

Katherine Ariemma Marin, Ph.D.

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Education

Ph.D., *Boston College* Chestnut Hill, MA
Curriculum and Instruction: Mathematics Education
May 2015

M.Ed., *Framingham State University* Framingham, MA
Elementary Education
May 2007

B.A., *Boston College* Chestnut Hill, MA
Majors: Elementary Education and Human Development, Minor: Special Education
May 2001

Funding and Awards

Outstanding Faculty Award, *Stonehill College Department of Athletics* April 2020
Inclusive Excellence Grant, *Stonehill College Office of Intercultural Affairs* March 2019
Service, Teaching, and Research (STaR) Fellow, *Association of Mathematics Teacher Educators* 2016-2017
Donald J. White Teaching Excellence Award, *Boston College* 2009-2010

Teaching

Higher Education

Assistant Professor of Math Education, *University of Louisville* Louisville, KY
July 2021 – present

- ◆ Courses Taught: EDTP313: Math Methods; EDTP314: Field Experience

Associate Professor of Education Studies, *Stonehill College* Easton, MA
July 2020 – June 2021

- ◆ Tenure awarded January 2020
- ◆ Director, Moreau Honors Program
June 2020 – present
- ◆ Courses Taught: EDU225: Learn to Teach II; EDU301: Assessment and Analysis in Education; EDU310: Content Specific Pedagogy; EDU315: Curriculum and Instructional Design; EDU320: Teaching Mathematics, Science, and Technology; EDU333: Special Topics in Education (Classroom Management for Secondary Education); EDU621: Teaching Mathematics to Students with Disabilities; HON400: Senior Seminar for Moreau Honors Scholars; and MTH143: Mathematical Reasoning for Education
- ◆ Internships Supervised: The May Institute (Spring 2016); The Martin Middle School (Spring 2016); School on Wheels (Fall 2016); Attleboro YMCA Camp Finberg (Fall 2018); English-Spanish Two Way Dual Language Program, Brockton Public Schools (Spring 2019); Dedham High School Foreign Language Department (Summer/Fall 2019)
- ◆ Directed Studies: Lesson Planning in Mathematics (Spring 2016); Teaching Math, Science & Technology (Fall 2018); Classroom Management for Secondary Education (Fall 2019); The Inclusive Secondary Classroom (Spring 2020); Adolescent Development (Fall 2020).
- ◆ Service to the College: General Education Advisory Committee; Learning Sapces Committee; Faculty Hiring Guide Revision Committee; 2019 CIHE/NEASC Steering Committee Group Standard 4 The Academic Program; Team Faculty Liaison for Field Hockey; Faculty Advisor for Education Society; Generation Z Faculty Learning Community

Assistant Professor of Education Studies, *Stonehill College* Easton, MA
July 2015 – June 2020

Adjunct Faculty, *Lesley University* Cambridge, MA
January 2015 – August 2016

- ◆ Courses Taught: CSTEM5105: Expressions & Equations, CSTEM5103: Fraction as Number

Adjunct Faculty, Boston University Boston, MA
Spring 2015

- ◆ Courses Taught: SED ME504: Elementary Mathematics II: Mathematical Reasoning in the Elementary Grades

Adjunct Professor, Endicott College Beverly, MA
Spring 2014

- ◆ Courses Taught: EDPF573: Developing Proportional Thinking

Teaching Fellow, Boston College, Lynch School of Education Chestnut Hill, MA
September 2010 to December 2011

- ◆ Courses Taught: ED039: Learning & Curriculum in the Elementary School; ED520: Mathematics & Technology: Teaching and Learning in the Elementary School

Instructor, Salem State University, School of Education Salem, MA
Spring 2011

- ◆ Courses Taught: EDU347: Elementary School Mathematics with Field Experience

K-12 Education

Project Coordinator, Math Teacher Leaders Project, Diocese of Fall River Catholic Schools Fall River, MA
January 2020 – present

- ◆ Project design, oversight, and management
- ◆ Development and delivery of professional development for Math Teacher Leaders & Administrators
- ◆ Mentoring for Math Teacher Leaders cohort

Mathematics Consultant Stoughton, MA
June 2008 – present

- ◆ Design and delivery of professional development courses targeted to school/district needs
- ◆ Math coaching and instructional support for K-8 mathematics
- ◆ Data analysis student support plans, and curriculum reviews for mathematics

Middle School Coordinator of Mathematics Instruction and Intervention Westwood Public Schools Westwood, MA
September 2014 to June 2015

- ◆ Provided coaching and instructional support to classroom and special education teachers grades 6-8
- ◆ Classroom teacher in full inclusion classroom for grade 7 mathematics (September 2014 – June 2015)

K-8 Mathematics Coordinator, Westwood Public Schools Westwood, MA
September 2011 to June 2014

- ◆ Chaired curriculum and assessment design and development for grades K-8
- ◆ Designed and delivered professional development courses and workshops for teachers, coaches, and administrators

Grade Six Mathematics Teacher, Seven Hills Charter Public School Worcester, MA
July 2004 - June 2008

- ◆ Classroom teacher in full inclusion classroom

Classroom Teacher, St. William School Boston, MA
September 2001 – June 2004

- ◆ Grade 4 Classroom teacher (2002-2004)
- ◆ Grade 7 Classroom teacher & Grades 5-8 Mathematics Teacher (2001-2002)

Professional Licenses

- ◆ Massachusetts Elementary Teacher (1-6)
- ◆ Massachusetts Mathematics (1-6)
- ◆ Massachusetts Mathematics (5-8)

Research

Current Projects

Gen Z in the Math Classroom: 21st Century Teachers and Learners

- ◆ **Marin, K. A.**

Introducing Teacher Candidates to a Professional Network: Diverse Conference Experiences

- ◆ **Marin, K. A.**, & Roller, S. A.

Past Projects

Capturing Disappearing Data: Photographs and Learning Trajectories as Formative Assessment Tools

- ◆ Roller, S. A., Cunningham, E.P., & **Marin, K. A.**

National Science Foundation – Robert Noyce Teacher Scholarships Program. *Communities of Practice: Teacher Preparation and Beyond.*

- ◆ PI: Karen L. Anderson, Ph.D.; Co-Is: Quinn, E., Woodcock, T., McNamara, K., Yang, E., & **Marin, K. A.**
- ◆ Funded by the National Science Foundation

NURE 2016: What's So Demanding About Cognitive Demand? (Summer 2016)

- ◆ Student Researchers: Lauren Hennessey, Class of 2018 and Danielle Tarchara, Class of 2019

Graduate Assistant to Dr. Rebecca Mitchell, Boston College, Lynch School of Education (2009 – 2011)

- ◆ Research Assistant for studies examining the use of video and MQI coding protocols with student teachers, the effectiveness of mathematics methods courses, the development of MKT in pre-service teachers, & the intersections of mathematics education and cognitive psychology in mathematics methods courses.

Graduate Assistant to Rev. Joseph M. O'Keefe, SJ, Boston College, Lynch School of Education (2008 – 2009)

- ◆ Research Assistant for Sustaining the Legacy II: A Longitudinal Study of Inner-City Catholic Schools

Publications

Book Chapters

Marin, K. A., Roller, S. A., & Cunningham, E. P. (2020). Dynamic duo: Photographs and learning trajectories to enhance teacher noticing to support formative assessment. In C. Martin, D. Polly, & R. Lambert (Eds.), *Handbook of Research on Formative Assessment in Pre-K through Elementary Classrooms*. Hershey, PA: IGI Global

Peer-Reviewed Journal Articles

Martell, C. C., Carney, M. M., Marin, K. A., & Hashimoto-Martell, E. A. (2021). Whose research counts? Teacher research and the practitioner-academic divide. *The Teacher Educator*. 56(4), 399-426, DOI: 10.1080/08878730.2021.1927274

Roller, S. A., Cunningham, E. P., & **Marin, K. A.** (2019). Photographs and learning progressions: Supports for intentional assessment and instruction in mathematics. *Young Children*. 74(3), 26-32.

Roller, S. A., Cunningham, E. P., & **Marin, K. A.** (2019). Capturing disappearing data and strategy development: Use photographs as a formative assessment tool. *Teaching Children Mathematics*. 25(6), 382-383.

Anderson, K. L., Boyd, M., **Marin, K.A.**, & McNamara, K. (2019). Reimagining service-learning: Deepening the impact of this high impact practice. *Journal of Experiential Education*. <https://doi.org/10.1177/1053825919837735>

Marin, K. A. (2018). Routinizing mathematics vocabulary: The vocab grid. *Mathematics Teaching in the Middle School*. 23(7), 395-398.

Mitchell, R. N. & **Marin, K. A.** (2015). Examining the Use of a Structured Observation Protocol to Support Pre-Service Teacher Noticing. *Journal of Mathematics Teacher Education*. 18(6), 551-575.

Marin, K. A. (2014). Becoming a teacher educator: A self-study of the use of inquiry in a mathematics methods course. *Studying Teacher Education*. 10(1), 20-35.

Conference Proceedings Papers

Martell, C., Carney, M. M., **Marin, K. A.**, & Hashimoto-Martell, E. A. (2019). The practitioner-academic research divide endures: A review of teacher research in the content areas, presented at the Annual Meeting of the American Educational Research Association, Toronto, Ontario, 2019. Washington, D.C.: American Educational Research Association.

Book Reviews

Ariemma, K. (2012). Lessons Learned: What International Assessments Tell Us About Math Achievement: Book review. *Catholic Education: A Journal of Inquiry and Practice*. 15(2), 357-359.

Professional Presentations

Marin, K. *Talking About Their Generation! Generation Z in the Math Classroom*. National Council of Teachers of Mathematics 2021 Annual Meeting. April 29, 2021. Virtual.

Marin, K. & Roller, S. *Diverse Conference Experiences: An Introduction to Professional Networking*. Poster presentation at the NCTM 2020 Research Symposium. April 1, 2020. Chicago, IL. *Cancelled due to COVID-19

Marin, K. & Roller, S. *Introducing Teacher Candidates to a Professional Network: Diverse Conference Experiences*. Poster presentation at the Association of Mathematics Teacher Educators Annual Conference. February 7, 2020. Phoenix, AZ.

Roller, S. & **Marin, K.** *Math Work Stations: Supporting Preservice Teachers to Notice and Analyze Mathematical Thinking in Photographs*. Presentation at the Association of Mathematics Teacher Educators Annual Conference. February 7, 2020. Phoenix, AZ.

Marin, K. *Manipulatives Are for Middle School Too! – Building Conceptual Understanding with Concrete Models*. Presentation at the National Council of Teachers of Mathematics Regional Conference. September 26, 2019. Boston, MA.

Marin, K., Roller, S., & Cunningham, E. Click, Click, Zoom! Using Photographs and Learning Progressions as Tools for Formative Assessment. Presentation at the National Council of Teachers of Mathematics Regional Conference. September 27, 2019. Boston, MA.

Martell, C. C., Hashimoto-Martell, E. A., **Marin, K. A.**, & Carney, M. M. *The Practitioner-Academic Research Divide Endures: A Review of Teacher Research in the Content Areas*. Presentation at the American Educational Research Association Annual Meeting. April 6, 2019. Toronto, Ontario.

Roller, S. A., Cunningham, E. P., & **Marin, K. A.** In a SNAP! Using Photographs and Learning Progressions as a Formative Assessment Tool. Presentation at the National Council of Teachers of Mathematics 2019 Annual Meeting. April 4, 2019. San Diego, CA.

Marin, K. A., Cunningham, E. P., & Roller, S. Coaching Teachers to Use Photographs and Learning Progressions as Formative Assessment Tools. Presentation at the National Council of Supervisors of Mathematics 2019 Annual Conference. April 1, 2019. San Diego, CA.

Marin, K. A. & Anderson, K. L. Non-traditional Service Learning as Field Experience: The NUMB3Rs Project. Presentation at the Association of Mathematics Teacher Educators 2018 Annual Meeting. February 10, 2018. Houston, TX.

Anderson, K. L. & **Marin, K. A.** *Deepening the Impact of Early Field Experiences*. Poster Session at the Association of Mathematics Teacher Educators 2018 Annual Meeting. February 9, 2018. Houston, TX.

Marin, K. A. *Beyond Word Problems: Modeling with Mathematics Using 3 Act Tasks*. Presentation at the Massachusetts Mathematics Association of Teacher Educators 2017 Symposium. May 23, 2017. Bridgewater, MA.

Marin, K. A. *Looking for Patterns and Making Use of Structure: Making Sense of Practices 7 & 8 with Math Content.* Presentation at the Association of Teachers of Mathematics in Massachusetts Spring Conference. March 24, 2017. Worcester, MA.

Marin, K. A. *Talking the Math Talk: How Teachers' Learning Sparks Kids' Talking.* Presentation at the Massachusetts Mathematics Association of Teacher Educators 2016 Symposium. May 25, 2016. Bridgewater, MA.

Marin, K. A. *How long is $\sqrt{3}$? Building Number Sense with Number Lines.* Presentation at the Association of Teachers of Mathematics in Massachusetts Spring Conference. March 19, 2016. Marlborough, MA.

Marin, K. A. *Bar Modeling: A Model for All.* Presentation at the Association of Teachers of Mathematics in New England 2015 Fall Conference. October 29-30, 2015. Portland, ME.

McHugh, M., **Marin, K. A.**, & Abramson, M. *STAT(S)!: Critical Thinking Activities with Statistics.* Presentation at the National Council of Teachers of Mathematics 2015 Annual Meeting. April 15-18. Boston, MA.

Marin, K. A. *Division concepts in grades 3-6.* Presentation at the Association of Teachers of Mathematics in Massachusetts 2014 Winter Conference. January 9, 2014. Boston College, Chestnut Hill, MA.

Marin, K. A. and Galante, J. *Division concepts in grades 3-6.* Presentation at the Association of Teachers of Mathematics in New England 2013 Annual Meeting. October 24-25, 2013. Killington, VT.

Mitchell, R. N., **Ariemma, K.**, and Bujalski, A. *Using MQI protocol as videocoding intervention for student teachers.* Presentation at the National Council of Teachers of Mathematics 2012 Annual Meeting. April 25-28, 2012. Philadelphia, PA.

Ariemma, K. *Beyond basic facts: Developing relational thinking skills in grades K-2.* Gallery Workshop Presentation at the National Council of Teachers of Mathematics 2011 Annual Meeting. April 13-16, 2011. Indianapolis, IN.

Ariemma, K. and Mitchell, R. N. *Through the looking glasses: A self-study of an elementary mathematics methods course using Brookfield's four critically reflective lenses.* Paper presented at the American Educational Research Association 2011 Annual Meeting. April 8-12, 2011. New Orleans, LA.

Mitchell, R. N. and **Ariemma, K.** *Examining the development of preservice teacher mathematical knowledge for teaching (MKT) using a multiple case study approach.* Paper presented at the American Educational Research Association 2011 Annual Meeting. April 8-12, 2011. New Orleans, LA.

Ariemma, K. *Inquiry about inquiry: Exploring a new model for elementary mathematics teacher education.* Paper presented at the 32nd Annual Ethnography in Education Research Forum. February 25-26, 2011. University of Pennsylvania, Philadelphia, PA.

Professional Service

Association of Teachers of Mathematics in Massachusetts (ATMIM) – Affiliate of NCTM

President Elect (2019 – 2021); Director (2018 – 2019); Scholarship Chair (2017 – 2018)

Massachusetts Mathematics Association of Teacher Educators (MassMATE) – Affiliate of AMTE

Treasurer (2017 – 2021); Board Member (2016 – 2021)

Boston Area Mathematics Specialists (BAMS)

Secretary (2013 – 2015)

Mathematics Teacher: Learning and Teaching PK-12

NCTM Journal Referee (2019 – present)

Teaching Children Mathematics

NCTM Journal Referee (2010 – 2019)

Association of Mathematics Teacher Educators

Conference Proposal Reviewer (2017, 2019, 2020, 2021)

Massachusetts Department of Elementary and Secondary Education

Committee Member, Elementary Mathematics Content Advisory Committee – Objective Review Conference (2019)

Committee Member, Subject Matter Knowledge (SMK) Working Group: Elementary Mathematics (1-6) (2017)

Committee Member, MTEL General Curriculum – Mathematics Content Advisory Committee (2016)

Committee Member, MCAS Mathematics Assessment Development Committee, Grade 5 (2013 – 2015)

Massachusetts Department of Higher Education

Taskforce Member, Taskforce on Mathematics Diagnostics for Elementary Teacher Preparation (2009 – 2010)

Diocese of Fall River Academic Excellence Committee

Committee Member (2018 – 2021)

Professional Affiliations

- ◆ Association of Mathematics Teacher Educators (AMTE)
- ◆ Kentucky Association of Mathematics Teacher Educators (KAMTE)
- ◆ Kentucky Council of Teachers of Mathematics (KCTM)
- ◆ National Council of Supervisors of Mathematics (NCSM)
- ◆ National Council of Teachers of Mathematics (NCTM)
- ◆ TODOS: Mathematics for All (TODOS)