

**Joi A. Spencer, PhD.**  
University of San Diego  
School of Leadership and Education Sciences



## **ACADEMIC & LEADERSHIP APPOINTMENTS**

2020- Present      Interim Dean, University of San Diego, School of Leadership and Education Sciences (SOLES)  
2016- 2020        Associate Dean, University of San Diego, School of Leadership and Education Sciences  
2018-Present     Professor of Mathematics Education, University of San Diego, School of Leadership and Education Sciences  
Fall 2012- 2018   Associate Professor of Mathematics Education, University of San Diego  
Fall 2006- 2012   Assistant Professor of Mathematics Education, University of San Diego

## **EDUCATION**

University of California, Los Angeles (UCLA), Ph.D., Mathematics Education  
Stanford University, M.A., Education (Language Learning and Policy)  
Stanford University, BA, African and African American Studies with Honors in Education

## **QUALITIES & SKILLS**

Collaborative leadership style that seeks input from multiple voices and constituencies  
Strong analytical and quantitative skills  
Knowledgeable of and responsive to the status of higher education in California and across the US  
Nuanced understanding of diversity, equity, inclusion and anti-racism in the higher education context  
Record of enacting equity-based initiatives that improve opportunities for faculty and students  
Committed to supporting faculty scholarship  
Expertise with building collaborative, interdisciplinary and community-based partnerships

## **KEY ADMINISTRATIVE ROLES AND SERVICE**

Oversight of academic departments & institutes and centers  
Oversight of leadership team including budget & finance, admissions & enrollment, accreditation & assessment  
Development & fundraising in coordination with University Development  
Provide leadership on distance education efforts in coordination with Learning Design Center & PCE  
Work collaboratively with University Library to secure resources and services for faculty and graduate students  
Faculty Development  
Academic Program Design & Development  
University Strategic Planning Steering Committee  
University Institutional Effectiveness & Strategic Initiatives (IEIS) University, CO-Chair Diversity and Equity  
Library Committee & University Library Renovation Committee  
Academic Integrity Chair  
ARRT and Tenure Committee  
Institutional Review Board (IRB)  
Chair Multiculturalism and Social Justice Committee  
Strategic Planning Committee, Co-Chair  
Provost's Center for Inclusion and Diversity Working Group

University Academic Review Committee

Provost & Dean search Committee Member & Chair of numerous university-level search committees

## KEY INITIATIVES

**Diversity Post-doctoral Program, 2021-** Launched inaugural program which will hire of postdoctoral faculty members across the school of education. Focus is on the development and preparation of tenure-line faculty with emphasis on those from BIPOC communities whose scholarship centers on race, anti-racism, critical diversity, equity, social justice and their intersections.

**Anti-Racism Initiatives-** Comprehensive programming encompassing faculty professional development, school-wide foundational anti-racism training and the development of mechanism for reporting acts of racial intolerance.

**Education for Social Justice Doctoral (EDSJ) Program-** Designed and implemented the fully online, synchronous, hybrid EDSJ Program. The first of its kind at USD, the doctoral program prepares educators to understand and impact complex systems of education through their research and practice. Prepared full accrediting proposal garnering university approval and WSCUC accreditation. Program grants EDS and PHD degrees.

**Conversations of Color, 2018-Present-** Designed and initiated program to support the academic, personal, and professional growth of graduate students and faculty of color. Conversations provides a space for individuals to dialogue, improve wellness, and share their personal and professional journeys.

**Graduate Student Writing Center-** Via personalized coaching sessions, targeted workshops and writing boot camps, the Center supports the development and success of students by building competency and skill in graduate and professional-level writing. Center services have been expanded to support the scholarship of Assistant and postdoctoral faculty.

**Diversity, Inclusion & Social Justice Excellence Annual Showcase, 2017-Present-** Held on USD's Research Week and open to the USD community, the event showcases the body of social-justice focused work, research & ideas across the SOLES community.

**STEAM Academy, Co-Founder and Co-Director** STEAM Academy is an interdisciplinary, Community-Based STEM Initiative serving rising 6<sup>th</sup> grade to graduate students from San Diego's multilingual, multiracial and multicultural communities. The Interdisciplinary team (Department of Mathematics, School of Engineering and School of Education) partners with community-based organizations (SD Unified, Chula Vista Elementary SD, Ocean Discovery Institute, etc.) to fosters STEM equity in the SD region.

**STEAM Team Teacher Academy, Founder-**STEAM Teacher Academy equips teachers and non-profit leaders to design quality, equitable STEM programming in their communities and schools. Immersive & responsive, STEAM Teacher Academy works to undo inequitable practices in STEM education to the benefit of historically under-served and minoritized communities.

**Student Movements in Education -** Designed in concert with the College of Arts and Sciences, this course-based initiative supports Black student retention at the University of San Diego. Students use research and writing,

to increase knowledge of historical movements for educational equity and to create an affirming academic community.

## AWARDS

RISE San Diego [Inclusive Leadership In Action Award](#) Finalist, 2021

[Freire and hooks Decolonial Pedagogy Award](#), Center for Educational Excellence, USD, 2021

Elementary Institute of Science, [International Day of Women and Girls in STEM Recognition](#)- for women who are changing the world of STEM and carving paths for future generations of women, 2020

Women of Impact Award, 2016; Finalist, 2019; Nominee, 2021

Benjamin Banneker Association, Exemplary Post-Secondary Mathematics Educator Award, 2016

Faculty of the Year Award, University of San Diego, School of Leadership and Education Sciences, 2013 & 2016

Greater San Diego Mathematics Council, Outstanding Post-Secondary Mathematics Teacher, 2011

## PUBLICATIONS

Spencer, J. & Ullucci, K. (In Press). *Anti-Blackness at School: Creating Affirming Educational Space for African American Students*. Teachers College Press.

Bullock, E., Leonard, J., Spencer, J., & Walker, E. (2021). Closing faculty ranks: Black women mathematics education faculty navigating across career stages. In. B. Irby, N. Abdelrahman, B. Polnick & J. Ballenger, (Eds.) *Women of Color in STEM: Navigating the Double Bind*. Information Age Publishing.

Jiang, Y., Popov, V., Li, Y., Myers, P. L., Dalrymple, O., & Spencer, J. A. (2021). "It's Like I'm Really There": Using VR Experiences for STEM Career Development. *Journal of Science Education and Technology*, 1-12.

Spencer, J. & Ullucci, K. (2020). A Resource Guide for Schools and Districts: Addressing Racism in the Education System. School of Leadership and Education Sciences: Faculty Scholarship. 6. <https://digital.sandiego.edu/soles-faculty/6>

Ullucci, K. & Spencer, J. (2020). Resources for Teaching About Race and Police Violence. School of Leadership and Education Sciences: Faculty Scholarship. 7. <https://digital.sandiego.edu/soles-faculty/7>

Molina, S. & Spencer, J. (2020). Feedback sessions as rehearsal spaces: Preparing teacher candidates for professional presentations of their action research studies. *Educational Action Research*.

Spencer, J. (Ed.) (2019). *Observing for Access, Power and Participation in Mathematics Classrooms as a Strategy to Improve Mathematics Teaching and Learning*. Mathematical Sciences Research Institute. Berkeley, CA.

Valoyes-Chávez L., Martin D.B., Spencer J., Valero P. (2017) White Supremacy, Anti-Black Racism, and Mathematics Education: Local and Global Perspectives. In: Kaiser G. (eds) *Proceedings of the 13th International Congress on Mathematical Education*. ICME-13 Monographs. Springer.

Spencer, J. & Molina, S. (2017). Mentoring graduate students through the action research journey using guiding principles. *Educational Action Research*, 26(1), 144-165.

Bartell, T. G. Wager, A. A., Edwards, A. R., Battey, D., Foote, M. Q., and Spencer, J. (2017). Towards a framework for research linking equitable teaching with the Standards for Mathematical Practice. *Journal for Research in Mathematics Education*. 48(1). 7-21.

- Spencer, J. & White, D. (2016). Learning to teach equity: Cases and commentaries on facilitating mathematics- teacher professional development. In D.Y. White, S. Crespo & M. Civil (Eds.), *Cases for teacher educators: Facilitating conversations about inequities in mathematics classrooms*. Association for Mathematics Teacher Educators (AMTE). (Section Editor).
- Spencer, J. (2016). Moving from the outside in or what white colleagues need to do to get it right with their white students. In N.M. Russell, C.M. Haynes & F. Cobb (Eds.), *Interrogating whiteness and relinquishing power: White faculty's commitment to racial consciousness in STEM classrooms* (pp.223-226). Peter Lang.
- Spencer, J. & Hand, V. (2015). The racialization of mathematics education. In L. Drakeford (Ed.) *The Race Controversy in American Education* (p.237-258). Santa Barbara, CA: Praeger.
- Cordeiro, P., & Spencer, J., (2014). Building a Culture of Learning' training module for proprietors and head teachers of low-cost private schools in Ghana. San Diego, CA: The University of San Diego, Global Center.
- Spencer, J., Cordeiro, P., & Kelly, M. (2014). 'Health & Wellness' training module for proprietors and head teachers of low Cost private schools in Ghana. San Diego, CA: The University of San Diego, Global Center.
- Cordeiro, P. & Spencer, J. (2014). 'Facilities and Safety' training module for proprietors and head teachers of low-cost private schools in Ghana. San Diego, CA: The University of San Diego, Global Center.
- Spencer J. & Cordeiro, P. (2014). "Recruiting, Selecting, and Developing Quality Teachers' training module for proprietors and head teacher of low cost private schools in Ghana. San Diego, CA: The University of San Diego, Global Center.
- Stinson, D. W., & Spencer, J. (Eds.). (2013). Privilege and oppression in the mathematics preparation of teacher educators. *Journal of Urban Mathematics Education*, 6(1).
- Spencer, J. (2013). Views from the black of the math class. In M. Katz & M. Rose, (Eds.) *Public Education Under Siege* (p.21-29). Philadelphia, PA: University of Pennsylvania Press. (Reprint).
- Spencer, J. (2013). The mathematical practices of those without power. In M. Berger, K. Brodie, V. Frith, & K. le Roux (Eds.) *Proceedings of the Seventh International Mathematics Education and Society (MES 7)*. Cape Town, South Africa.
- Spencer, J. (2012). Views from the Black of the math class. *Dissent*. Winter 2012. [www.dissentmagazine.org](http://www.dissentmagazine.org).
- Quezada, R., Lattimer, H. & Spencer, J. (2011). Opportunities and obstacles in action research as a pathway to developing as a practitioner researcher. In Saleh, I. & M.S. Khine (Eds.) *Practitioner Research in Teacher Education: Theory and Best Practices* (Peter Lang International).
- Spencer, J., Santagata, R. & Park, J. (2010). Keeping the mathematics on the table in urban, mathematics professional development: A model that integrates dispositions towards students. In M. Q. Foote (Ed.) *Mathematics teaching and learning in K-12: Equity and professional development* (pp. 199-218). New York, NY: Palgrave.
- Hubbard, L. & Spencer, J. (2009). Achieving equity through charter schools: More than tinkering at school structure. *Perspectives in Education*. 27(4), 395-405.
- Spencer, J. (2009). Identity at the crossroads: Understanding the practices and forces that shape African American success and struggle in mathematics. In D.B. Martin (Ed.) *Mathematics Teaching, Learning, and Liberation in African American Contexts*. New York: Routledge.
- Ullucci, K. & Spencer, J. (2009). Unraveling the myths of accountability: A Case study of the California High School Exit Exam. *Urban Review*. 41(2), 161-173.

- Spencer, J. (2008). *Study Guide to the MisEducation of the Negro*. Washington, DC: Association for the Study of African American Life and History.
- Erickson, F., Bagrodia, R., Cook-Sather, A., Espinoza, M., Jurow, S., Shultz, J., Spencer, J. (2008). Students' Experience of School Curriculum: The everyday circumstances of granting and withholding assent to learn. In F. M. Connelly, M. F. He & JoAnn Phillion (Eds.) *Handbook of Curriculum and Instruction* (pp. 198-218). Sage Publications.
- \*Diversity in Mathematics Education (2007). Culture, race, power, and mathematics education. In F. Lester (Ed.) *Handbook of Research on Mathematics Teaching and Learning* (pp. 405-433). New York, NY: National Council of Teachers of Mathematics (NCTM). (\*one of five equally contributing editors/writers: Bannister, V, Bartell, T., Battey, D., Hand, V. & Spencer, J.)
- Bannister, V., Bartell, T., Battey, D., Hand, V. & Spencer, J. (November, 2006). Inequity in mathematics education: Moving beyond individual-level explanations of differential mathematics achievement to account for race and power. In S. Alatorre, J.L. Cortina, M. Saiz, & A. Mendez (Eds.), *Proceedings of the twenty- eighth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Merida, Yucatan, Mexico.
- Borko, H., Stecher, B., Martinez, F., Kuffner, K., Barnes, D., Arnold, S., Spencer, J. & Creighton, L. (2006). *Using classroom artifacts to measure instructional practice in middle school science: A Two-state field test*. National Center for Research on Evaluation, Standards, and Student Testing (CRESST) Center for the Study of Evaluation (CSE) Report 690.
- Spencer, J. (2006). *Balancing the equation: African American students' opportunity to learn mathematics with understanding in two central city middle schools*. Doctoral dissertation, University of California, Los Angeles.

## SELECTED NATIONAL & INTERNATIONAL CONFERENCE PRESENTATIONS (PEER REVIEWED)

- 2020            Dalrymple, O., Myer, P. & Spencer, J. (2020, March 6-7). Coming Together as a Community to Nurture Students in STEAM through Culturally-Rich Strategies. The 28<sup>th</sup> Annual Educators Conference: Association of African American Educators. San Diego, CA.
- Spencer, J. (2020, April 2-3). Creating Spaces where African American Mathematics Learners Can Thrive. National Council Teachers of Mathematics (NCTM) Research Symposium. Paper Accepted. (Conference canceled)
- 2019            Spencer, J., Dalrymple, O. Li, Y. & Myers, P. (2019, October 31-November 2). NSF-Supported Culturally-Rich Strategies for Advancing STEM Learning. SACNAS, The National Diversity in STEM Conference. Honolulu, HI.
- Spencer, J., Dalrymple, O., Li, Y., Myers P. & Popov, V. (2019). Building a Culturally Sustaining and Responsive Informal Summer STEM Academy for Latinx Students. Annual Meeting of the American Educational Research Association (AERA). Toronto, Canada.
- 2017            Spencer, J. (2017). An Equity Inventory to Address Equity in Mathematics Education. Cognitively Guided Instruction (CGI) Conference. University of Washington. Seattle, WA.
- Spencer, J. (2017). Promoting vs. Undermining the Mathematical Thinking of Under-served students. Conference for the Advancement of Mathematics Teaching (CAMT), Fort Worth, TX.

- Spencer, J., Battey, D. & Foote, M. (2017). A 10-Year Review of Equitable Instructional Practices in Mathematics. National Council of Research in Mathematics (NCTM) Research Symposium. San Antonio, TX.
- 2016 Spencer, J., Martin, D., Chavez, L., & Valero, P. (2016). White Supremacy, Anti-Black Racism, and Mathematics Education. International Congress on Mathematical Education (ICME). Hamburg, Germany.
- Spencer, J. & Hand, V. (2016). The Racialization of Mathematics Education. Annual Meeting of the American Educational Research Association (AERA). Washington, D.C.
- Spencer, J., Russell, N, & Johnson, K. (2016). Exploring Racial Consciousness and Faculty Behavior in STEM Classrooms. Annual Meeting of the Association of Mathematics Teacher Educators (AMTE). Irvine, CA.
- 2015 Spencer, J., Foote, M. & Battey, D. (2015). Equitable Mathematics Instructional Practices. Annual Meeting of the American Educational Research Association (AERA). Chicago, IL.
- Cordeiro, P., Spencer, J. & Brion, C. (2015). Leadership Development in Affordable Private Schools in Developing Nations. University Council for Educational Administration. (UCEA). San Diego, CA.
- 2014 Spencer, J., Goffney, I., Felton-Koestler, M., Bieda, K., White, D. Y., Aguirre, A., Crespo, S., Civil, M., Moschkovich, J, & Breyfogle, M. L. (2014). *Cases for Teacher Educators: Facilitating Conversations with Prospective Teachers about Inequities in Mathematics Classrooms*. Annual Meeting of the Association of Mathematics Teacher Educators (AMTE). Irvine, CA.
- Leonard, J., Spencer, J., Bullock, E. & Walker, E. (2014). Black Women STEM Faculty's Perspectives on their Experiences in the Academy. International Conference on Urban Education. Montego Bay, Jamaica.
- Spencer, J., Williams, Y.R., Dagbovie, P. & Melvin, M. (2014). Before and Beyond the Niagra Movement: Timeless Lessons in History That Help Connect the Dots. Annual Meeting of the Association or the Study of African American Life and History. Memphis, Tennessee.
- 2013 Spencer, J., Bartell, T., Foote, M. Battey, D., Wager, A. & Edwards, A. (November, 2013). Addressing Equity and Diversity Issues in Mathematics Education. Working Group. Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA). Chicago, IL.
- Spencer, J. (2013). Impediments to Equity in Middle School Mathematics. California-NAME (National Association of Multicultural Educators) San Diego Conference. San Diego, CA.
- 2012 Spencer, J., Ouedraogo-Thomas, R. & Cordeiro, C. (July, 2012). Impediments to and Prospects for Acquiring Millennial Skills in Low cost Ghanaian Academies. International Council on Education for Teaching (ICET) World Assembly, Cape Coast, Ghana.
- 2011 Spencer, J. Ullucci, K., & Renee, M. (2011). Social Justice Mathematics Education in the Time of Standards. Free Minds, Free People Conference. Providence, RI.
- Spencer, J. (2011). Identity, Opportunity & Disposition: The Learning Experiences of African American Middle School Mathematics Students. Institute for the Study of the African American Child, Conference on Research Directions. Hilton Head, SC.
- Spencer, J., Santagata, R. & Park, J. (2011). Design Principles for Using Video as a Tool for Engaging Teachers in Equity Based Discussions about Mathematics Teaching and Learning. International Symposium CADIVAM Lausanne. Lausanne, Switzerland.
- Spencer, J. (2011). Ethnic Identity as a Tool for Mitigating Racism in Middle School Mathematics Learning

- Opportunities. Annual Meeting of the American Educational Research Association (AERA). New Orleans, LA.
- 2010 Spencer, J. (2010). Professional Development as a Tool for Building Culturally Responsive Education: Lessons from a Middle School. Annual Meeting of the American Educational Research Association (AERA). Denver, CO.
- 2009 Spencer, J. (2009). Impediments to Teaching Mathematics for Understanding. California Mathematics Council-North Conference. Pacific Grove, CA.
- Santagaga, R., Spencer, J. & Park, J. (2009). Teaching Mathematics for Understanding in Urban Settings: A Model that Integrates Knowledge, Skills, and Dispositions Toward Students. Annual Meeting of the American Educational Research Association (AERA). San Diego, CA.
- Spencer, J. (2009). Mathematics Tracking Policies and the Construction of Educational Opportunity and Achievement. Annual Meeting of the American Educational Research Association (AERA). San Diego, CA.
- 2008 Spencer, J. (November, 2008). Mathematics Discourse Practices in an Urban Charter School. Meeting of the American Anthropological Association (AAA). San Francisco, CA.
- Spencer, J. (September, 2008). Examining a Charter School Through a Socio-cultural Lens. International Society for Cultural and Activity Research Conference (ISCAR). San Diego, CA.
- Spencer, J. (April, 2008). Social Justice in the Mathematics Classroom: Powerful Lessons for Today's Realities. Radical Mathematics Conference. New York, NY.
- Spencer, J. (March, 2008). Foregrounding Issues of Equity and Diversity in Mathematics Education Research: Implications for Research Methods and Teacher Development. Professional Development Course taught at Annual Meeting of the American Educational Research Association (AERA). New York, NY.
- Spencer, J. (March, 2008). Identity at the Crossroads: African American Mathematics Students Discuss Who They Are and Who They Hope to Be. Annual Meeting of the American Educational Research Association (AERA). New York, NY.
- Spencer, J., Ullucci, K. & Goode, J. (February, 2008). Talking Race with White Pre-Service Teachers: Ideas for the University Classroom. Association of Teacher Educators (ATE). New Orleans, LA.
- 2007 Spencer, J. (June, 2007). The Elevator Problem: Urban School Teachers' Impediments to Teaching a Rich Mathematics Lesson. Institute of Education Sciences Research Conference (IES). Washington D.C.
- Bannister, V., Bartell, T.G., Battey, D., Hand, V., & Spencer, J. (April, 2007). Critiquing the stories, roles, and structures in mathematics education that privilege whiteness. Annual Meeting of the American Educational Research Association (AERA), Chicago, IL.
- 2006 Bannister Pitts, V., Bartell, T., Battey, D., Hand, V. & Spencer, J. (April, 2006). The Untapped Potential of Mathematics Education Research to Address Equity. Annual Research Pre-session of the National Council of Teachers of Mathematics (NCTM). St. Louis, MO.
- Goode, J., Spencer, J. and Ullucci, K. (January, 2006). Making Meaning of Identity: A View through Three Lenses. Paper presented at the 75<sup>th</sup> Annual Hawaii International Conference on Education. Honolulu, Hawaii.

## INVITED TALKS

- "Catalyzing Transformational Change in Higher Education and Philanthropy." The Non-Profit Institute. (2022)
- "Black Excellence in K-12 and Higher Education." San Diego County Office of Education & San Diego NAACP. (2022)
- "Enacting Affirming Mathematics Education Spaces for African American Students." The Costen Foundation. (2022)

"Race, Equity and Mathematics Education." STEM Teacher Leadership Network. STEMNet. National Science Foundation. (2020)

"Black Leadership Panel," San Diego County Office of Education & Association of African American Educators. (2020)

"Race, Power and Identity in Mathematics Learning." University of Wyoming. (2020)

"Building the STEM Students We Need." University of Wyoming Social Justice Research Center. (2019)

"Taking Stock of Exclusionary Practices in K-12 Mathematics Settings: An Educator's Tool." Brigham Young University.(2018)

"Promoting vs. Undermining the Mathematical Thinking of Under-served students." Conference for the Advancement of Mathematics Teaching (CAMT), Fort Worth, TX. (2017)

"Mathematics, Social Justice and Exclusion in California Schools: An Inventory for Change." California Mathematics Project, Directors Meeting. San Diego, CA. (2016)

"Lesson and Learning Study as a Tool for Equity. UCLA Mathematics Project, Cognitively Guided Instruction (CGI) Conference. Manhattan Beach, CA. (2016)

"African American, Minoritized Students in School Mathematics: New American or Designated Serf?" Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA). Lansing, Michigan. (2015)

"School Leadership in Developing Countries: Context Matters." International Division of the University Council of Educational Administration (UCEA). San Diego, CA. (2015)

"The Mathematical Practices of those without Power." International Mathematics Education and Society (MES 7) Conference. Cape Town, South Africa.(2013)

"Mathematical Teaching, Mathematical Tasks & the Kinetic Power of STEAM." LEAD San Diego. San Diego, CA. (2013)

"Mathematics Education Research as a Site for Social Justice." Middle Tennessee State University. Research Address to the Inaugural Mathematics and Science Education Doctoral Cohort. Murfreesboro, TN. (2011)

"Why are All the Students of Color Sitting at the Back of the Mathematics Classroom: Teaching Mathematics for Freedom and Opportunity." Greater San Diego Mathematics Council. San Diego, CA. (2011)

"Mathematics Education Researchers: Taking a Stand to Keep our Seat in the School Room." Radical Mathematics Conference. Long Island University. Brooklyn, NY. (2010)

Franke, M. L., Spencer, J., & Terry, C. L. "Narratives from the Field: Mathematics Teacher Disposition Towards African American Middle School Students. Plenary Session, Research Pre-session of the National Council of Teachers of Mathematics (NCTM). Washington, DC. (2010)

"Implications from Research on Instructional Practice in Today's Mathematics Classrooms." National Center for Women and Information Technology (NCWIT). Menlo Park, CA.(2019)

"Teaching Mathematics for Understanding in Urban Settings: A Model that Integrates Knowledge, Skills, and Dispositions towards Students. Center for Research in Math and Science Education (CRMSE). San Diego State University. San Diego, CA. (2009)

"Making Mathematics Real through Woodson's MisEducation of the Negro. International Conference of the National Association for Multicultural Education (NAME). New Orleans, LA. (2008)

"The MisEducation of the Negro: A Study Guide." Summer Institute of the National Association for Multicultural Education (NAME). Philadelphia, PA. (2008)

"African American Mathematics Identity in Central City Schools." Urban Learning, Teaching and Research Special Interest Group of the American Educational Research Association (AERA). Presented at the 2008 Annual meeting of the American Educational Research Association. New York, NY. (2008)

"Framing failure in The Mathematics Classroom: A 2-School Case Study Of African-American Mathematics Achievement." California Mathematics Council South Annual Conference. Palm Springs, CA. (2007)

"Math Education: Breaking Through Barriers Towards Excellence. National Council for Black Studies Annual Conference. San Diego, CA. (2006)

"Improving African American Student Academic and Mathematics Identity." San Bernardino County Institute on Educating African American Students. San Bernardino, CA. (2006)

## UNIVERSITY COURSES (\*designed and taught; \*\*designed, doctoral level courses)

\* Critical Quantitative Research Methods I (EDUC 607) and II (in progress)

\*\* History of Education for Social Justice

\*\* Research Design and Methods for Social Justice

\*The Engineering Design Process in Mathematics and Science Education EDUC 509 (Online MEd. course)

\*\* STEAM and Special Student Populations EDUC 528

\*Secondary Mathematics Methods (EDUC 332/532)

\*Advanced Seminar in Math Content (EDUC 573)

Research Design and Methods (EDUC 500)

\*Masters Capstone Seminar (EDUC 580)

\*The Historical Struggle for Educational Equity (EDUC 597)

\*Historical Student Movements in Education (EDUC 379)

\*Current Issues in Math, Science, and Technology Education (EDUC 570)

Educational Leadership for Peace & Sustainability

Independent Study Course: Improving Educational Equity in Low-Cost Ghanaian Schools

## INTERDISCIPLINARY INITIATIVES

**STEAM Teacher Academy, Founder-** Immersive, critical and culturally relevant professional development for K-12 STEM educators. Teachers build STEM knowledge and skill, reflect on their own instructional practices and build pedagogical practices that support under-served STEM students.

**STEAM Academy, Co-Founder and Director, University of San Diego-** Educational program serving rising 6 grade through graduate school from San Diego's diverse communities. STEAM TEAM provides hands-on learning experiences in science, technology, engineering, arts and mathematics. Experience includes school and college counseling sessions, which help students understand mathematics and science course requirements for college, and learn how to navigate and avoid detrimental mathematics and science course-tracking. Along with two co-founders, I designed the STEAM TEAM program and curriculum, developed budget, fundraised, marketed, hired staff, and provided instruction for students and teachers.

**STEAM Youth and Community Conference-** The annual Conference mobilizes the community to help provide new pathways for youth to ignite, develop and pursue their STEAM interests, while simultaneously elevate the STEAM literacy, awareness and nurturing potential of the community.

**Teaching Innovation Studio, Founder & Director, University of San Diego-** The goal of the Studio is to deepen student thinking and understanding in mathematics, and STEM-related fields and to document, and share this complex process with the larger educational community. Work is concentrated in schools serving traditionally under-resourced students. Contracts & Studio

Participants include: Miramar Community College, San Diego Unified School District (3-year US Department of Education Magnet Grant), Cajon Valley School District, and Nativity Prep Academy of San Diego

**Gear-Up Math & Science Summer Academy, Inglewood Unified School District via UCLA Gear-Up Grant** -Developed and directed middle school math & science program for African American and Latino, low-income middle school students. Researched and developed integrated mathematics and science curriculum focused on deepening student understanding and problem-solving, developed budget, hired all faculty and staff, conducted staff and faculty development, supported and monitored student progress.

## GRANTS AND FELLOWSHIPS

Spencer, J., Myers, P., Dalrymple, O. & Forbes, M. (Submitted July, 2021). Project SEISMIC: Racial Equity in STEM Education. National Science Foundation. \$3.1mil.

San Diego Unified School District Level Up SD grant. University of San Diego Summer 2021 Enrichment Experience for Rising Stars: STEAM Academy and STEAM Youth and Community Conference. \$175,000. San Diego Foundation.

Spencer, J., Myers, P., & Dalrymple, O. (2018). STEAM Academy and the STEAM Youth and Community Conference. University of San Diego Strategic Initiative Grant. \$78,000. Funded January, 2018.

Myers, P., Spencer, J., Dalrymple, O., Popov, V. & Li, Y. (2017-Present). Bridging the World of Work and Informal STEM Education. National Science Foundation. \$300,000. Funded August, 2017.

Page, E., Spencer, J., Friedman, J. & Kua, J. (2009). Noyce Scholars Program, National Science Foundation, \$900,000.

NSF REESE Collaborative Research Grant: "Integrating Mathematics and Equity – Toward a New Model for the Professional Development of Effective Mathematics Teachers" (\$45,000), submitted January 2007 (unfunded)

American Educational Research Association (AERA) Dissertation Year Grant, \$15,000

Doctoral Student Fellow, Diversity in Mathematics Education (DiME) NSF Center for Learning and Teaching, UCLA, Fall 2002 – Spring 2005

Eugene Cota Robles Fellowship for doctoral study, Fall 2001- Spring 2005

### Faculty Research Grants, University of San Diego

Spring 2011 Understanding Multiplicative Reasoning in Struggling Middle School Math Students

Spring 2010 The Impact of Teacher Disposition on Mathematics Instructional Practice

Spring 2008 African American Middle School Student Success & Struggle in Mathematics

### International Opportunity Travel Grants, University of San Diego

International Conference of Mathematics Education (ICME), Hamburg, Germany, Summer 2016

University of West Indies, Cave Hill, Barbados, Spring 2014

International Symposium CADIVAM Lausanne. Lausanne, Switzerland. Spring, 2011

## STEM & PROFESSIONAL LEADERSHIP

Board of Trustees, Nativity Prep Academy, San Diego, CA (2014-2021); Academic Committee Board Member

Elementary Institute of Science, San Diego, CA (2016-Present); External Affairs Committee

California Association of Mathematics Educators, (CAMTE)

- President (2016-Present)
- President-Elect (2016-2017)
- Board Member (2015-2016)

Journal for Research in Mathematics Education (JRME), Editorial Panel

- Chair (2016-2017)
- Member (2016-2018)

Benjamin Banneker National Conference Chair, 2010

Organized conference program, including speakers, receptions, and awards and scholarship ceremony honoring high achieving African American middle and high school mathematics students and their teachers throughout San Diego County.

## **ADDITIONAL PROFESSIONAL AND RESEARCH EXPERIENCE**

### **NASA Ames Pre-Service Teacher & Alumni Institute, Mathematics Director, Mountain View, CA**

Lead curriculum and instruction on learner-centered & inquiry-based mathematics to pre-service and practicing teachers serving high needs K-12 students on the NASA Ames Research campus. Lessons incorporated NASA STEM curriculum related to rocketry, solar energy, and space travel.

### **Research Associate, LessonLab Research Institute, Santa Monica, CA**

Implemented experimental research study of middle school mathematics teachers in Los Angeles Unified School District. Study development of teacher content and pedagogical content knowledge and the impact of this knowledge on the teaching of rich mathematical problems in the classroom. Served as professional development facilitator for teachers participating in the study.

### **Educational Researcher, Rand Corporation, Santa Monica, CA**

As member of research team, developed an instrument for measuring mathematics and science instruction with a two-state research team. Responsibilities included conducting classroom observations, and scoring classroom artifact packages.

### **Teaching Assistant, Mathematics Methods, University of California, Los Angeles**

Prepared lessons and ran section of 30+ pre-service teachers. Topics included Cognitively Guided Instruction, curriculum development, and theories of teaching and learning mathematics.

### **Middle Grades Mathematics Teacher, Ravenswood School District, East Palo Alto, CA**

- Cesar Chavez Academy 1995-1998
- Menlo Oaks Middle School 1994-1995

## **PROFESSIONAL MEMBERSHIPS**

American Educational Research Association (AERA): Divisions K & G; SIGs: Research in Mathematics Education & Research Focus on Black Education

American Association of Colleges for Teacher Education (AACTE)

Association of Independent California Colleges and Universities (AICCU)

National Council of Teachers of Mathematics (NCTM)

Association of Mathematics Teacher Educators (AMTE)

Benjamin Banneker Association

California Association of Mathematics Teacher Educators (CAMTE)

California Mathematics Council (CMC)

Association for the Study of African American Life and History (ASALH)

## **PERSONAL INTERESTS**

California Natural History, African American History and Culture, National Parks, Hiking, and Theatre (musicals & comedies)

*References Available Upon Request*