CURRICULUM VITAE

Aimee J. Ellington

Virginia Commonwealth University

Contact Information:

Department of Mathematics & Applied Mathematics
1015 Floyd Avenue
P O Box 842014
Richmond, VA 23284-2014
ajellington@vcu.edu

Education:

University of Tennesse – Knoxville, Tennessee, 2000
Doctor of Philosophy in Mathematics Education
Dissertation – "The Effects of Hand-held Calculators on Precollege Students in the Mathematics Classroom – A Meta-Analysis."

University of North Texas – Denton, Texas, 1993
Master of Science in Mathematics
Research Project – "NP Completeness and the Graph Coloring Problem"

Washington Adventist University – Takoma Park, Maryland, 1991
Bachelor of Science in Mathematics with Computer Science Minor
Twenty hours toward secondary education certification.

Professional Experience:

Virginia Commonwealth University – Richmond, Virginia, 2018 – Present
Professor, Department of Mathematics & Applied Mathematics
Associate Chair and Director of Undergraduate Studies, 2019 – 2022
Director of Mathematics Outreach, 2014 – Present

Virginia Commonwealth University – Richmond, Virginia,
Associate Professor, 2007 – 2018, Department of Mathematics & Applied Mathematics
Assistant Professor, 2001 – 2007, Department of Mathematics & Applied Mathematics

University of Tennessee at Chattanooga – Chattanooga, Tennessee, 1994 – 2001
Instructor, Department of Mathematics

Southern Adventist University – Collegedale, Tennessee, 1993 – 1994
Instructor, Department of Mathematics

University of North Texas – Denton, Texas, 1991 – 1993
Graduate Teaching Fellow, Department of Mathematics

Awards & Honors

- 2019 VCU College of Humanities and Sciences Distinguished Teaching Award

Research

Book:

- Campbell, P., Ellington, A., Haver, W. & Inge, V. (Eds.) (2013), *The Mathematics Specialist Handbook*. Reston, VA: National Council of Teachers of Mathematics.

Refereed Papers Published or In Press:

- Ellington, A. J., & Yoder, A. (2021). Transitioning a Mathematics Specialist Preparation Program into an Interactive Online Program: Insights from the Developer and Candidate Perspectives. *Journal of Mathematics and Science: Collaborative Explorations*, 17, 34 – 44.
- Baker, C., Ellington, A., & Haver, W. (2021). Mathematics Teacher Leadership Preparation, Mentorship, and Service: Communities of Practice Through Online Modalities. *Journal of Mathematics and Science: Collaborative Explorations*, 17, 1 – 9.
- Whitenack, J. W., & Ellington, A. J. (2020). Purposefully Coaching Middle School Teachers: The Case of an Exemplary Mathematics Specialist. *NCSM Journal of Mathematics Education Leadership*, 21 (1), 13 – 29.
- Ellington, A. J., Whitenack, J. W., & Edwards, D. E. (2017). Effectively coaching middle school teachers: A case for teacher and student learning. *Journal of Mathematical Behavior*, 46, 177 – 195.
- Ellington, A. J., Whitenack, J. W., Trinter, C., & Fennell, F. (2017). Preparing and implementing successful mathematics coaches and teacher leaders. *Journal of Mathematical Behavior*, 46, 146 – 151.
- Whitenack, J. W. & Ellington, A. J. (2015). Lessons from the field: Challenges we face when coaching teachers. *NCSM Journal of Mathematics Education Leadership*, 16 (2), 37 – 48.
- Ellington, A. J. (2015). The effects of calculators on students' achievement and attitude levels in K-12 mathematics classes. In E. Silver & P. Kenney (Eds.), *More Lessons Learned from Research: Volume 1* (pp. 181 – 187). Reston, VA: National Council of Teachers of Mathematics.
- Whitenack, J. W., Cavey, L. O., & Ellington, A. J. (2014). The role of framing in productive classroom discussions: A case for teacher learning. *Journal of Mathematical Behavior*, *33*, 42 – 55.
- Whitenack, J. W., & Ellington, A. J. (2013). Supporting middle school mathematics specialists' work: A case for learning and changing teachers' perspectives. *The Mathematics Enthusiast*, *10* (3), 647 – 678.
- Ellington, A. J. & Haver, W. E. (2013). Induction to a new position involves transitions. In P. Campbell, A. Ellington, W. Haver & V. Inge (Eds.), *The Mathematics Specialist Handbook* (pp. 215 – 226). Reston, VA: National Council of Teachers of Mathematics.
- Campbell, P. & Ellington, A. J. (2013). Research findings on the impact and role of mathematics specialists in elementary schools. In P. Campbell, A. Ellington, W. Haver

& V. Inge (Eds.), *The Mathematics Specialist Handbook* (pp. 17 – 28). Reston, VA: National Council of Teachers of Mathematics.

- Ellington, A. J. (2012). The impact of calculators on student achievement in the K-12 mathematics classroom. *International Handbook of Student Achievement* (pp. 303 – 306). New York, NY: Routledge Publishers.
- Ellington, A. J., Whitenack, J. W., Inge, V., Murray, M., & Schneider, P. (2012). Assessing K-5 teacher leaders' mathematical understanding: What have the test makers and the test takers learned? *School Science and Mathematics*, 112 (5), 310 – 324.
- Ellington, A. J., & Haver, W. E. (2011). Modeling-based college algebra at Virginia Commonwealth University. In S. L. Ganter & W. E. Haver (Eds.), *MAA Reports: Partner Discipline Recommendations for Introductory College Mathematics and the Implications for College Algebra* (pp. 87 – 92). Washington, DC: Mathematical Association of America.
- Ellington, A. J. & Hardin, J. R. (2011). The use of tablet PCs in a rational numbers course for elementary mathematics specialists. *Mathematics and Computer Education*, 45 (2), 92 – 105.
- Ellington, A. J., & Whitenack, J. W. (2010). Fractions and the funky cookie story. *Teaching Children Mathematics*, 16 (9), 532 – 539.
- Whitenack, J. W., & Ellington, A. J. (2010). What we are learning about the elementary mathematics specialist's role: Some reflections about math coaching. *Journal of Mathematics and Science: Collaborative Explorations*, 12, 29 – 43.
- Ortiz-Robinson, N. L., & Ellington, A. J. (2009). Learner-centered strategies and advanced mathematics. *Primus*, 19 (5) 463 – 472.
- Whitenack, J. W., Cavey, L. O., & Ellington, A. J. (2009). The instructor's important role in supporting mathematical arguments in a K-5 mathematics specialist program. Conference Proceedings of the 12th Conference on Research in Undergraduate Mathematics Education.
- Whitenack, J. W., & Ellington, A. J. (2009). K-5 mathematics specialists' teaching and learning about fractions. *Journal of Mathematics and Science: Collaborative Explorations*, 11, 109 – 126.
- Ellington, A. J. & Hardin, J. R. (2008). The use of video tutorials in a mathematical modeling course taken by pre-service teachers. *Mathematics and Computer Education*, 42(2), 109 – 117.
- Ellington, A. J. & Haver, W. E. (2006). The impact of assessing introductory mathematics courses. In B. Madison (Ed.), *Assessment of Student Learning in College Mathematics: Towards Improved Programs and Courses* (pp. 76 – 96). Tallahassee, FL: Association for Institutional Research.
- Ellington, A. J. & Haver, W. E. (2006). Contribution of a first year mathematics course to quantitative literacy. In R. Gillman (Ed.), *Current Practices in Quantitative Literacy* (pp. 97 – 103). Washington, DC: Mathematical Association of America.

- Ellington, A. J. (2006). The effects of graphing calculators on student achievement and attitude levels in mathematics – A meta-analysis. *School Science and Mathematics*, 106 (1) 16 – 26.
- Ellington, A. J. (2006). An assessment of general education mathematics courses' contribution to quantitative literacy. In L. Steen (Ed.), *Supporting Assessment in Undergraduate Mathematics* (pp. 81 – 85). Washington, DC: Mathematical Association of America.
- Ellington, A. J. (2005). A modeling-based approach to college algebra. *Academic Exchange Quarterly*, 9 (3), 131 – 135.
- Ellington, A. J. (2005). A modeling-based college algebra course and its effect on student achievement. *Primus*, 15 (3), 193 – 214.
- Hardin, J. R., & Ellington, A. J. (2005). Using multimedia to facilitate software instruction in an introductory modeling course. *INFORMS Transactions on Education*, 5 (2), 9 – 16.
- Ellington, A. J. (2004). The calculator's role in mathematics attitude. *Academic Exchange Quarterly*, 8 (2), 110 – 114.
- Ellington, A. J. (2003). A meta-analysis of the effects of calculators on students in precollege mathematics classes. *Journal for Research in Mathematics Education*, 34 (5), 433 – 463.

Technical Report:

Ellington, A. J. (2018). Math 151 Precalculus: ALEKS vs large lecture instruction project report. Submitted to the VCU Department of Mathematics & Applied Mathematics.

Invited Publication:

Dessart, D. J., DeRidder, C. M., & Ellington, A. J. (1999). The research backs calculators. In Z. Usiskin (Ed.), *Mathematics Education Dialogues* (Vol. 2, No. 3, pp. 6). Reston, VA: National Council of Teachers of Mathematics.

Electronic Publication:

Ellington, A. J. (2003). An assessment of general education mathematics courses contribution to quantitative literacy at Virginia Commonwealth University. SAUM: Supporting Assessment in Undergraduate Mathematics website: http://www.maa.org/sites/default/files/pdf/SAUM/new_cases/new_case_05_04/assessVCUr5.pdf, accessed May 28, 2017

Grants Awarded:

- National Science Foundation, Investigating Effective Teaching Through a Culturally Responsive Lens (with E. Edmondson (VCU School of Education), co-Principal Investigator VCU Subaward through the American Museum of Natural History, $999,931, July 2020 – June 2025.
- National Science Foundation, Scholarship Support for STEM Teacher Preparation and Induction for Urban High Need Schools: VCU Noyce Initiative Phase III (with E.

Edmondson, & R. Hargraves (VCU School of Education), L. Waller (Dept of Chemistry)), co-Principal Investigator, $1,199,425, July 2018 – June 2023.

- National Science Foundation, The Virginia Mathematics Specialist Initiative: An Online Program to Prepare K-8 Mathematics Teacher Leaders for High-Needs School Districts (with Elizabeth Edmondson), Principal Investigator, $1,499,991, May 2017 – April 2023
- Virginia Department of Education, Interactive Mathematics Institute for Middle School Teachers, Principal Investigator, $230,470, March 2015 – September 2018
- Virginia Department of Education, Secondary Mathematics Professional Development Center, Principal Investigator for VCU sub-award through Radford University, $64,760, March 2015 – September 2018
- National Science Foundation, Phase II Virginia Commonwealth University Noyce Initiative (with J. McDonnough, R. Hargraves, C. Trinter (VCU School of Education)), co-Principal Investigator, $799,719, September 2013 – August 2018
- National Science Foundation, Researching the Expansion of K-5 Mathematics Specialist Program into Rural School Systems (with R. Farley, P. Campbell, V. Inge, and J. Whitenack) co-Principal Investigator, $4,713, 684, January 2010 – July 2016
- National Science Foundation, MSP Institute: Mathematics Specialists in Middle Schools, co-Lead Reasearcher, $4,947,929, September 2009 – September 2015
- Virginia Department of Education, Virginia Secondary Mathematics Professional Development Center Part III, Principal Investigator for sub-award through Radford University, $46,229, March 2014 – September 2015
- Virginia Department of Education, Virginia Secondary Mathematics Professional Development Center Part II, Principal Investigator for sub-award through Radford University, $48,156, March 2013 – September 2014
- Virginia Department of Education, Virginia Secondary Mathematics Professional Development Center Part I, Principal Investigator for sub-award through Radford University, $43,157, February 2012 – September 2013
- Virginia Department of Education, Virginia Algebra Project, continuation of project, Principal Investigator for sub-award through the University of Virginia, requested $58,073, October 2009 – September 2010
- Virginia Department of Education, Teacher Preparation: Algebra, Functions, and Data Analysis, Principal Investigator for sub-award through the University of Virginia, $42,614 May 2009 – September 2010
- National Science Foundation Institutes: Preparing Virginia's Mathematics Specialists (with W. Haver, D. Walston, E. Gross, and V. Inge), co-Principal Investigator, $3,726,915, August 2004 – July 2009
- Virginia Department of Education, Preparing Highly Qualified Middle School Mathematics Teachers Across Virginia, Principal Investigator for sub-award through the University of Virginia from the Virginia Department of Education through federal NCLB act, $44,891, March 2006 – September 2007

- Virginia Department of Education, Preparing Highly Qualified Middle School Mathematics Teachers Across Virginia, Principal Investigator for sub-award through the University of Virginia from the Virginia Department of Education through federal NCLB act, $69,660, May 2005 – September 2006
- National Science Foundation, Enhancing Workforce Preparation in Computer Science, Engineering, and Mathematics (with R. Farley, W. Haver, R. Moore, and B. Creggar), co-Principal Investigator, $398,748, October 2002 – June 2006

Invited Presentations:

- Ellington, A. J. *The Power of Mathematics Coaches and Teacher Leaders in K-8 Schools*. Education Week Virtual Summit, May 2020.
- Ellington, A. J., & Lovin, J. *Mathematics Coaches – Practical Research-based Ideas for Successful Leadership*. Northern Virginia Coaching Institute. Manassas, VA, March 2020.
- Ellington, A. J., & Lovin, J. *Practical Research-based Ideas for Mathematics Coaches*. Annual Meeting of the Virginia Council of Mathematics Specialists. Fredericksburg, VA, October 2018.
- Arbaugh, F., Briars, D., Ellington, A., Fennel, F., Kaplinsky, R., McGatha, M., & Mills, V. *Supporting and Inspiring Mathematics Specialists, Leaders, and Coaches*, Annual Meeting of the National Council of Supervisors of Mathematics, Washington, DC, April 2018.
- Ellington, A. J., Whitenack, J. W., & Edwards, D. E. *Effectively Coaching Middle School Teachers: A Case for Teacher and Student Learning*, Research and Development Conference: Preparing and Implementing Successful Mathematics Coaching Programs, Richmond, VA, June 2016.
- Ellington, A. J. & Whitenack, J. W. *Modeling Fractions, Decimals, and Percents to Understand Proportions*, Greater Richmond Council of Teachers of Mathematics, March 2015
- Ellington, A. J. & Whitenack, J. W. *Working with Pattern Blocks to Explore Fractions and Proportions*, Greater Richmond Council of Teachers of Mathematics, March 2014
- Ellington, A. J. *Using Assessment Results to Encourage Large Scale Change in Instructional Practices*, Project NeXT Meeting, MathFest of the Mathematical Association of America, Madison, WI, August 2012
- Ellington, A. J., & Whitenack, J. W. *Conceptually-rich Mathematics Coaching: Will Mathematics Specialists Put Into Practice What They Have Learned?* MSP Learning Network Conference, Washington, DC, January 2012
- Ellington, A. J.*What We Know about the Current Status of Mathematics Specialists in Virginia*, Keynote Address, Virginia Mathematics Specialist: Blasting Off to New Horizons – Learning, Sharing, Networking Conference, Hampton, VA, January 2012
- Ellington, A. J., & Haver, W. E. *Impact of MSP-prepared Mathematics Specialists on Middle School Instruction and Student Success*, MSP Learning Network Conference, Washington, DC, January 2011.

- Ellington, A. J. & Whitenack, J. W. *Numbers and Operations Instructors Workshop*, Mathematics Specialists Program Instructor's Professional Development Workshop, Richmond, VA, March 2008
- Campbell, P., Ellington, A., Haver, W., & Whitenack, J. *Virginia Mathematics Specialist Projects: Preliminary Findings*, National Science Foundation Brown Bag Session, Washington, DC, February 2008
- Whitenack, J., Ellington, A., & Haver, W. *Quality of Virginia's Mathematics Specialists*, 2008 Learning Network Conference – Teacher Quality, Quantity, and Diversity, Washington, DC, January 2008
- Ellington, A., Haver, W., Inge, V., & Whitenack, J. *Quality of Virginia's Mathematics Specialists*, 2006 Learning Network Conference – Teacher Quality, Quantity, and Diversity, Washington, DC, January 2006
- Ellington, A. J. *Exploring the Geometer's Sketchpad*, Central Virginia Community College Area Math Conference, Lynchburg, VA, November 2007
- Agras, N., & Ellington, A. *Building Learning Communities*, Presentation and Panel Discussion for Project NEXT participants at the Joint Meetings of the American Mathematical Society & Mathematical Association of America, San Antonio, TX, January 2006
- Ellington, A. J. *Calculators in the Classroom – A Review of Recent Research Findings*, Southwest Consortium for the Improvement of Mathematics and Science Teaching (SCIMAST) Spring Forum, Baton Rouge, LA, April 2004
- Cai, J., Ellington, A., Izsak, A., Silver, E., & Williams, S. *Publishing in the Journal for Research in Mathematics Education*, 90 minute Research Presession talk at the Annual Meeting of the National Council of Teachers of Mathematics, Philadelphia, PA, April 2004
- Ellington, A. J. *Graphing Calculators in the Classroom – What Does the Research Say?* VCU Mathematics Department Colloquium, Richmond, VA, December 2003
- Ellington, A. J., & Farley, R. W. *Virginia Commonwealth University B.S. in Science Program* Statewide Conference on the Preparation of Middle School Science and Mathematics Teachers, Harrisonburg, VA, October 2003
- Ellington, A. J. *Math 303 Investigations in Geometry – A Hands-on Course for K-8 Preservice Teachers* Statewide Conference on the Preparation of Middle School Science and Mathematics Teachers, Harrisonburg, VA, October 2003
- Ellington, A. J. *Assessing The Quantitative Literacy Skills of Students Who Complete A Contemporary Mathematics Course* FIPSE Sponsored Colloquium, Richmond, VA, July 2002
- Ellington, A. J. *Preparing Middle School Teachers* FIPSE Sponsored Colloquium, Richmond, VA, July 2002
- Ellington, A. J. *The Effects of Calculators in the Classroom – Results of a Meta-Analysis* Richmond City Mathematics Teachers Colloquium, Richmond, VA, August 2001

Presentations at Professional Meetings:

- Edmondson, E., Ellington, A., Waller, L. *Protocols: Guiding Induction and Graduates Success*. NSF Noyce Summit, Washington DC, July 2024.
- Howes, E., Wallace, J., Edmondson, E., Ellington, A., Fantacone, D., Hopkins, M., Nolan, S. *Exploring the Roles of Course Experiences in Three Science Teacher Preparation Programs: Preparing Culturally Responsive Teachers*. NSF Noyce Summit, Washington DC, July 2024.
- Howes, E., Wallace, J., Edmondson, E., Ellington, A., Fantacone, D., & Nolan, S. *Investigating Effective Teaching Through a Culturally Responsive Lens: Collaboratively Developing the CRE-Core Practices Guide for Teacher Case Studies*, NSF Noyce Summit, Washington, DC, June 2023.
- Ellington, A. J. & Lovin, J. L. *Practical Research-based Ideas for Mathematics Coaches and Teacher Leaders*, Annual Meeting of the Virginia Council of Teachers of Mathematics. Farmville, VA, March 2019.
- Ellington, A. J. *A Detailed Analysis of Two Methods of Instruction in College PreCalculus: The Pros and Cons for Students and Instructors*, Joint Meetings of the American Mathematical Society and the Mathematical Association of America. Baltimore, MD, January 2019.
- Ellington, A. J., & Whitenack, J. W. *Developing an Online, Interactive Program to Prepare Mathematics Teacher Leaders: Lessons Learned in Year 1*, NSF Noyce Summit, Washington, DC, July 2018.
- Ellington, A. J., & Whitenack, J. W. *Purposeful Coaching of Middle School Teachers and the Positive Effect on Teacher and Student Learning*, Research Symposium with L. Gibbons, J. Munson, S. Lubienski, & M. Stein for the Annual Meeting of the American Educational Research Association, New York, NY, April 2018.
- Ellington, A. J., & Whitenack, J. W. *Coaches' Relational Work in Support of Ambitious Teacher Learning: Situated Co-construction of a Teacher-learning Culture*, Annual Meeting of the Association of Mathematics Teacher Educators, Orlando, FL, February 2017
- Ellington, A. J., Whitenack, J. W., & Edwards, D. Virginia's K-8 Mathematics Specialists: How They are Prepared to be Mathematics Leaders and Their Impact on Students and Teachers, Joint Meetings of the American Mathematical Society and the Mathematical Association of America, Seattle, WA, January 2016
- Ellington, A. J., & Whitenack, J. W. *The Work of the Elementary Mathematics Coach: Problems and Solutions*, Regional Meeting of the National Council of Teachers of Mathematics, Richmond, VA, November 2014
- Whitenack, J. W., Cavey, L. O., & Ellington, A. J. *From Argumentation to Proof Making: A Case for the Density Property*, Annual Meeting of the American Educational Research Assocation, San Francisco, CA, April 2013

- Ellington, A. J. *Impact of Mathematics Specialists on K-8 Instruction and Student Success*, National Council of Teachers of Mathematics Regional Conference, Chicago, IL, November 2012
- Whitenack J. W., Cavey, L. O., & Ellington, A. J. *The Role of Framing in Advancing Argumentation*, Poster Presentation at the Annual Meeting of the North American Chapter of the Psychology of Mathematics Education, Kalamazoo, MI, November 2012
- Ellington, A. J. *An Assessment Plan for Courses Taken by Math-Intensive Majors*, MathFest of the Mathematical Association of America, Madison, WI, August 2012
- Ellington, A. J. *Impact of MSP-prepared Mathematics Specialists on Middle School Instruction and Student Success*, Research Symposium with R. Heaton, H. Sevian, H. Hilunsky, R. Chen, & S. Smith for the Annual Meeting of the American Educational Research Association, Vancouver, BC, April 2012
- Ellington, A. J. *The Instructor's Perspective: How to Make Learning Mathematics an Interactive Experience in an Online Environment*, Joint Meetings of the American Mathematical Society & Mathematical Association of America, Boston, MA, January 2012
- Whitenack, J. W., & Ellington, A. J. *The Emerging of a K-8 Mathematics Specialist*, Virginia Mathematics Specialist: Blasting Off to New Horizons – Learning, Sharing, Networking Conference, Hampton, VA, January 2012
- Whitenack, J. W., Ellington, A. J., & Cavey, L. O. *The Instructor's Proactive Role in Supporting Teachers' Arguments*. The Research Pre-session of the Annual Meeting of the National Council of Teachers of Mathematics, Washington, DC, April 2009.
- Whitenack, J. W., Cavey, L. O., & Ellington, A. J. *The Instructor's Important Role in Supporting Mathematical Arguments in a K-5 Mathematics Specialist Program*. Twelfth Conference on Research in Undergraduate Mathematics Education for the Special Interest Group of the Mathematical Association of America on Research in Undergraduate Mathematics Education, Raleigh, NC, March 2009.
- Whitenack, J. W., Ellington, A. J., Hodges, V., Bernie, S., Abdeljawad, C., Sinclair, E., Miller, S. *Mathematics Specialists' Roles in Elementary Schools: Successes and Challenges in Supporting Teacher and Student Learning*. Annual Meeting of the Virginia Council of Teachers of Mathematics, Virginia Beach, VA, March 2009.
- Dunbar, S., Edwards, B., Ellington, A., Gordon, S., Herriott, S., McGowen, M., & Waller, W. *Tracking Our Students: Where they Come From, How they Do, Where they Go and Where They Don't Go*, Joint Meetings of the American Mathematical Society & Mathematical Association of America, San Diego, CA, January 2008
- Whitenack, J., Cavey, L., & Ellington, A. *Exploring Rational Numbers with K-5 Mathematics Specialists: A Case for Examining the Density Property*, Joint Meetings of the American Mathematical Society & Mathematical Association of America, San Diego, CA, January 2008
- Whitenack, J., Ellington, A., Schneider, P., Warren, G., Adler, L., Eberle, K. *Teachers Exploring Place Value and the Operations Using DMI Materials*, Regional Meeting of the National Council of Teachers of Mathematics, Richmond, VA, October 2007

- Campbell, P., Heaton, R., Whitenack, J. W., Nelson, B. S., & Ellington, A. J. *The Development, Activity, Pedagogical Practices and Impact of Mathematics Coaches in Elementary and Middle Schools*, Annual Meeting of the American Educational Research Association, Chicago, IL, April 2007
- Ellington, A. J., Inge, V., & Whitenack, J. W. *Assessing K-5 Teacher Leaders' Mathematical Learning: What Have the Test Makers and the Test Takers Learned?* Annual Meeting of the National Council of Supervisors of Mathematics, Atlanta, GA, March 2007
- Whitenack, J. W., Heaton, R., & Ellington, A. J. *Developing Case Studies of Elementary and Middle Level Teacher Leaders*, Annual Meeting of the National Council of Supervisors of Mathematics, Atlanta, GA, March 2007
- Burrill, G., Ellington, A. J., & Zbiek, R. M. *The Impact of Graphing Calculators on Student Performance: Implications for the Classroom*, Research Presession for Annual Meeting, National Council of Teachers of Mathematics, Atlanta, GA, March 2007
- Whitenack, J. W. & Ellington, A. J. *Teachers Explore the Nature of Rational Numbers: A Case for Inquiry in a Mathematics Specialist Program*, Joint Meetings of the American Mathematical Society & Mathematical Association of America, New Orleans, LA, January 2007
- Ellington, A. J. *The Effects of Graphing Calculators on Student Achievement and Attitude Levels in Mathematics – A Meta-Analysis*, Annual Meeting, National Council for Teachers of Mathematics, St. Louis, MO, April 2006
- Dick, T., Ellington, A., Heaton, R., Newborn, D., Whitenack, J. *Preparing Mathematics Specialists*, Research Presession for Annual Meeting, National Council for Teachers of Mathematics, St. Louis, MO, April 2006
- Ellington, A. J. *A Modeling-based College Algebra Course and Its Effect on Student Achievement*, Joint Meetings of the American Mathematical Society & Mathematical Association of America, San Antonio, TX, January 2006
- Ellington, A. J. *An Assessment of the Contribution of Two General Education Mathematics Courses on the Quantitative Reasoning of Students*, Joint Meetings of the American Mathematical Society & Mathematical Association of America, Phoenix, AZ, January 2004
- Ellington, A. J. *Calculators in the Classroom: A Review of Recent Research Findings* Annual Meeting, National Council for Teachers of Mathematics, San Antonio, TX, April 2003
- Ellington, A. J. *An Assessment of General Education Mathematics Courses Contribution to Quantitative Literacy at Virginia Commonwealth University*, Joint Meetings of the American Mathematical Society & Mathematical Association of America, Baltimore, MD, January 2003
- Ellington, A. J. *Calculators in the Classroom: A Look at Results of Recent Research* Spring Conference, Greater Richmond Council for Teachers of Mathematics, Richmond, VA, March 2002

- Ellington, A. J. *Calculators in the Classroom: What Does the Research Say?* Joint Meetings of the American Mathematical Society & Mathematical Association of America, San Diego, CA, January 2002
- Ellington, A. J., Hard, D., & Pratt. E. *Statistics for the Classroom: Focusing Teachers' Attention on Ongoing Teaching and Learning* 45th Annual Conference of the Tennessee Mathematics Teachers Association, Knoxville, TN, April 1997

Other Presentations:

- Ellington, A. J. *Math 151 Pecalculus: ALEKS vs Large Lecture Instruction*. VCU Math Education Seminar, September 2018.
- Ellington, A. J. *Assessing Quantitative Literacy* Mathematical Association of America PREP Assessment Workshop, Baltimore, MD, January 2003
- Ellington, A. J. *Assessing Quantitative Literacy* Mathematical Association of America PREP Assessment Workshop, Richmond, VA, May 2002

Teaching

Courses Taught:

Math 141 Algebra with Applications
Math 151 Precalculus
Math 200 Calculus I
Math 303 Investigations in Geometry
Math 310 Linear Algebra
Math 361 Numbers and Operations
Math 362 Algebra & Functions
Math 404/504 Algebraic Structures and Functions for Teachers
Math 454/554 Using Technology in the Teaching of Mathematics
Math 505 Modern Geometry
Math 591 Algebraic Structures for Teachers
Math 591 Mathematical Problem Solving with Technology
Math 591 Euclidean and Non-euclidean Geometry for Educators
Math 591 Linear Algebra for Educators
Math 591 Calculus for the Algebra Add-on Endorsement
Math 691 Geometry with Applications
Math 661 Numbers and Operations for K-5 Mathematics Specialists
Math 665 Rational Numbers and Proportional Reasoning for K-5 Mathematics Specialists
Math 667 Functions and Algebra II for K-5 Mathematics Specialists
Math 668 Mathematical Modeling for K-5 Mathematics Specialists
Math 691 Research in Mathematics Education for Mathematics Specialists
Tedu 680 Externship Seminar for Mathematics Specialists
Tedu 700 Externship for Mathematics Specialists

New or Redesigned Courses:

Math 151 Precalculus Mathematics – Redesigned Fall 2023
Math 668 Mathematical Modeling for Mathematics Specialists – Redesigned Summer 2023
Tedu 700 Externship for Mathematics Specialists – Redesigned Spring 2019

Tedu 680 Externship Seminar for Mathematics Specialists – Redesigned Fall 2018
Math 505 Modern Geometry – Redesigned Fall 2015
Math 591 Algebraic Structures for Teachers – Introduced Summer 2014
Math 591 Mathematical Problem Solving with Technology – Introduced Fall 2013
Math 691 Research in Mathematics Education for Math Spec – Introduced Summer 2012
Math 591 Calculus for the Algebra Add-on Endorsement – Introduced Spring 2011
Math 667 Functions and Algebra II for Math Specialists – Introduced Summer 2010
Math 303 Investigations in Geometry – Redesigned in Spring 2009
Math 362 Algebra and Functions – Redesigned Fall 2007
Math 504 Algebraic Structures – Redesigned Spring 2007
Math 361 Numbers and Operations – Introduced Spring 2006
Math 661 Numbers & Operations for K-5 Math Spec – Introduced Summer 2004
Math 554 Using Technology in the Teaching of Mathemtaics – Introduced Fall 2004
Math 691 Geometry with Applications – Introduced Fall 2002

Teaching-Related Refereed Publications:

- Ellington, A. J. (2007) A capstone course for pre-service mathematics teachers which uses technology as its unifying theme, *Mathematics and Computer Education*, 41 (1), 55 – 66.
- Ellington, A. J. (2004). Investigations in geometry – A hands-on course for 6-8 preservice teachers. *Journal of Mathematics and Science: Collaborative Explorations*, 7, 17 – 21.

Invited Publication:

Ellington, A. J. (2001). An annotated list of web sites for mathematics educators. *Journal of Adventist Education*, 63 (5), 43 – 45.

Grants Awarded:

- Exploring Tablet PCs in the Classroom, VCU Center for Teaching Excellence, Lenovo Tablet PC, 2007 – 2008
- Academic Technology Faculty Mentoring Grant, Dell laptop and geometry software, 2003 – 2004

Service:

Mathematics Department:

- Associate Chair and Director of Undergraduate Studies, 2019 – 2022
- Director of Mathematics Outreach Programs, 2014 – Present
- Member of the Executive Committee, January 2007 – 2012, 2013 – 2018, 2019 – 2022
- Precalculus Course Faculty Coordinator, 2021 – Present
- Chair of the Undergraduate Affairs Committee, 2019 – 2022
- Academic Program Review Self-Study Committee, 2020
- Member of the Classroom Visitation Committee, 2018 – 2019

- Mathematics Education Seminar, Organizer, 2018 – 2019
- Chair of the Diversity Committee, 2010 – 2015
- Chair of Undergraduate Credentials Committee, 2004 – 2007 (member from 2001)
- Member of Capstone Committee (Math 490), 2004 – 2015
- Co-Chair of the Chairperson Search Committee, 2013 – 2014
- Chair of the Hiring Committee, 2011 – 2012
- Member of the Instructor Search Committee, 2011 – 2015, 2017, Chair 2015
- Member of Six Tenure and Promotion Committees, 2009 – 2011, 2023, Chair 2020 & 2023
- Chair of Term Promotion Committee, 2018
- Research Director for the Gateway Committee for Project PRISM: Producing Results in Science and Mathematics, 2003 – 2009
- Chair of SACS Assessment Committee, 2007 – 2010, Member 2002 – 2010
- Mathematics Department Representative to College of Humanities & Sciences Open House, October 16, 2004
- Member of the Management Team for the project "Preparing Virginia's Mathematics Specialists" supported by a National Science Foundation Mathematics and Science Partnership grant, August 2004 – May 2015
- Member of the Management Team for the project "Mathematics Specialists in K-5 Schools: Research and Policy Pilot Study" supported by a National Science Foundation grant, June 2004 – May 2015
- Member of the Management Team for the project "Preparing Future Middle School Mathematics and Science Teachers: An Opportunity for Virginia" supported by a US Department of Education Funds for the Improvement of Post Secondary Education grant, January 2002 – December 2005

<u>School of Education</u>:

- Member of CAEP Continuous Improvement Committee, 2018 – Present
- Virginia Department of Education Program Alignment Committee, 2019 – 2022
- Member of STEP Committee for VCU's Standards-Based Teacher Education Program in Mathematics and English Education, 2003 – 2009

<u>College of Humanities & Sciences</u>:

- Covid-19 Response Teaching Working Group, Chair 2020
- Promotion and Tenure Committee, Member 2011 – 2014, Chair 2013 – 2014
- Member of the Steering Committee for the Liberal Studies for Early and Elementary Education degree program, 2004 – Present

- Department of Mathematics and Applied Mathematics Representative to Faculty Council, 2006
- Member of the PeRQ Review Panel, 2018
- Member of Task Force to determine suitable course alternatives for students with documented disabilities in mathematics and foreign language, 2005 – 2006
- Member of Selection Committee for College of Humantities & Sciences Faculty Awards, 2004 – 2005
- Junior Faculty Presenter at the Faculty Mentoring Luncheon devoted to Teaching, October 12, 2004
- Evaluator of written materials for the General Education Assessment pilot project for SACS, May 2003

University:

- Program Director, Masters in Interdisciplinary Studies, Mathematics and Science Leadership Track, 2010 – Present
- University Undergraduate Curriculum Committee, 2019 – 2022
- Masters in Interdisciplinary Studies Advisory Board, 2011 – 2021
- Steering Committee for Banner Enforcement of Test Score Prerequisites, 2012 – 2014
- College of Humanities & Sciences Representative to Faculty Senate, 2004 – 2007
- Faculty representative on Student Activities Advisory Committee (SAAC), 2004 – 2006
- Commencement Marshall for May Graduation Ceremony, 2003 – 2010, 2015
- Commencement Marshall for December Graduation Ceremony, 2010 – 2012
- Member of Selection Committee for the Board of Visitors Award, 2006 – 2011
- Member of Nominating Committee for Who's Who in American Colleges and Universities, February 2006
- Member of the VCU Walking Team, Spring 2007
- Member of VCU Heart Walk Team, Walk to benefit the American Heart Association, October 29, 2005
- Member of Faculty Team to welcome students and their families to VCU, Move-In Day, August 21, 2005 & August 20, 2006

Professional Organizations:

- Virginia Mathematics and Science Coalition
  - Board Member, 2016 – Present
  - Staff Member, 2014 – 2015
- Mathematical Association of America
  - Instructional Practices Guide Book Study Working Group, 2019 – 2022

- Committee on Assessment, 2010 – 2016

- Member of the Program Committee for the Greater Richmond Council of Teachers of Mathematics (GRCTM) Conference in Fall 2002. The conference entitled "Infinity and Beyond" was held at the Maggie L. Walker Governor's School on October 27, 2002

Conference Organizing:

- Organizer (with co-organizers Joy Whitenack and Christine Trinter) of a national conference: *Research and Development: Preparing and Implementing Successful Mathematics Coaching Programs*, June 7-8, 2016, Richmond, VA. Funded by the National Science Foundation and the Brookhill Institute of Mathematics.
- Session Organizer, *Assessment of Courses for Students in Math-Intensive Majors*, Mathematical Association of America MathFest Madison, WI, August 2012

Editorial Work:

Books:

- co-Editor with Pat Campbell (lead), Bill Haver, and Vickie Inge, *The Mathematics Specialist's Handbook*, Reston VA: National Council of Teachers of Mathematics

Journal:

- Editor of *Journal of Mathematics and Science: Collaborative Explorations*, 2014 – Present, https://scholarscompass.vcu.edu/jmsce_vamsc/
- Special Issue Editor (with co-editors Joy Whitenack and Christine Trinter) of volume 46 (June 2017) of the *Journal of Mathematical Behavior*. An issue devoted to mathematics coaching and leadership, https://www.sciencedirect.com/journal/the-journal-of-mathematical-behavior/vol/46

Reviewer for Funding Agencies:

- Proposals for the National Science Foundation's Course, Curriculum, and Laboratory Improvement program, Phase 1, 55 – 70 grants awarded, maximum of $200,000 each, July 2007
- Proposals for the National Science Foundation's Course, Curriculum, and Laboratory Improvement program, Phase 1, 55 – 70 grants awarded, maximum of $200,000 each, July 2006

Reviewer for Journals:

- *Journal for Research in Mathematics Education*, National Council of Teachers of Mathematics, 2003 – Present
- *Journal of Mathematical Behavior*, 2016 – Present
- *School Science and Mathematics*, School Science and Mathematics Association, Inc. 2006 – Present
- *Mathematics Teaching in the Middle School,* National Council of Teachers of Mathematics, 2014 – 2018
- *Mathematics and Computer Education*, The MATYC Journal, 2002 – 2016

- *Review of Educational Research*, American Educational Research Association, 2011 – 2015
- *Mathematics Teacher Educator*, National Council of Teachers of Mathematics and Association of Mathematics Teacher Educators, 2013 – 2015
- *American Educational Research Journal – Teaching, Learning, and Human Development*, American Educational Research Association, 2008 – 2010
- *On-Math, Online Journal of School Mathematics*, National Council of Teachers of Mathematics, 2007 – 2010

Reviewer for Publishers:

- *Mathematics and Quantitative Literacy: A Contextual Approach to Developing Mathematical Proficiency*, Nyack, NY: FlatWorld Knowledge, 2009 – 2010
- *Introductory Linear Algebra with Applications* 7th ed. textbook by B. Kohlman & D. Hill for Prentice Hall Publishing, October 2003
- *Elementary Linear Algebra* 9th ed. textbook by Anton, Wiley Publishers, March 2004
- *Survey of Calculus* textbook for McGraw-Hill Higher Education, 2002