote imagination and creativity through student choice. Presented at the annual George Mason University Innovations of Teaching and Learning Conference, Fairfax, VA.
- Bailey, P. R. & **Baker, C. K.** (2016, March). Math specialists/coaches: Support through networking. Presented at the annual Virginia Council of Teachers of Mathematics Conference, Stafford, VA.
- Baker, C. K.**, Smucny, D., & Tripathy, M. (2015, September). Beyond the discussion board: Increasing participation and engagement in synchronous and asynchronous learning environments. Presented at the annual George Mason University Innovations of Teaching and Learning Conference, Fairfax, VA.
- Baker, C. K. (2013, March). Differentiate and engage to make the math workshop work for you. Presented at the annual Virginia Council of Teachers of Mathematics Regional Conference, Virginia Beach, VA.
- Baker, C. K.** & Lee, C. (2012, April). Exploring our available resources: Probability and statistics. Presented at the Westfield Pyramid Mathematics Institute, Chantilly, VA.
- Baker, C. K.** & Lee, C. (2012, February). Exploring our available resources: Measurement and geometry. Presented at the Westfield Pyramid Mathematics Institute, Chantilly, VA.
- Baker, C. K.** & Wyland, R. (2012, January). Addition for the primary grades: Putting it all together.

Presented at the Fairfax County Public School Elementary Mathematics Lead Conference, Lorton, VA.

Baker, C. K. & Wills, T. (2011, April). Using Glogster to enhance student understanding. Presented at the annual Battlefields of Northern Virginia Council of Teachers of Mathematics Regional Conference, Manassas, VA.

Baker, C. K. (2011, March). Student invented mathematics: Promoting critical thinking of computation through problem-based assessments. Presented at the annual Virginia Council of Teachers of Mathematics Conference, Harrisonburg, VA.

Baker, C. K. (2010, March). Using a teacher book club to gain mathematical understanding. Presented at the annual Virginia Council of Teachers of Mathematics Regional Conference, Richmond, VA.

Baker, C. K. (2008, January). Implementing problem solving in the primary classroom. Presented at the Fairfax County Public School Elementary Mathematics Lead Conference, Fairfax, VA.

Baker, C. K. (2007, January). Invented mathematics: A unique approach to mathematics. Presented at the Fairfax County Public School Elementary Mathematics Lead Conference, Fairfax, VA.

ACADEMIC TEACHING AND ADVISING

PhD in Education Program

George Mason University

EDCI 855: Mathematics Education Leadership Research on Teaching and Learning

EDCI 994: Advanced Internship in Education

Master's Program for K-8 Mathematics Specialists (Online Synchronous/Hybrid)

George Mason University

EDCI 645: Curriculum in Mathematics Education Leadership

EDCI 644: Assessment in Mathematics Education Leadership

EDCI 646: School Change in Mathematics

EDCI 666: Research in Mathematics Education Leadership

EDCI 702: Internship in Mathematics Education Leadership

Elementary Mathematics Licensure and Master's Program

George Mason University

EDCI 552: Math Methods for the Elementary Classroom

EDCI 790: Internship in Elementary Education; University Facilitator

Teaching Culturally, Linguistically Diverse & Exceptional Learners Program

George Mason University

EDUC 513: Teaching Math in International Settings

COMPLETE Center Courses: Continuing Education in Mathematics Education

George Mason University

MATH 600: Assessing Math Learning and Modeling Math in Primary Grades

MATH 600: Modeling Math Ideas Across Learning Progressions

MATH 600: TRANSITIONS Algebraic Thinking

MATH 600: TRANSITIONS Proportional Reasoning

MATH 600: TRANSITIONS Geometric and Spatial Reasoning

Guest Lectures

George Mason University

EDRS 825: Advanced Research Methods in Self-study (Spring 2019)

EDRS 810: Problems and Methods in Education Research (Fall 2019)

Student Supervision

Doctoral Dissertation Committees

Terrie Galanti (GMU, member); Summer 2018-Summer 2019

Doctoral Advising Committees

Terrie Galanti (GMU, member); 2016-2018

Sara Birkhead (GMU, member); 2016-2018

Cassie Cook Eatmon (GMU, member); Spring 2018-present

COMMUNITY TEACHING AND PROFESSIONAL DEVELOPMENT WORKSHOPS

Baker, C. K. (2019, May). Considering actions for equity in mathematics. Presented at Loudoun County Public Schools Secondary Mathematics Department Chair Professional Development, Loudoun, VA.

Baker, C. K. (2016, August). Integration of STEM in mathematics. Presented at Manassas City Public Schools Professional Development Day, Osborne High School, Manassas City, VA.

Baker, C. K. & Galanti, T.* (2016, June 27-30). STEM in math. Presented at Manassas City Public Schools Curriculum Development Week, MCPS Instructional Headquarters, Manassas City, VA.

Baker, C. K. (2015, August). Structuring your RTI to engage in mathematics: K-4. Presented at Manassas City Public Schools Professional Development Day, Metz Middle School, Manassas City, VA.

Baker, C. K. (2015, August). Structuring your RTI to engage in mathematics: 5-8. Presented at Manassas City Public Schools Professional Development Day, Metz Middle School, Manassas City, VA.

Baker, C. K. (2015, March). The VRES math program: Understanding where we came from and knowing where we are going. Presented at Virginia Run Elementary School, Centreville, VA.

Baker, C. K. (2015, January). A brand new start: Looking back and moving forward. Presented at Cesar Chavez Public Charter School for Public Policy, Washington, D.C.

Baker, C. K. (2014, November). Facilitating mathematical discourse: A continued conversation. Presented at Cesar Chavez Public Charter School for Public Policy, Washington, D.C.

Baker, C. K. (2014, October). Facilitating mathematical discourse: Lesson study reflection. Presented at Cesar Chavez Public Charter School for Public Policy, Washington, D.C.

Baker, C. K. (2014, September). Facilitating mathematical discourse. Presented at Cesar Chavez Public Charter School for Public Policy, Washington, D.C.

*co-author/presenter is a current or former student

co-author/presenter is a K-12 school district partner

Baker, C. K. (2013, November). Facilitating professional learning communities. Presented at the initial George Mason University Mathematics Specialist Institute, Fairfax, VA.

ACADEMIC AND COMMUNITY SERVICE

Service to the Field

Editorial and Grants Duties

National Science Foundation Reverse Site Panel; PIRE (Fall 2018)
 National Science Foundation Review Panel; DRK-12 (Spring 2017)
 Editorial Board, *The Journal of Mathematics and Science: Collaborative Explorations* (2019 – present)
 Editorial Review Board, *International Journal of Web-based Learning and Teaching Technologies* (2017-2019)

Journal Reviewer

Reviewer, *Mathematics Teacher: Learning and Teaching PreK-12* (2018-present)
 Reviewer, *Mathematics Teacher Educator* (2018-present)
 Reviewer, *Virginia Mathematics Teacher Journal* (2017-present)
 Reviewer, *National Council of Supervisors of Mathematics* (2017, July)
 Reviewer, *Psychology of Mathematics Education – North America* (2019, 2017, 2016, May)
 Reviewer, *American Educational Research Association* (2016 & 2015, August)
 Reviewer, *Teaching Children Mathematics* (2011-2019)
 Assistant Editor, *School-University Partnerships* (2014-2018)

Leadership in Professional Organizations and Associations

2019-present	Nominated	Board Member Virginia Mathematics and Science Coalition
2019-present	Nominated	Board Member Virginia Council of Mathematics Specialists
2017-2019	Nominated	4-Year College Representative Virginia Council of Teachers of Mathematics

Professional Organizations and Associations

American Educational Research Association (AERA)
 Association of Mathematics Teacher Educators (AMTE)
 Association of Teacher Education (ATE)
 National Council of Teachers of Mathematics (NCTM)
 National Council of Supervisors of Mathematics (NCSM)
 Virginia Council of Mathematics Specialists (VACMS)
 Virginia Council of Teachers of Mathematics (VCTM)
 Virginia Association of Mathematics Teacher Educators (VA-AMTE)

Service to the University/ College

George Mason University

Spring 2017	Chair	Mathematics Education Leadership Search Committee
Fall 2017	Member	Advanced Professional Teacher Development and International Education Outlook Coordinator Search Committee
2016-present	Co-Chair	Standards 1 & 2 Advanced Programs CAEP Working Group
January 2016	Invited	PhD Student Curriculum Vitae Workshop
2015-2017	Invited	New Faculty Orientation Planning Committee

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co-author/presenter is a K-12 school district partner

Service to the Program/ Department***George Mason University – Mathematics Education Program***

Summer 2019	Organizer	Mason Mathematics Education Leadership Summer Tweet Club
2017-present	Co-Chair	Mason Coaching Institute for Mathematics and Literacy
2014-2016	Chair	Annual GMU Mathematics Specialist Institute
2015-2016	Organizer	Mathematics Coaching Professional Learning Communities