

# Nicole A. Bannister, Ph.D.

## Curriculum Vitae

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### Academic Identification

#### **Name**

Nicole A. Bannister

#### **Position**

Associate Professor, Mathematics Education 2019—Present  
Clemson University, Clemson, SC  
Jointly Appointed in the College of Education (51%) Department of Teaching and Learning and  
the College of Science (49%) School of Mathematical and Statistical Sciences

#### **Academic Degrees**

Doctor of Philosophy, Learning Sciences 2009  
University of Washington, Seattle, WA  
Dissertation: *Reframing practice: High school mathematics teachers' learning through  
interactions in teacher groups*

Committee: Ilana Horn (Chair), John Bransford, Elham Kazemi, James King

Master of Science, Mathematical Sciences 2001  
Clemson University, Clemson, SC

Bachelor of Science, Mathematics 1999  
College of Charleston, Charleston, SC  
Minor: Secondary Mathematics Education  
*Honors Program Graduate*

#### **Academic Experience**

Associate Professor, Mathematics Education 2019—Present  
Clemson University, Clemson, SC  
Jointly Appointed in the College of Education (51%) Department of Teaching and Learning and  
the College of Science (49%) School of Mathematical and Statistical Sciences

Assistant Professor, Mathematics Education 2012—2019  
Clemson University, Clemson, SC  
Jointly Appointed in the College of Education (51%) Department of Teaching and Learning and  
the College of Science (49%) School of Mathematical and Statistical Sciences

Graduate Research Assistant, College of Education 2004—2009  
University of Washington, Seattle, WA, with Ilana Horn and Chrysan Gallucci

Graduate Teaching Assistant, Department of Mathematical Sciences 1999—2001  
Clemson University, Clemson, SC, with Sherry Biggers

#### **Professional Licensure**

National Board Certified Teacher (NBCT) 2008—2018  
National Board for Professional Teaching Standards  
*Certification Area: Adolescence and Young Adulthood Mathematics (AYA/Math)*

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State of Washington Teaching License 2006—2016  
*Certification Area: Mathematics (6-12)*

State of Georgia Teaching License 2000—2010  
*Certification Areas: Mathematics (6-12); Gifted-In Field; AP Calculus Endorsement*

State of South Carolina Teaching License 1999—2004  
*Certification Area: Mathematics (6-12)*

### **Professional Teaching Experience**

Mathematics Teacher and Instructional Coach, Cleveland High School 2006—2008  
Seattle Public Schools, Seattle, WA

Mathematics Teacher, Grayson High School 2001—2004  
Gwinnett County Public Schools, Loganville, GA

Student Teacher, Wando High School 1999  
Charleston County School District, Mt. Pleasant, SC

Practicum Teaching Intern, Septima P. Clark Corporate Academy 1998  
Charleston County School District, Charleston, SC

### **Organizational Affiliations**

American Educational Research Association (AERA)  
Association of Mathematics Teacher Educators (AMTE)  
International Society of the Learning Sciences (ISLS)  
National Council of Teachers of Mathematics (NCTM)  
Psychology of Mathematics Education, North American Chapter (PME-NA)  
South Carolina Center of Excellence for Innovation in Mathematics and Science (CEIMS)  
South Carolina Council of Teachers of Mathematics (SCCTM)  
TODOS: Mathematics for ALL (TODOS)

### **Research**

#### **Publications**

##### *Peer Reviewed Articles*

Crespo, S., Bowen, D., Buli, T., **Bannister, N.**, Kalinec-Craig, C. (2021, accepted). Supporting prospective teachers to notice and name student language resources as mathematical strengths. *ZDM Mathematics Education*, 53(2).

Kalinec-Craig, C., **Bannister, N.**, Bowen, D., Jacques, L., & Crespo, S. (2020). “It was smart when:” Supporting prospective teachers’ noticing of students’ mathematical strengths. *Journal of Mathematics Teacher Education*. Advanced online publication. DOI: 10.1007/s10857-020-09464-2

- Bannister, N.** & Sinwell, B. (2019). Connecting hexagon constructions and similarity. *Mathematics Teacher*, 112(4). 320. DOI: 10.5951/mathteacher.112.4.0320
- Sinwell, B., & **Bannister, N.** (2019). Constructing triangles with technology: Modeling important concepts in geometry. *AATM OnCore Journal*. 27-32. (Invited Manuscript)
- Bannister, N.** (2018). Theorizing collaborative mathematics teacher learning in communities of practice. *Journal for Research in Mathematics Education*, 49(2). 125-139. DOI: 10.5951/jresemetheduc.49.2.0125
- Bannister, N.**, Kalinec-Craig, C., Bowen, D., & Crespo, S. (2018). Learning to notice and name students' mathematical strengths: A digital experience. *Journal for Technology and Teacher Education*, 26(1). 13-31.
- Leonard, A. E. & **Bannister, N.** (2018). Dancing our way to geometric transformations. *Mathematics Teaching in the Middle School*, 23(5). 258-267. DOI: 10.5951/mathteacmidscho.23.5.0258
- Simpson, A., **Bannister, N.**, & Matthews, G. (2017). Cracking her codes: Understanding shared technology resources as positioning artifacts for power and status in CSCL Environments. *International Journal of Computer-Supported Collaborative Learning*, 12(3). 221-249. DOI: 10.1007/s11412-017-9261-y
- Bannister, N.** (2016). Breaking the spell of differentiated instruction through equity pedagogy and teacher community. *Cultural Studies in Science Education*, 11(2). 335-347. DOI: 10.1007/s11422-016-9766-0
- Bannister, N.** (2015). Reframing practice: Teacher learning through interactions in a collaborative group. *Journal of the Learning Sciences*, 24(3), 347-372. DOI: 10.1080/10508406.2014.999196
- Bannister, N.** & Linder, S. (2015). Teaching for learning: Recasting a traditionally summative assessment as an intentionally formative experience. *The Educational Forum*, 79(2). 190-199. DOI: 10.1080/00131725.2014.1002594
- Bannister, N.** (2011). A sweet way to investigate volume. *Mathematics Teacher*, 105(5), 400. DOI: 10.5951/mathteacher.105.5.0400
- Published/Indexed Refereed International and National Conference Proceedings*
- Bannister, N.** & Wilder, P. (2020). Investigating collaborative teacher learning in rural contexts. To appear In Gresalfi, M. & Horn, I. S. (Eds.), *Proceedings of the International Conference of the Learning Sciences 2020: Interdisciplinarity of the Learning Sciences*. <https://repository.isls.org/>

- Horn, I. S. & **Bannister, N.** (2020). Interactionist perspectives on mathematics teachers' collaborative learning: Implications for intervention design. In Boriko, H. & Potari, D. (Eds.), *Proceedings of the International Commission on Mathematical Instruction (ICMI) Study 25: Teachers of Mathematics Working and Learning in Collaborative Groups* (pp. 126-133), Lisbon, Portugal: Instituto de Educação, Universidade de Lisboa.  
<https://www.mathunion.org/icmi/conferences/icmi-study-conferences>
- Bannister, N.**, Kalinec-Craig, C., Crespo, S. Bowen, D., & Jacques, L. (2018). Learning to notice and name strengths with LessonSketch. In Hodges, T.E., Roy, G. J., & Tyminski, A. M. (Eds.), *Proceedings of the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 1279), Greenville, SC: University of South Carolina & Clemson University. <https://www.pmena.org/proceedings/>
- Bannister, N.**, Arbaugh, F., & Simpson, A. (2016). Pressing methodological boundaries: Analyzing PCK using frame alignment processes. In M. B. Wood, E. E. Turner, M. Civil, & J. A. Eli (Eds.), *Proceedings of the 38th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1620-1623), Tucson, AZ: The University of Arizona. <https://www.pmena.org/proceedings/>
- Horn, I. S., Yoon, I., Kane, B. D., **Bannister, N.**, van Es, E. A., & Hand, V. (2014). Teachers' learning about equitable practice through talk with colleagues. In Polman, J. L., Kyza, E. A., O'Neill, D. K., Tabak, I., Penuel, W. R., Jurow, A. S., O'Connor, K., Lee, T., & D'Amico, L. (Eds.), *Proceedings of the International Conference of the Learning Sciences (ICLS) 2014: Learning and Becoming in Practice* (Vol. 3, pp. 1209-1218). Denver, CO.  
<https://doi.org/10.22318/icls2014.1209>
- Bannister, N.** (2011). Reframing failure: An analysis of high school mathematics teachers' learning. In Wiest, L. R., & Lamberg, T. (Eds.), *Proceedings of the 33rd Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 399-407), Reno, NV: University of Nevada, Reno.  
<https://www.pmena.org/proceedings/>
- Bannister, N.** (2011). Constructing equitable teaching practices: An analysis of mathematics teachers' conversations. In Wiest, L. R., & Lamberg, T. (Eds.), *Proceedings of the 33rd Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1946-1947), Reno, NV: University of Nevada, Reno. <https://www.pmena.org/proceedings/>
- Bannister, N.** (2009). Reframing failure: High school mathematics teachers' learning about struggling students through participation in workplace communities. In S. L. Swars, D. W. Stinson, & S. Lemons-Smith (Eds.), *Proceedings of the 31st Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (Vol. 5, pp. 1033-1041), Atlanta, GA: Georgia State University, GA.  
<https://www.pmena.org/proceedings/>

### *Book Chapters*

da Ponte, J. P., Miyakawa, T., Koichi, B., Pepin, B., & **Bannister, N.** (in preparation). Theoretical perspectives on studying mathematics teacher collaboration. In Borko, H. & Potari, D. (Eds.), *Teachers of Mathematics Working and Learning in Collaborative Groups: The 25th ICMI Study*. New York, NY: Springer.

**Bannister, N.** & Arbaugh, F. (2018). In the spotlight: Supporting focus teachers in video-based collaborative learning settings. In N. Llevot & O. Caverro (Eds.), *Advanced learning and teaching environments: Innovation, contents and methods* (pp. 73-84). IntechOpen. DOI: 10.5772/intechopen.74030

### *Technical Reports*

Steele, M., **Bannister, N.**, Eli, J., Krupa, E., Orona, C., Safi, F. (2016). *National Council of Teachers of Mathematics review of and response to the AMTE standards for mathematics teacher preparation*. NCTM: Reston, VA.

### **Research Presentations**

#### *Refereed International and National Conference Presentations*

**Bannister, N.** & Wilder, P. (2020). Investigating collaborative teacher learning in rural contexts. *International Conference of the Learning Sciences 2020: Interdisciplinarity of the Learning Sciences*. Nashville, TN. [isls.org/conferences/icls-2020-online-conference](http://isls.org/conferences/icls-2020-online-conference)

Crespo, S., Bowen, D., Buli, T., **Bannister, N.**, & Kalinec-Craig, C. (2020, April). Strength or deficit: Exploring how prospective teachers position multilingual students in the mathematics classroom. American Education Research Association (AERA) Annual Meeting, San Francisco, CA. (Conference canceled)

**Bannister, N.** & Horn, I. S. (2020, February). *Interactionist perspectives on mathematics teachers' collaborative learning: Implications for intervention design*. International Commission on Mathematical Instruction (ICMI) Study 25: Teachers of Mathematics Working and Learning in Collaborative Groups. Lisbon, Portugal: Instituto de Educação, Universidade de Lisboa.

**Bannister, N.** & Horn, I. S. (2020, February). *Our response to Shinno and Yanagimoto—An opportunity for preservice teachers to learn from inservice teachers' lesson study: Using meta-didactic transposition*. International Commission on Mathematical Instruction (ICMI) Study 25: Teachers of Mathematics Working and Learning in Collaborative Groups. Lisbon, Portugal: Instituto de Educação, Universidade de Lisboa.

Louie, N., Zavala, M., Dunleavy, T., Kalinec-Craig, C., & **Bannister, N.** (2020, February). *A critical perspective on equity pedagogies and race in mathematics education*. 24<sup>th</sup> Annual Conference of the Association of Mathematics Teacher Educators (AMTE). Phoenix, AZ.

**Bannister, N.**, Kalinec-Craig, C., Bowen, D., & Crespo, S. (2019, February). *Supporting PTs learning to draw on students' mathematical strengths*. 23<sup>rd</sup> Annual Conference of the Association of Mathematics Teacher Educators (AMTE). Orlando, FL.

- Leonard, A. E. & **Bannister, N.**, (2018, October). *Flip, turn, & slide: Case study of teaching dance-based inquiry of geometrical transformations*. National Dance Education Organization (NDEO) Annual Conference, San Diego, CA.
- Bannister, N.**, Leonard, A. E., McClenahan, J., & Jones, S. (2018, April). *Relearning the dance of geometric transformations*. National Council of Teachers of Mathematics (NCTM) Research Conference, Washington, D.C.
- Bannister, N.**, Arbaugh, F., & Simpson, A. (2017, April). *The role of reification in analyzing teacher learning*. National Council of Teachers of Mathematics (NCTM) Research Conference, San Antonio, TX.
- Bannister, N.**, Arbaugh, F., & Simpson, A. (2016, April). *Analyzing mathematics teacher learning using frame alignment processes*. National Council of Teachers of Mathematics (NCTM) Research Conference, San Francisco, CA.
- Matthews, G., **Bannister, N.**, & Simpson, A. (2016, April). *Cracking her codes: Investigating technology boundary objects using interaction analysis*. National Council of Teachers of Mathematics (NCTM) Research Conference, San Francisco, CA.
- Crespo, S., **Bannister, N.**, & Kalinec-Craig, C. (2016, April). Learning to notice students' mathematical competence. In W. R. Aaron (Chair), *Research on math teacher education in an online multimedia environment*. Symposium conducted at the National Council of Teachers of Mathematics (NCTM) Research Conference, San Francisco, CA.
- Bannister, N.** (2015, April). *An empirical example of teacher learning inside teacher community*. American Education Research Association Annual Meeting, Chicago, IL.
- Bannister, N.** (2014, June). *Capturing teachers' learning through their framing of a struggling student problem*. 11<sup>th</sup> International Conference of the Learning Sciences (ICLS), Denver, CO.
- Horn, I. S., **Bannister, N.**, Fetter, A., Hedgepeth, S., Black, A., Lanier, J., & Vilson, J. (2014, April). *Colleagues 2.0: The MathTwitterBlogoSphere and mathematics teachers' professional learning*. NCTM Research Conference, New Orleans, LA.
- Bannister, N.** (2014, April). *A brief introduction to high-press questioning*. National Council of Teachers of Mathematics (NCTM) Annual Meeting, New Orleans, LA.
- Luedeman, J., **Bannister, N.**, & Williams, C. L. (2014, January). *Improving middle grades teacher quality through the Clemson Mathematics Institute and Video Club*. Hawaii International Conference on Education, Honolulu, HI.
- Bannister, N.** (2014, January). *Capturing high school mathematics teachers' learning through their framing of a struggling student problem*. Hawaii International Conference on Education, Honolulu, HI.

- Bannister, N.** (2013, June). *Moving towards agency: An analysis of mathematics teachers' conversations*. Science and Maths Teacher Imperative Annual Conference, St. Louis, MO.
- Bannister, N.** (2012, April). *Constructing equitable teaching practices: An analysis of mathematics teachers' conversations*. American Education Research Association (AERA) Annual Meeting, Vancouver, British Columbia, Canada.
- Bannister, N. & Horn, I. S.** (2010, April). *Constructing student competence beyond the classroom: An analysis of mathematics teachers' collaborative conversations*. National Council of Teachers of Mathematics (NCTM) Research Conference, San Diego, CA.
- King, J. & **Bannister, N.** (2010, April). *Using video clubs as a vehicle to link instruction and student learning*. National Council of Supervisors of Mathematics (NCSM) Annual Meeting, San Diego, CA.
- Bannister, N. & Horn, I. S.** (2009, April). *Re-framing failure: High school mathematics teachers' learning about struggling students*. 13<sup>th</sup> Biennial Conference of the European Association for Research on Learning and Instruction (EARLI), Amsterdam, Netherlands.
- Burrill, G., King, J. & **Bannister, N.** (2009, January). *Making teaching public in a math centered learning environment: What did we learn?* Math and Science Partnership (MSP) Learning Network Conference, Washington, DC.
- Bannister, N., Burrill, G., White, A., Kanim, K., & King, J.** (2008, January). *PD<sup>3</sup>: Opening classroom doors as a vehicle for change*. Math and Science Partnership (MSP) Learning Network Conference, Washington, DC.
- Bannister, N.** (2005, April). *Exploring one teacher's experiences implementing reform-based mathematics*. National Council of Teachers of Mathematics (NCTM) Research Conference, St. Louis, MO.
- Invited Presentations*
- Bannister, N.** (2020, January). *Everyone is a math person*. Science on Tap. Pendleton, SC.
- Bannister, N.** (2019, October). *Learning to join an in-progress conversation of expertise*. Clemson College of Education REAL Lunch Tenure Conversation. Clemson, SC.
- Bannister, N.** (2019, September). *Understanding mathematics teacher learning within communities of practice*. Regional Education Laboratory Appalachia (REL-AP) at SRI International. Harrisonburg, VA.
- Bannister, N.** (2019, January). *Reframing teachers' professional learning for supporting students' mathematical thinking*. EDC Rural Professional Learning Network (RPLN) Series. El Dorado County, California.

- Bannister, N. & Leonard, A. E.** (2018, October). *Relearning the dance of geometric transformations*. Clemson Teaching Conference: Teaching Students Today, Clemson, SC.
- Bannister, N.** (2017, September). *A frame analysis approach for analyzing teacher learning in communities of practice*. University of Illinois-Chicago Learning Sciences Research Institute Speaker Series. Chicago, IL.
- Bannister, N.** (2015, July). *Geometry, isometry, & Escher: Fostering productive academic talk in your classes*. Tri-County Technical College, Pendleton, SC.
- Bannister, N.** (2015, March). *Using collaborative methods in university math courses*. Clemson University Association for Women in Mathematics (AWM) Speaker Series. Clemson, SC.
- Bannister, N.** (2007, July). *Using video as a tool to examine students' understanding of mathematics*. Park City Mathematics Institute (PCMI), Park City, UT.
- Regional and State Conference Presentations*
- Bannister, N.** (2017). *Connecting rural teacher education with the mission of the College of Education*. Clemson University Teaching and Learning Department Faculty Short Presentation Series. Clemson, SC.
- Bannister, N. & Seawright, J.** (2015, November). *Standing tall: Facilitating meaningful classroom discourse in 6th grade*. National Council of Teachers of Mathematics (NCTM) Regional Conference, Nashville, TN.
- Bannister, N.** (2015, November). *Smarter together: Developing habits of mind for teaching middle level and secondary geometry*. South Carolina Council of Teachers of Mathematics (SCCTM) Annual Meeting, Greenville, SC.
- Bannister, N.** (2015, November). *Strength in numbers: Learning to teach middle and secondary mathematics together*. South Carolina Council of Teachers of Mathematics (SCCTM) Annual Meeting, Greenville, SC.
- Bannister, N. & Breazel, E.** (2015, November). *Inquiring minds: Student enrichment through a peer teaching experience*. South Carolina Council of Teachers of Mathematics (SCCTM) Annual Meeting, Greenville, SC.
- Bannister, N. & Seawright, J.** (2013, October). *The power of pattern blocks...for students and their teachers!* South Carolina Council of Teachers of Mathematics (SCCTM) Annual Meeting, Greenville, SC.
- Bannister, N.** (2013, March). *Let's talk! Generating productive academic talk in your mathematics classroom*. Noyce Foundation Southeastern Conference, Greenville, SC.
- Bannister, N.** (2012, February). *Connected representations and the amazing technicolor dreamcoat*. Noyce Foundation Southeastern Conference, Greenville, SC.

**Bannister, N.,** Trakas, E. & Goss, C. (2011, October). *Origami geometry: Connecting straightedge and compass constructions to origami*. South Carolina Council of Teachers of Mathematics (SCCTM) Annual Meeting, Charleston, SC.

**Bannister, N.,** Jackson, J. & Trakas, E. (2011, October). *Complex instruction: Designing groupwork for middle school and secondary classrooms*. South Carolina Council of Teachers of Mathematics (SCCTM) Annual Meeting, Charleston, SC.

**Bannister, N.** (2011, March). *Complex instruction: Designing groupwork for secondary mathematics instruction*. Noyce Foundation Southeastern Conference, Greenville, SC.

**Bannister, N.** (2007, October). *Group-worthy Tasks*. Northwest Mathematics Conference, Bellevue, WA.

**Bannister, N.** (2006, June). *Moving forward: Teachers' learning of ambitious teaching practices in the context of video club*. University of Washington College of Education Qualitative Methods Conference, Seattle, WA.

### **Sponsored Research Funding**

#### *External Sponsored Research*

Bannister, N. (PI), Knijnenburg, B., & Caine, K. (2020-2022—in preparation). EAGER: SaTC AI-Cybersecurity: Mathematically-grounded metaphors to teach AI-related cybersecurity. National Science Foundation (NSF) Secure and Trustworthy Cyberspace Program (SaTC). \$300K.

Matthews, G., Childs, L., Chung, J., Jenkins, L. **Bannister, N.** (co-PI), & Sather-Wagstaff, S. (2019-2021). *MORE: Mathematics - Opportunities in Research and Education*. National Security Agency (NSA) Mathematical Sciences Program (MSP). \$25K.

*Mathematics - Opportunities in Research and Education (MORE)*. (2019-2022). National Science Foundation (NSF) Division of Mathematical Sciences (DMS).

Clemson Co-PIs: L. Jenkins, **N. Bannister**, & S. Sather-Wagstaff. Award #1902350, \$25K. Virginia Tech Co-PIs: G. Matthews, G., L. Childs, & J. Chung. Award #1902214, \$30K.

**Bannister, N.** (PI), Wilder, P., & Williams, C. L. (2017-2018). *Exploring the mathematics of genetics*. United States Department of Education, South Carolina Commission on Higher Education Improving Teacher Quality Higher Education Grant program. \$172K.

**Bannister, N.** (PI—50%), Wilder, P., & Williams, C. L. (2016-2017). *Understanding geometry by design*. United States Department of Education, South Carolina Commission on Higher Education Improving Teacher Quality Higher Education Grant program. \$142K.

**Bannister, N.** (PI—50%) & Wilder, P. (2015). *Inquiring minds: Motivating early adolescent learning in mathematics and science*. Greenwood County Community Foundation Grant program. \$4K.

Williams, C. L., Deaton, C., **Bannister, N.** (co-PI), & Hardwick, R. (2014). *The Clemson Integrated Mathematics and Science Institute*. United States Department of Education, South Carolina Commission on Higher Education Improving Teacher Quality Higher Education Grant program. \$103K.

Matthews, G. & **Bannister, N.** (co-PI) (2014-15). *We do math—A summer camp for high school girls*. Mathematical Association of America Tensor Women & Mathematics program. \$6K.

Matthews, G. & **Bannister, N.** (co-PI) (2014). *We do math—A summer mathematics experience for high school girls*. American Mathematical Society Epsilon Fund Grant program. \$5K.

Williams, C. L. & **Bannister, N.** (co-PI—40%) (2012-2014). *Improving middle grades teacher quality through the Clemson Mathematics Institute and video club*. United States Department of Education, South Carolina Commission on Higher Education Improving Teacher Quality Higher Education Grant program. \$213K.

Che, S. M., Williams, C. L., & **Bannister, N.** (2012). *iPad technology in middle grades mathematics: Meeting the need for highly qualified mathematics teachers*. United States Department of Education, South Carolina Commission on Higher Education Improving Teacher Quality Higher Education Grant program. \$63K.

#### *Other Sponsored Research*

**Bannister, N.** (co-PI), Visser, R., (2020-2021). *Makerspace @ The Steward School*. Clemson Creative Inquiry Program and Clemson Foundation (Internal). \$20K

**Bannister, N.** (PI), Boettcher, M., Croom, N., Jenkins, L., Sather-Wagstaff, A (2020-2021). *CU SEED-Tier 2: Including MORE voices in research on the graduate mathematics pipeline*. Clemson Support for Early Exploration and Development Grant Program (Internal). \$10K. (Virginia Tech Co-PIs: G. Matthews, L. Childs, & J. Chung)

**Bannister, N.** (PI) & Arbaugh, F. (2015). *Analyzing mathematics teacher learning*. Clemson University URGC Project Completion Grant program (Internal). \$3K

Calkin, N., **Bannister, N.** (co-PI), Corbin, V., Breazel, E., & Quigley, C. (2011-2015). *Inquiring minds: Engaging students with hands-on science and math activities*. Clemson Creative Inquiry program (Internal). \$5K

**Bannister, N.** (PI). (2009). *Learning in an MSP Community*. University of Washington College of Education Graduate Student Travel Grant program (Internal). \$500.

#### **Honors and Awards**

Dean's Leadership Institute, Inaugural Class 2019-2020  
College of Education, Clemson University

Selected as a Candidate for Co-Chair on the 2020 SIG-RME Election Ballot 2020  
Research in Mathematics Education, American Educational Research Association

Selected as a Candidate for Secretary on the 2019 AMTE Election Ballot Association of Mathematics Teacher Educators	2019
Top 3 Faculty Recognition to the Clemson University Board of Trustees College of Education, Clemson University	2016
Service, Teaching, and Research (STaR) Fellow Association of Mathematics Teacher Educators	2014
Excellence in Teaching Award Eugene T. Moore School of Education, Clemson University	2012-2013
Teaching & Teacher Education Outstanding Dissertation Award Finalist Division K, American Educational Research Association	2010
Excellence in Teaching Award Nominee Clemson Undergraduate Student Government and Fluor Daniel Corporation	2010
Spencer Dissertation Fellowship Finalist National Academy of Education	2010
Doi Doctoral Student Research Award College of Education, University of Washington	2008
Microsoft Innovative Teacher Award Microsoft Partners in Learning	2007
Recognition of Excellence Award for Outstanding Performance on the Praxis II (Mathematics: Content Knowledge), Educational Testing Service	2006
Esther-Livesey Scholarship Award for Teachers University of Washington, College of Education	2004
Atlanta Toyota Most Inspiring Teacher Award <i>Nominated by High School Student Joshua Golden</i>	2004
Student/Teacher Achievement Recognition (STAR) Teacher Grayson High School, Gwinnett County Public Schools <i>Nominated by High School Student David Rutter</i>	2004
Grayson High School Teacher Letter Faculty Award <i>Nominated by Grayson High School Teaching Faculty</i>	2004
Outstanding Creativity in the Classroom Award Grayson High School, Gwinnett County Public Schools	2003

The Center for Discrete Mathematics and Theoretical Computer Science (DIMACS) Connect Institute Fellow, Rutgers University 2003

Georgia Intern Fellowship for Teachers (GIFT) Fellow 2003  
Center for Education Integrating Science, Mathematics, and Computing (CEISMC)  
Georgia Institute of Technology, Internship: Water-Chemistry Lab, Georgia Power

Graduate Teaching Assistant of the Year 2001  
Mathematical Sciences Department, Clemson University

Jeremy Warren Vann Memorial Scholarship, Inaugural Recipient 1999  
Teacher Education Department, College of Charleston

### **Teaching and Advising**

#### **Teaching (Fall 2012 to Present)**

*College of Education, Clemson University*

ED 3970/HONS 499 Creative Inquiry: Inquiring Minds: Engaging Students with Hands-On Science and Math Activities

ED 3970 Creative Inquiry: Making to Learn Geometry

EDEL 4520/4521 Elementary Methods in Mathematics Teaching and Lab

EDML 8030 The Early Adolescent Learner

EDML 8130/8131 Middle Grades Mathematics Methods I and Practicum

EDML 8230/8231 Middle Grades Mathematics Methods II and Student Teaching

EDML 8080 Middle School Assessment for Teachers

EDML 8410 Advanced Middle School Curriculum

EDSC 8420 Advanced Studies in the Teaching of Secondary School Mathematics

EDSC 8620/8621 Teaching Methods and Strategies for Secondary Mathematics and Lab

ED 8250 Cultural Diversity

ED 8380 Geometry Teaching and Learning in Secondary Education

ED 9010 Classics in Mathematics Education Research

ED 9020 Independent Doctoral Study

ED 9910 Doctoral Dissertation Research

ED 9940 Directed Research

ED F 8080 Educational Tests and Measures

ED F 9020 Seminar in the Learning Sciences II

*School of Mathematical and Statistical Sciences, Clemson University*

MATH 1070 Differential and Integral Calculus

MATH 1080 Calculus of One Variable II

MATH 2160 Geometry for Elementary School Teachers

MATH 3080 College Geometry

MATH 4080 Exploration and Analysis of Secondary Mathematics

MATH 4910 Independent Study

MATH 7060 Probability and Statistics for Middle Grades Teachers

MATH 7090 Geometry for Middle Grades Teachers

MATH 7130 Algebra for Middle Grades Teachers

MATH 7140	Foundations of Mathematics for Middle Grades Teachers
MATH 7190	Special Topics: Equity & Groupwork in Middle Grades Mathematics
MATH 7490	Discrete Mathematics for Secondary Teachers
MATH 7770	AP Calculus Institute
MATH 7380	Modern Geometry for Secondary Teachers
MATH 9700	Directed Studies in Mathematical Sciences

### **New Courses Developed**

MATH 3130	Algebra for Middle Level Teachers
MATH 3140	Foundations of Mathematics for Middle Level Teachers

### **Academic Advising**

#### *Doctoral Committees*

#### Committee Chair—Completed

Leigh Martin, Ph.D., Curriculum and Instruction—Mathematics Education, 2016.  
 Department of Teaching and Learning, College of Education, Clemson University  
 “The intentionality of coaching responses: Connecting stances to practices”

#### Committee Chair—In Progress

Diana Carver, Educational Leadership (Co-Chair, Dr. Daniella Hall)

#### Committee Member—Completed

Lorraine Jacques, Ph.D., Learning Sciences, 2017.  
 Amber Simpson, Ph.D., Curriculum and Instruction—Mathematics Education, 2015.

#### Committee Member—In Progress

DeOnte Brown, Learning Sciences  
 Karen Franklin, Learning Sciences

#### *Master of Education Committees*

#### Committee Chair—Completed

Lisa Hall, M.Ed., Teaching and Learning, 2016.

#### Committee Member—Completed

Megan Shipman, M.Ed., Teaching and Learning, 2013.  
 Larry Fetterly, M.Ed., Teaching and Learning, 2012.

#### *Master of Arts in Teaching Committees*

#### Committee Chair—Completed

29 Middle Level Mathematics students, 2012-2018.

#### Committee Member—Completed

59 Middle Level Science, Social Studies, & English/Language Arts students, 2012-2018.  
 7 Secondary Mathematics students, 2012-2018.

## **Service**

### **Service to the Field**

#### *Leadership*

Mathematics - Opportunities in Research and Education Conference Organizer, 2019-2022.  
*MORE 2019: Virginia Tech; STRIVE for MORE 2020: Virtual*

Math Leaders COVID Consortium, 2020.

Advisory Board Member, NSF-Funded Research Grant: Building a Teacher Knowledge Base for the Implementation of High-quality Instructional Resources through the Collaborative Investigation of Video Cases (J. DiNapoli (PI), E. Murray (co-PI)), 2019-2023.

Advisory Board Chair, NSF-Funded Collaborative Research Grant: Mathematics Immersion for Secondary Teachers (MIST) At Scale (A. Cuoco (PI), D. Heck (co-PI), M. McLeod, Co-PI), 2017-2019.

2019 NCTM Annual Meeting Program Committee (Appointed), 2017-2019.

2018 PME-NA Local Organizing Committee (Appointed), 2017-2018.

NCTM Committee Review of AMTE Maths Teacher Preparation Standards (Appointed), 2016.

AP Reader, Advanced Placement Calculus AB and BC, The College Board, 2010-2012.

*Guest Reviewer (Journal Articles)*

American Education Research Journal

Cognition and Instruction

Educational Researcher

Journal of Mathematics Teacher Education

Journal of Curriculum Studies

Journal of the Learning Sciences

Journal of Teacher Education

Journal for Research in Mathematics Education

Teachers College Record

Teaching and Teacher Education

*Guest Reviewer (Conference Proposals)*

American Educational Research Association Annual Meeting

National Council of Teachers of Mathematics Annual Meeting and Research Conference

Psychology of Mathematics Education – North America Chapter Annual Meeting

**Service to Clemson Colleagues**

*University Service*

Undergraduate Curriculum Committee, College of Education Representative, 2019-Present.

*R-Initiatives* CU SEED Grants Committee, 2018-2020 (Invited)

*R-Initiatives* Alumni Award (AAOAR) Committee, 2018. (Invited)

University Research Grants Committee, 2015-2018.

Graduate Admissions and Continuing Enrollment Appeals Committee, 2014-2017. University

Graduate Council, 2014-2017.

*College Service*

Continuous Improvement Committee, 2020-2021.

College of Education Curriculum Committee, 2019-Present.

Undergraduate Middle Level Degree Program Development Committee, 2017-Present.

Middle Level and Secondary MAT Program Development Committee, 2018-Present.

*Department Service*

Chair, TL Middle Level Program Area, 2019-Present.

Co-Chair, 2 TL Associate Professor Science Education Faculty Search Committees, 2019-2020.

TL Departmental Advisory Committee (DAC), 2018-2021.

TL Curriculum Committee, 2015-Present.

Curriculum & Instruction Doctoral Program Advisory Committee (DPAC), 2018-2021.

Ad Hoc TL Bylaws Committee, 2019-2020.

TL Department Chair Search Committee, 2018-2019.  
LS Doctoral Advisory Committee, 2017-2018.  
TL Elementary Mathematics Education Faculty Search Committee, 2016-2017.  
Secondary Mathematics Education Faculty Search Committee, 2015-2016.  
Ad Hoc Departmental Name and Vision Subcommittee, 2014-2015.  
Ad Hoc Committee for Distinguished Scholar Visitation, 2013-2015.  
Ad Hoc Committee on Clinical Supervision, 2013-2014.  
Founder and Facilitator, Teacher Induction Support Group, 2013.  
Clemson Calculus Challenge Exam Committee and Volunteer, 2011-2012.  
Chair, Ad Hoc Committee for Revisions to Secondary Education Math Sequence, 2011.  
Chair, Ad Hoc Committee for Revisions to Elem. Education Math Sequence, 2009-2010.

### **Service to Practitioners and the Public**

#### *Invited Workshop Presentations*

- Bannister, N.** (2016, July). *A multiple representation mash-up problem for intermediate algebra*. National Council of Teachers of Mathematics High School Institute, Atlanta, GA.
- Bannister, N.** (2016, July). *Let's talk about intermediate algebra*. National Council of Teachers of Mathematics High School Institute, Atlanta, GA.
- Bannister, N.** (2015, July). *Using connected representations to promote reasoning and problem solving*. National Council of Teachers of Mathematics High School Institute, Anaheim, CA.
- Bannister, N.** (2015, July). *Fostering meaningful mathematical discourse in your intermediate algebra classroom*. National Council of Teachers of Mathematics High School Institute, Anaheim, CA.
- Bannister, N.** (2014, July). *Developing perseverance and problem solving skills in an intermediate algebra context*. National Council of Teachers of Mathematics Interactive Institute—Grades 9-12, Chicago, IL.
- Bannister, N.** (2014, July). *Developing mathematical precision and argumentation skills in an intermediate algebra context*. National Council of Teachers of Mathematics Interactive Institute—Grades 9-12, Chicago, IL.
- Bannister, N.** (2007, August). *Groupwork in the Mathematics Classroom*. Short Course. Northwest Mathematics Interaction Math Short Course, Seattle, WA.
- Bannister, N.** (2006, November). *Effective use of groupwork*. Northwest Mathematics Interaction Teacher Workshop, Seattle, WA.

#### *Professional Development Leadership and Design*

- Bannister, N., Wilder, P., & Williams, C. L.** (2011-2018). Monthly Video Club Workgroup. *Exploring the Mathematics of Genetics* (2017-2018). Greenwood, SC.  
*Geometry by Design* (2016-2017). Greenwood, SC.  
*ML Math Teacher Video Club* (2011-12, 2012-13, 2013-14, 2014-15). Abbeville, SC.

**Bannister, N., Wilder, P., & Williams, C. L. (2012-2019).** The Clemson Mathematics Institute (CMI): Summer Institute for Teachers.

*CMI 2019: Exploring the Mathematics of Genetics II.* Greenville, SC.

*CMI 2018: Exploring the Mathematics of Genetics I.* Greenwood, SC.

*CMI 2017: Geometry by Design.* Greenwood, SC.

*CMI 2016: Geometric Habits of Mind.* Greenwood, SC.

*CMI 2015: Focus on Habits of Mind.* Abbeville, SC. (with B. Sinwell)

*CMI 2014: Focus on Statistics and Teacher Community* Abbeville, SC. (with B. Sinwell)

*CMI 2013: Focus on Geometry and Groupwork.* Abbeville, SC. (with B. Sinwell)

*CMI 2012: Focus on Algebra and Classroom Discourse.* Abbeville, SC. (with B. Sinwell)

**Bannister, N. (2014-2015).** *Classroom discussions in mathematics.* Workshop series for middle school mathematics teachers, Greenwood School District, Greenwood, SC.

Williams, C. L., Deaton, C. M., **Bannister, N.,** Hardwick, R., & Deaton, B. (2014, July). *The Clemson Integrated Mathematics and Science Institute—Focus on soil investigations and data analysis.* Summer Institute for Teachers. Greenville, SC.

**Bannister, N., & Williams, C. L. (2013-2014).** *Secondary lenses on learning: Team leadership for mathematics in middle and high schools.* Teacher Professional Development, Greenwood School District, Greenwood, SC.

**Bannister, N. (2008, July).** *Reflecting on practice: Connections to research.* Summer Institute for Teachers. Park City Mathematics Institute, Park City, UT.

Campbell, S., & **Bannister, N. (2008, July).** *Through an algebraic lens.* Teacher Professional Development. Teacher Leaders of Math Academy, Bethel School District, Bethel, WA.

Horn, I. S., & **Bannister, N. (2004-2008).** *Seattle PD<sup>3</sup> video club.* Monthly Video Club Workgroup, University of Washington, Seattle, WA.

**Bannister, N. (Summer 2005-2008).** *Working group: Learning from teaching cases.* Summer Institute for Teachers. Park City Mathematics Institute, Park City, UT.

**Bannister, N. (2007-2008).** *Secondary lenses on learning: Team leadership for mathematics in middle and high schools.* Teacher Workshop. Lakewood School District, Marysville, WA.

Stimpson, V., & **Bannister, N. (2006-2007).** *Secondary lenses on learning: Team leadership for mathematics in middle and high schools.* Teacher Professional Development. Bellevue and Northshore School Districts, Bothell, WA.

**Bannister, N. (2007, September).** *Groupwork in the classroom.* Teacher Workshop. Meadow Ridge Elementary School, Kent School District, Kent, WA.

*Teaching Presentations*

**Bannister, N.** (2015). Heterogeneous groupwork. In D. Kombe (Instructor), *Teaching Secondary Mathematics* (EDSC 4260). Clemson University, Clemson, SC.

**Bannister, N.** (2013, January). *Complex instruction*. Clemson University Middle Level MAT Program Faculty presentation. Clemson, SC.

**Bannister, N.** (2009). Research informed practice. In T. Lee (Instructor), *Service Learning and Research Seminar* (ECFS 305), University of Washington, Seattle, WA.

**Bannister, N.** (2006). Groupwork in the secondary mathematics classroom. In R. Killingsworth (Instructor), *Teaching secondary mathematics* (EDMA 3357), Seattle Pacific University, Seattle, WA.

**Bannister, N.** (2005). What kinds of activities help students make sense of mathematics? In S. Campbell (Instructor), *Teaching mathematics in the secondary school* (EDTEP 582), University of Washington, Seattle, WA.

**Bannister, N.** (2004). Technology in the secondary mathematics classroom. In I. S. Horn (Instructor), *Teaching Mathematics in the Secondary School* (EDTEP 582), University of Washington, Seattle, WA.