

**Roni Ellington**  
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## **Education**

**Ph.D. Curriculum and Instruction** May 2006  
Concentration: Mathematics Education  
*University of Maryland College Park, Baltimore, MD*

**MA Mathematics** May 1997  
*Morgan State University, Baltimore, MD*      *Maryland State Teacher Certification*  
*Secondary Mathematics Education*

**BS Mathematics** May 1993  
Minors: English and Education  
*Morgan State University, Baltimore, MD*

## **Relevant Work Experience:**

January 2022 - Present

### **Visiting Associate Professor, Mathematics Education**

Mathematics Science and Technology Department, Teachers College, Columbia University, New York, NY

- Taught graduate level classes on multicultural mathematics education.
- Advised doctoral students on dissertations.
- Collaborated with colleagues to develop comprehensive exam questions.
- Served as Edd sponsor for doctoral students.

August 2011-Present

### **Associate Professor, Mathematics Education**

*Graduate Programs in Mathematics and Science Education*

*School of Education and Urban Studies, Morgan State University; Baltimore, MD*

- Presented research to a variety of scholarly communities
- Conducted research on high-achieving African Americans in mathematics.
- Advised ten doctoral students with dissertations and conference presentations.
- Developed partnerships with local schools and provided technical assistance to schools and mathematics teachers.
- Developed, implemented, and evaluated workshops for students in research conceptualizing and implementing research.

May 2013-Present

**Managing Partner and Director of Training and Development ([evoklife.com](http://evoklife.com))**

*Evok Life; Baltimore, MD*

- Developed and implemented transformative personal and professional development content
- Facilitated workshops on Leadership Diversity and Inclusion for STEM professionals
- Developed and implemented customized content for seminars, workshops, and programs for individuals, groups, and corporations to improve performance.
- Developed and implemented customized workshops focused on leadership, diversity, equity, and inclusion

August 2006-Present

**President and Owner**

*Transforming STEM Network ([www.TransSTEM.net](http://www.TransSTEM.net)); Baltimore, MD*

- Developed and implemented various STEM diversity trainings and workshops for K-12 and universities specifically focused on diversity, equity, and inclusion in mathematics, STEM, and STEM-related disciplines.
- Trained faculty on the STEM Diversity Framework and developed customized workshops for university faculty.
- Presented Transformative Framework to various stakeholders, including administrators, teachers, and university faculty.
- Developed and implemented professional development workshop for elementary, middle, and high school teachers and administrators.
- Developed and implemented equity-focused workshops for university leaders, faculty, and staff.
- Conducted comprehensive evaluations for STEM programs, transdisciplinary centers, educational institutions, and organizations

August 2006-May 2011

**Assistant Professor Mathematics Education**

*School of Education and Urban Studies, Morgan State University; Baltimore, MD*

- Presented research to a variety of scholarly communities.
- Conducted research on high-achieving African Americans in mathematics.
- Advised doctoral students with dissertations and conference presentations.
- Developed partnerships with local schools and provided technical assistance to schools and mathematics teachers.
- Designed various quantitative and qualitative research studies on high achieving students, standards-based curriculum, and the impact of professional development activities on student achievement.
- Developed and implemented a variety of graduate courses in research, mathematics curriculum, issues in mathematics education, and foundations of mathematics education.

- Developed and implemented a collaborative partnership with Johns Hopkins University and the Maryland State Department of Education (MSDE) MSDE for a state-wide STEM professional development project
- Served as the chair of the department recruitment committee.

January 2003-2015

**Mathematics Professional Development Coordinator, Facilitator, and Consultant**  
*Center for Excellence in Mathematics and Science Education, Morgan State University;  
 Baltimore, MD*

- Developed and implemented innovative Algebra and Geometry-based professional development for Baltimore City Public School teachers.
- Designed curriculum lesson plans and classroom activities based on the National Council of Teachers of Mathematics (NCTM) Standards Framework
- Oriented Baltimore City Public School instructional leaders on the new Math Connections Curriculum
- Served as a liaison between the Fund for Educational Excellence and the Center to establish partnerships and unique projects.
- Developed and implemented a professional development workshop for middle school teachers.
- Coached BPS teachers on the new NSF-based mathematics curriculum

January 2006-2015

**Mathematics Professional Development Facilitator/Consultant and Curriculum Specialist**  
*Baltimore City Schools; Baltimore, MD*

- Developed curriculum modules for Praxis test review in partnership with the National Education Association
- Supervised and coached 1<sup>st</sup> year Baltimore City Teachers
- Developed partnerships with Baltimore City High Schools
- Conducted research on the impact of foreign-born mathematics teachers in urban schools.
- Developed training modules to help support new and seasoned mathematics teachers in urban settings.
- Developed, implemented, and evaluated mathematics curriculum and professional development activities in K-16 academic settings.

January 2005-August 2006

**Coordinator, University of Maryland/Montgomery County Public Schools Math Partnership Program**  
*University of Maryland College Park; College Park, MD  
 Department of Curriculum and Instruction*

- Assisted in the development and implementation of the master's program in middle school mathematics.
- Coordinated the application process for all participants.

- Served as a liaison for UMCP, teachers, and county representatives.
- Managed the day-to-day administrative duties for the program.
- Helped write the Improving Teacher Quality grant (ITQ) for the US Department of Education
- Managed the daily operations of the program.

August 1997–August 2006

**Mathematics Instructor**

*Morgan State University; Baltimore MD*

*Mathematics Department*

- Taught several undergraduate courses, including Mathematics for Non-Science Majors, Pre-calculus, College Algebra, and Developmental Mathematics, Mathematics for Education
- Served as the chairperson of the Retention and Recruitment Committee
- Served as a member of the Academic Advisement Committee
- Developed and implemented a study group initiative for developmental math courses.
- Created mathematics courses for the graduate programs in mathematics education.

January 2000-May 2003

**Mathematics Supervisor and Mathematics Education Senior Seminar Instructor**

*University of Maryland; College Park, MD*

- Taught student teaching seminar to teacher interns.
- Developed and assessed teaching portfolios.
- Supervised and evaluated student-teacher interns.
- Provided professional development for teachers.
- Taught the introductory teaching methods course to undergraduate education majors
- Developed and organized educational materials packet for the course.

August 1994-June 1997

**Secondary Mathematics Teacher**

*Baltimore City Public Schools; Baltimore, MD*

- Taught several high school courses, including Algebra, Geometry, and Pre-calculus.
- Served as Junior Class Advisor, Step Team Couch, and Future Educators of America co-advisor.
- Assisted department chairperson with a variety of tasks and school-wide initiatives.
- Developed afterschool program for Maryland Functional Mathematics Test

**Funded Research**

***\$4,999,962 NSF-funded project.*** Miller, D (PI), **Ellington, R. (Co-PI)**, Ferguson, D, (Co-PI), Hedges, (L) Co-PI. ECR Hub: Advancing the Long-Term Potential of Fundamental Research. National Science Foundation Grant #2208422 (October 1, 2022-September 30, 2027);

***\$926,300, NSF-funded project.*** **Ellington, R. (PI)** and Dodo-Seriki, V (Co-PI). Maryland Collaborative for Research in Urban STEM Education (MD-CRUSE). National Science Foundation Grant #2025280 (August 1, 2020-August 31, 2023);

***\$250,000, NSF Funded Project.*** **Ellington, R. (PI)** and Tracy Rone (Co-PI). STEM Context Matters: An Inaugural Conference of the DMV MSI STEM Alliance Grant #2037432 (June 6, 2020–August 30, 2021);

***\$999,531 NSF Funded Project.*** Winstead, A. (PI), **Ellington, R. (Co-PI)** Nkwanta, A., Darden, C. (PI), and Rockword. W. Fostering Excellence as a Means to Increase Motivation and Persistence of Undergraduates in STEM (FUSE) National Science Foundation Grant #2030608 (August 2020 – September 2025); Grant Amount: \$999,531

***\$100,000 APLU/NSF Funded Project*** **Ellington, R. (PI)**, Nkwanta, A. (PI) Morgan State University Student Engagement in Mathematics through a Network of Active Learning (SEMINAL). National Science Foundation and Association of Public and Land-grant Universities (March 1, 2018-March 31, 2020)

***\$1,199,416 NSF Funded Project,*** Leonard, J. (PI), **Ellington, R. (Co-PI)**. Gamboa, B. (Co-PI), Gellis, R. (Co-PI) & G. Verma (Co-PI). The Bessie Coleman Project: Using Computer Modeling and Flight Simulations to Create STEM Pathways, National Science Foundation. ITEST Grant (March 1, 2018 – February 28, 2021);

***\$300,000 NSF Funded Project,*** National Science Foundation, Mathematics and Science Partnership (MSP) Nkwanta, A. (PI) Prime, G. (Co-PI), Norman, O. (Co-PI) **Ellington, R. (Co-PI)**, Baltimore Research Initiatives in New STEM partnerships Brain-STEM (August 2008–August 2010)

***\$150,000 ETS Funded Project,*** Enhancing STEM Teaching in Maryland High Schools. Morgan State University and the Johns Hopkins University, **Ellington, R.**, Senior Personnel (September 2007–June 2008);

***\$37,662 ETS funded Project*** “Freshman Science, Engineering and Mathematics Students and Their Placement Test Scores” HUD/EDI Special projects Aloa, S. (PI). **Ellington, R. (Co-PI)** Grant (January 15, 1999-August 15, 1999)

### **Evaluation Projects**

**10,000,000 NIH- Funded Project** National Network to Innovate for COVID and Adult Vaccine Equity, Uphold, H. (PI) **Ellington, R.** Member, Monitoring Evaluation and Quality Improvement Core Team (2020- present)

**7,5000,000 NIH-Funded Project** Flint Center for Health Equity Solutions (FCHES) National Institutes of Health (NIH), Furr-Holden, D. (PI). **R. Ellington** Internal Evaluator (February 2016-December 2022)

**\$300, 000 AAC&U Funded Project** Morgan Teaching to Increase Diversity and Equity in STEM (MTIDES) American Association of Colleges and Universities (AAC&U) **R. Ellington** Internal Evaluator

### **Publications**

Welsh, B., **Ellington, R.**, Shockley, K., & Prime, G. (accepted) The Making of Scholar Transformation Theory, Journal of Negro Education.

Leonard, J., Thomas, O, **Ellington, R.**, Mitchell, M., Fashola, O (EDS) (2022). Fostering computational thinking among underrepresented students in STEM: Strategies for supporting racially equitable computing. New York: Routledge.

**Ellington, R.** & Leonard, J. (2022) Professional development that fosters computational thinking and high-quality teaching for students of color. In Leonard et al. Fostering computational thinking among underrepresented students in STEM: Strategies for supporting racially equitable computing. New York: Routledge, p 110 - 132

**Ellington, R.**, Barajas, C., Drahota, A., Scott, J., Meghea, C, Uphold, H. & Furr-Holden, D (2021). An evaluation framework of a transdisciplinary collaborative center for health equity research. American Journal of Evaluation

Leonard, J., **Ellington, R.**, Blustein, D., & Jordan, W. J. (2021, October 14-17). The Bessie Coleman Project: Broadening historically-excluded students' participation in computer science. In D. Olanoff, K. Johnson, & S. M. Spitzer (Eds.), Proceedings of the 43rd Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (pp. 1728-1732).

Sekayi, D., **Ellington, R.**, Welsh, B., & Shockley, K. G (2021). The Role of Intellectual Humility in Dissertation Completion. Teachers College Record. August 20, 2021

Meghea, C.I., Montgomery, B.W., **Ellington, R.** et al. (2021). An NIH investment in health equity - the economic impact of the Flint Center for Health Equity Solutions. BMC Public Health 21, 1774 <https://doi.org/10.1186/s12889-021-11795-5>

**Ellington, R.**, Daniels, B., Orozco, F., Santiago, A. and Arnold, A. (2021). Transformative transmedia framework for early STEM learners: Harnessing the powers

of science, literacy, and media. *Journal of Educational Multimedia and Hypermedia*, 30(10), 5-23.

Harris, B. N., McCarthy, P. C., Wright, A. M., Schutz, H., Boersma, K. S., Shepherd, S. L., & **Ellington, R. M.** (2020). From panic to pedagogy: Using online active learning to promote inclusive instruction in ecology and evolutionary biology courses and beyond. *Ecology and evolution*, 10(22), 12581-12612.

**Ellington, R.** Nkwanta A, Barber, J, Syrifrida, S., and Tannouri, A. (2020). The MSU-SEMINAL project: Incorporating principles of culturally responsive teaching in a pre-calculus course. PRIMUS, DOI:10.1080/10511970.2020.1805661

Leonard, J., Jordan, W. J., & **Ellington, R.** (2019). (2019, November). The Bessie Coleman Project: Using Computer Modeling and Flight Simulation in Informal STEM Settings. In S. Otten, A. G. Candela, Z. de Araujo, C. Haines, & C. Munter (Eds.) *Proceedings of the 41st Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 106-110). St. Louis, MO: University of Missouri.

**Ellington, R.** Nkwanta, A, Peters, K. (2019) Interdisciplinary university school partnerships: Opportunities and Challenges. ERIC ED614574

Darden, C., **Ellington, R.**, Zaveri, J, Bapna, S & Hargett, S (2019). *Interventions addressing recruitment and retention of underrepresented minority groups in undergraduate STEM disciplines*. In Mack, K., Winter, K, and Soto M. (Eds) *Culturally responsive strategies for reforming STEM higher Education: Turning the tide on inequity*. Great Brittan: Emerald Publishing Limited

**Ellington, R.** (2018). *Toward a transformative framework for STEM Education: Achieving equity through a holistic approach*. In G. Prime Centering race in the STEM education of African American K-12 learners. (pp. 35-70). Bern, Switzerland: Peter Lang US.

**Ellington, R.** (2016). Mathematics teacher education as racialized experience: One black scholar's response to a white teacher educator's critical consciousness evolution and social justice practice. In Joseph, N., Haynes, C and Cobb, F(Eds). *Interrogating whiteness and relinquishing power: White faculty's commitment to racial consciousness in STEM classrooms* (pp. 211-222). New York: Lang Publishing, Inc.

Asghar, A., **Ellington, R.**, Rice, E., Prime, G. & Johnson, F. (2012). Supporting STEM education in secondary science contexts. *Interdisciplinary Journal of Problem-Based Learning*, 6(2), Article 4.

**Ellington, R.** & Fredrick, R. (2010) Black high-achieving undergraduate mathematics majors discuss their success and persistence in mathematics. *Negro Educational Review*

Nkwanta, A., & **Ellington, R.** (2010). Partnership building: Integrating math & life sciences in Baltimore. *Mathematics and Science Partnership: Learning Network Conference Proceedings, National Science Foundation*: Washington, DC.

**Ellington, R.,** Wachira, J. & Nkwanta, A. (2010). RNA secondary structure prediction by using discrete mathematics: an interdisciplinary research experience for undergraduate students. *CBE-Life Sciences Education* 9, 348-356.

**Ellington, R.** & Prime (2010). Reconceptualizing quality and equity in the cultivation of minority scholars in mathematics education. In B. Atweh (Ed). *Equity and quality in mathematics education* (pp. 423-436). London: Springer.

**Ellington, R.** & Fredrick, R. (2010). *Capitalizing on culture: Successful patterns of parental participation for African American Students*. New York: Nova Science Publishers.

**Ellington, R.** & Fredrick R. (2009). Capitalizing on culture: A socio-historical and current perspective of the parental involvement patterns of African American Parents. In R. Nata (Ed.). *Progress in Education, Volume 21*. New York: Nova Science Publishers.

**Ellington, R.** (2006). *High-Achieving African American mathematics majors: A case study of socio-cultural and personal factors that influenced their persistence and success in mathematics through college*. (Unpublished Doctoral Dissertation, University of Maryland)

### **Conference Presentations and Invited Talks**

**Ellington, R.** (2023) Moving equity from the margins to the center of your practice: From change to transformation, Keynote Address Midwest Noyce Conference, Little Rock, AK, February 24 - 26, 2023.

**Ellington, R.** (2023) A framework for developing equity-focused STEM content for Inclusive students, Wooster College Professional Development conference, Tuesday February 9, 2023

**Ellington, R** (2023) Social studies content through a transformational lens: Promoting solidarity, collaboration and Engagement, Region 4 Social Studies Conference, Houston TX, Saturday, January 28, 2024

**Ellington, R.** (2022) The Flint Center for Health Equity Solutions (FCHES): Evaluating a Transdisciplinary Collaborative Center Using a Comprehensive Framework, National Conference of the American Public Health Association, Boston, MA, November 6 – 9, 2022.



**Ellington, R. (2022)** Realizing STEM for All: Dismantling the Mechanisms that Exclude and Foster Inequities in STEM outcomes, Keynote Address, Region 4 Science Conference Houston, TX, October 25, 2022.

**Ellington, R. (2022)** A Framework for Developing Equity-Focused STEM Content for Inclusive Students International Conference of Innovation and Technology in Mathematics and Mathematics Education Committee, 2nd International Conference of Innovation and Technology in Mathematics and Mathematics Education (ICITMME), October 12-13, 2022.

**Ellington, R. (2022)** Re-Envisioning Mathematics and STEM Education: Moving from the Traditional to the Transformational Developing Quantitative Skills Through Inclusive Learning Experiences: A Virtual Conference for Educators and Practitioners University of Baltimore, Baltimore MD April 19, 2022

**Ellington, R. (2022)** Reframing Non-Violence to Realize YOUR Vision for Diversity, Equity and Inclusion, Federal Deposit Insurance Corporation MLK Annual Observance Event, FDIC Virtual Event, January 25, 2022

**Ellington, R. & Dodo-Seriki, V. (2021).** PEERS Webinar: Maryland Collaborative for Research in Urban STEM Education (MD-CRUSE) Virtual Webinar September 22, 2021

**Ellington, R. & Dodo-Seriki, V. (2021)** Maryland Collaborative for Research in Urban STEM Education, A Roundtable Discussion, AERA Annual Meeting roundtable symposium session featuring the NSF-BCER Institutes in Research Methods, American Educational Research Association (AERA) 2021 Annual Meeting, Virtual Sunday, April 11, 2021

**Ellington, R. (2021)** Promoting Equity in undergraduate STEM classrooms through pedagogical approaches, American Association for the Advancement of Science (AAAS) Improving Undergraduate STEM Education (IUSE), virtual workshop series, May 13, 2021

Leonard, J., **Ellington, R.**, Blustein, D., & Jordan, W. J. (2021). The Bessie Coleman Project: Broadening historically-excluded students' participation in computer science. National Conference 43rd Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA 43) Philadelphia, PA October 14- 17, 2021

**Ellington, R. (2021).** Realizing the dream through access, opportunity, and inclusion in STEM: Moving beyond strategies to unprecedented results. Texas Science Education Leadership Association National Meeting, Friday, March 5, 2021

Daniels, B, **Ellington, R.** Orozco, F., Parente, C. (2021) Developing and equity framework for media production and education National Educational Technology Association (NETA) Conference, Virtual Conference, January 25-28, 2021

Leonard, J., Djonko-Moore, C., **Ellington, R.**, Santiago, A., & Miller, M. (2020). Using Technology and Collaboration with STEM Professionals to Enhance Underrepresented Students' Self-Efficacy and Interest in STEM. American Educational Research Association. San Diego, CA.

**Ellington, R.** (2020). *Delivering equity-focused STEM Education*, Skyline College Equity Institute, San Bruno, California, April 17, 2020

**Ellington, R.** (2020). Realizing the Dream through Access, Opportunity, and Inclusion in STEM: Moving Beyond Strategies to Results University of Maryland, Baltimore's (UMB) Black History Month celebration, February 5, 2020, University of Maryland Baltimore

**Ellington, R.** (2019). *Addressing the Elephant in the Room: The weed-out culture and its impact on Diversity Equity and Inclusion*, Mathematical Association of American Regional Meeting, Detroit, MI, May 6, 2019

**Ellington, R.** (2018). Understanding Equity and Diversity in STEM education: Forwarding a Transformative Framework for STEM education. Skyline College Equity Institute, November 2, 2018

Prime, G., **Ellington, R.**, Welsh, B., & Shockley, K. (2017). *Scholar transformation theory: Empowering students to get the job done write*. International Conference on Doctoral Education, Orlando, Florida March 21-23, 2107.

**Ellington, R.** (2017). *A transformative framework for STEM Education: Transcending Boundaries to realize inclusion, diversity, and equity in STEM disciplines*. Bruin Brains Conference Salt Lake City Community College. Salt Lake City, Utah Friday, March 24, 2017

**Ellington, R.** (2107). *Re-Envisioning STEM Education: Transcending boundaries to realize the vision of inclusion, diversity, and equity in STEM fields*. Western Regional Noyce Conference, February 17- 19, 2107, Fresno, California

**Ellington, R.** (2016) *Promoting STEM diversity, inclusion and success for all students through a transformative framework for STEM education*. Phillips Community College STEM Summit, Helena, Arkansas Friday, November 18, 2106

**Ellington, R.** (2016). *Moving Inclusion from the margins to the center of classroom practice: Transformative Strategies for Teaching in STEM*. 2106 Capital PKAL Network Meeting Creating Learning Environments: Valuing Diversity, Improving Retention and Promoting Persistence for students in STEM. Washington, DC, April 8, 2106

**Ellington, R.** (2016). *A discourse framework that promotes equity and access in mathematics*. National Council of Teachers of Mathematics 2106 Annual Meeting. San Francisco, California, April 13- 16, 2017

**Ellington, R.** (2016). *Understanding the teaching and learning of STEM: A transformative framework for increasing diversity and equity in STEM*. 2016 Noyce Summit Stimulating research and innovation for preservice education of STEM teachers in high-needs schools. American Association for the Advancement of Science July 2016 Washington, DC

**Ellington, R.** (2015) Regaining the STEAM in STEM Education: Transcending Boundaries to Transform STE(A)M Education. Wayland Public School Professional Learning Conference, Wayland, MA June 28 - 29

**Ellington, R.** (2015). *MTIDES program milestones and outcomes*. Teaching to Increase Equity and Diversity (TIDES) Annual Meeting, Atlanta, GA

**Ellington, R. & Prime, G.** (2010, May). *Teachers as curriculum developers: A case study of a university-school partnership for the development of integrated mathematics and biology modules*. Poster session presented at American Educational Research Association (AERA) Annual Conference, Denver, Colorado.

Anderson, C. & **Ellington R.** (2010, April). Grow your own: Cultivating mathematicians. Paper presented at A Dream Deferred: The future of African-American education, Atlanta, GA.

**Ellington, R. & Thurman, K.** (2009, April). *Cultivating scholars in mathematics education: An HBCU perspective*. Poster presented at National Council of Teachers of Mathematics Research Pre-session, Washington, DC.

**Ellington, R. & Frederick, R.** (2009, April). *The impact of Black parents' use of capital on students' success*. Paper presented at National Council of Teachers of Mathematics Research Pre-session, Washington, DC.

Asghar, R., **Ellington, R.**, Rice, E., & Prime, G. (2009, April). *Supporting STEM education in secondary science contexts*. Paper presented at the Annual Meeting American Educational Research Association, San Diego, CA.

Asghar, A., **Ellington, R.**, Rice, E. & Prime, G. (2009, April). *Supporting STEM academies throughout Maryland: An integrated approach*. Paper presented at Annual Meeting American Educational Research Association, San Diego, CA.

**Ellington, R. & Frederick, R.** (2009, April). *Cultivating African American students' achievement in mathematics: The historical and current impact of Black parents' use of social capital on African American students' academic success*. Paper presented at Annual Meeting American Educational Research Association, San Diego, CA.

**Ellington, R.** (2008, April). *Experiences of African Americans in mathematics classrooms*. Symposium conducted at the meeting of the National Council of Teachers of Mathematics Annual Meeting Research Pre-session, Salt Lake City, Utah.

**Ellington, R.,** Thompson, L., Davis, J. (2008, March). *Understanding the Experiences of African Americans in K-16 mathematics and science*. Symposium conducted at the American Educational Research Association Annual Conference, New York, NY.

**Ellington, R.** (2007, April). *High Achieving African American Mathematics Majors: Social and Cultural Factors that Impact Their Success and Achievement in Mathematics* paper presented at American Educational Research Association (AERA) 2007 Annual Conference, Chicago, Illinois.

**Ellington, R.** (2007). *Eight High Achieving African American Mathematics Majors Discuss Their Success and Persistence in Mathematics*. Paper presented at National Council of Teachers of Mathematics (NCTM) 2007 Annual Conference Research Pre-session.

**Ellington, R.** (2007, October). *Socio-cultural factors that impacted the success of African Americans in mathematics*. Paper presented at the National Council of Teachers of Mathematics Regional Conference and Exposition, Richmond, VA.

**Ellington, R.** (2005, August). *High Achieving African American Mathematics Majors: Social and Cultural Factors that Impact Their Success and Achievement in Mathematics*. Paper presented at the Center for Excellence in Mathematics and Science Education Summer Institute, Baltimore, MD.

**Ellington, R.** (2005, May). *High Achieving African American Mathematics Majors: Social and Cultural Factors that Impact Their Success and Achievement in Mathematics* Paper presented at the Mid-Atlantic Center for Mathematics Teaching and Learning, College Park, Maryland.

\*Indicates publication/presentation with a student

### Supervised Dissertations

Baltzley, P. (2022) The impact of the levels of fidelity of teacher implementation on student achievement benchmarks based on a systemic implementation of a middle school preparation program for algebra I, unpublished doctoral dissertation, Morgan State University, committee chair.

Richards, D. (2021). The experience and enactment of teaching a culturally relevant ecology curriculum in urban science classrooms, Unpublished doctoral dissertation, Morgan State University dissertation committee chair.

Ayuk, E. (2021) *Differential application of learning strategies: A Comparative study of metacognitive and self-regulation among students in a computer-based development mathematics program at one community college*, Unpublished doctoral dissertation, Morgan State University dissertation committee chair

Cardona, C. (2020). *Experiences of students and faculty in online physical science courses at a community college*. Unpublished doctoral dissertation, Morgan State University, dissertation committee chair

Belton, N. (2019). *Why blacks remain underrepresented in the actuarial profession: Social cognitive and contextual variables in career choice behavior of black actuarial students*, unpublished doctoral dissertation, Morgan State University, dissertation committee chair.

Ahmadi, S. (2015). *The development of freshman pre-calculus students' understanding of the exponential and logarithmic function*, Unpublished doctoral dissertation. Morgan State University, dissertation committee chair

Anderson, C (2012). *Middle school mathematics teachers' beliefs about African American students and its impact on instructional practice*, unpublished doctoral dissertation. Morgan State University, dissertation committee chair

Berkley, D. (2012) *The Impact of chess instruction community college students' critical thinking and mathematics achievement*, unpublished doctoral dissertation. Morgan State University, dissertation committee chair

Reznichienko, N. (2012) *Learning intermediate algebra at the community college with the graphing calculator*. Unpublished doctoral dissertation. Morgan State University, dissertation committee chair

Davis, J. (2010). *A critical ethnography of Black Middle school students' mathematics education and lived realities*. Unpublished doctoral dissertation. Morgan State University, dissertation committee chair

#### Dissertation Committee Service

Bentley, R. (2022) *The Co-requisite Model: A Step in the Right Direction*, Unpublished doctoral dissertation. Morgan State University, dissertation committee member

Pagarigan, E. (2022) *Middle school science teachers' implementation of language-based strategies in NGSS classrooms*, Morgan State University, dissertation committee member

Porzillo, A. (2022) *Three-dimensional science: The use of engineering design challenges to teach middle school science*, Morgan State University, dissertation committee member

McKonnen, D. (2010). *Construct validity of Placement Testing at a Community College*. Unpublished Doctoral Dissertation. Morgan State University, dissertation committee member.

DePritter, T. (2008). *Individual and collaborative learning: an investigation of teaching strategy in the distance learning mathematics classroom*. Unpublished Doctoral Dissertation. Morgan State University, dissertation committee member.

Ajula, R. (2007). *Professional Competence in Teaching of Mathematics: Cross-Cultural Examination of Teaching Practices in India and the U.S.A.* Unpublished Doctoral Dissertation, dissertation committee member

#### *Master's Thesis and Projects*

Scott, L. (2012). *Integrating Technology in a High School Physics Class: An Action Research Study*. Master's Project, MSU

Brand, S. (2010). *Tutoring student-athletes in mathematics at Morgan State University*. Master's Project, MSU

Moore, D. (2010). *Enhancing students' knowledge of quadratic functions using a standards-based curriculum*. Master's Project, MSU

Richardson, C. (2010). *Improving high ability students' motivation in precalculus*. Master's Project, MSU

#### **Courses Taught**

MSTM 5020 Mathematics and Multicultural Education

ASLL 601 Learning Theory

EDSR 622 Quantitative Research Methods in Education

EDSR 624 Qualitative Research Methods in Education

EDSR 620 Action Research in Urban Education

EDSM 500 Masters Project

EDMA 620 History, Philosophy, and Sociology of Mathematics Education

EDSM 630 Assessment and Evaluation of Science and Mathematics Education

EDMA 621 Planning Developing and Evaluating the Mathematics Curriculum

EDSM 632 Instructional Systems Analysis for Mathematics and Science Education

EDMA 630 Methods of Concept Development in Mathematics Education

EDMA 651/EDSM 651 Seminar: Current Topics in Mathematics/Science Education

EDMA 554 Mathematical Investigations in the High School Curriculum I

EDMA 555 Mathematical Investigations in the High School Curriculum II

EDSM 631 Issues and Applications of Technology in Science and Mathematics Education

EDMA 641/EDSC 641 Practicum in Mathematics/Science Education

## **Awards, Recognition, and Certifications**

- International Coaching Federation, Professional Coaching Certification, 2022
- Benjamin Banneker Association Service Award, 2018
- Morgan State University Faculty Teaching Excellence Award, 2014
- Service Award and Recognition, Center for Excellence in Mathematics and Science Education, Morgan State University, 2014
- Morgan State University (2015) Mathematics Department Alumni of the Year, 2011-2012

## **Service**

### ***Professional Memberships***

- Mathematical Association of America
- National Council of Teachers of Mathematics
- Maryland Council of Teachers of Mathematics
- Phi Delta Kappa, Education Sorority, Inc
- American Educational Research Association
- Benjamin Banneker Association, Former Eastern Regional Director, and Membership Committee Chairperson

### ***Professional Service***

- American Mathematical Association (AMS) Notices Reviewer (2022)
- National Network Student Engagement in Mathematics through an Institutional Network for Active Learning (SEMINAL) Planning Committee member (2020-2022)
- The Baltimore Online Algebra for Students in Technology (BOAST), advisory board member (2019 - present)
- National Science Foundation Grant Reviewer (2015-present)
- Maryland Association of Mathematics Educators, member (2011- 2016)
- Organizing Committee, Bridging Research and Practice in K-12 STEM education for African American Learners Conference, 2016
- Baltimore City Public School, Mathematics Advisory Council (2012- 2014)
- Benjamin Banneker Association (BBA), Eastern Regional Representative, Executive Board Member (2012- 2015)
- Beyond the Numbers Conference (BBA sponsored) planning committee, 2010
- Interdisciplinary Journal of Problem Based Learning, Reviewer
- Journal of Negro Education, Reviewer
- Journal for Research in Mathematics Education. Reviewer
- International Journal of Qualitative Studies in Education, Reviewer
- Urban Education, Reviewer
- Journal for Research in Mathematics Education, Reviewer
- American Educational Research Association, Reviewer

- National Council of Teachers of Mathematics, Reviewer
- Journal of Mathematical Behavior, reviewer

***Professional Development***

- Institute in Critical Quantitative, Computational, & Mixed Methodologies, QCM Scholars Cohort and Conference participant, 2020 - 2022
- 2018 Institute for Advanced Study (IAS)/Park City Mathematics Institute (PCMI)
- AACU Preparing Critical Faculty for the Future Cohort 2, 2011-2013
- Research Training Institute for Quasi-Experiential Research Design, Northwestern University 2010, participant
- Morgan Institute for Scientific Teaching, member, the planning committee, participant

***University Service***

- Chair, Foundations of Excellence Sub-committee Faculty Involvement
- AACU Preparing Critical Faculty for the Future STEM Strategic Plan Committee
- Member, Placement Test Advisory Committee
- Member, Blue Ribbon Task Force for Teaching Excellence
- Member, Homecoming Improvement Committee
- Member, Provost Search Committee (2021)
- Morgan Community Mile Steering Committee, Education Committee Chair

***College Service***

- Chair, Morgan Educational Consortium School of Education and Urban Studies
- Member, Center for Excellence in Mathematics and Science Advisory Committee
- Education Committee for Morgan Mile Initiative co-leader

***Departmental***

- DASLP Dissertation Intensive Facilitator (2009- present)
- Chair, Doctoral Programs in Mathematics and Science Education Recruitment Committee (2012 - present)
- Coordinator Graduate Programs Mathematics and Science Education (2012 - 2016)
- Member, Search Committee Science Education Faculty (2021)
- Member, Academic Advisory Committee (2018- present)
- Member, Tenure and Promotion Committee (2011- present)

***Communal, State, National***

- Member, Delta Sigma Theta Sorority Inc
- Garret Heights Parent Teacher Association, member and president (2007 - 2011)
- Baltimore City Public Schools Parent Community Advisory Board Member (2012- 2014)



- Morgan State University Alumni Association, Life Member
- Centers for Spiritual Living Greater Baltimore, Practitioner Core Leader (2018-2022)