

SHERON L. MARK, PH.D.

Assistant Professor, Science Education
University of Louisville
College of Education and Human Development
Department of Elementary, Middle and Secondary Education
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EDUCATION

Ph.D. Boston College Curriculum and Instruction	2012
M.S. Syracuse University Chemical Engineering	2008
B.S. Syracuse University (<i>magna cum laude</i>) Biochemistry	2006

HONORS, AWARDS, & FELLOWSHIPS

2017 National Science Foundation (NSF) Innovative Technology Experiences for Students and Teachers (ITEST) Fellowship. STEM Learning and Research Center (STELAR). Alexandria, VA.

2016 Nystrand Offutt Scholar. Nystrand Center of Education Excellence. College of Education and Human Development. University of Louisville. Louisville, KY.

2015 Jhumki Basu Scholar. National Association for Research on Science Teaching (NARST) Equity and Ethics Committee.

2003 National Academic Scholarship – Science. Republic of Trinidad and Tobago.

ACADEMIC APPOINTMENTS

Assistant Professor University of Louisville Department of Elementary, Middle and Secondary Education	2015 - present
<u>Courses Taught:</u> Culture and Power in (STEM) Education Developing Cross-Cultural Competence: Teaching Students from Diverse Backgrounds	

Public Schools in America
Middle and Secondary Science Teaching Methods
/Capstone Seminar for Student Teaching in Mathematics and Science
Curriculum and Instruction for Gifted and Talented Education (co-taught)

Post-Doctoral Fellow and Keck Foundation Teaching Fellow 2012 – 2015

Loyola Marymount University
Center for Urban Resilience (CUREs) || Seaver College of Science and Engineering || Bellarmine College of Liberal Arts

Courses Taught:

Biochemistry
General Biology Lab
Ecology of Homelessness
Introduction to Environmental Studies

Graduate Assistant 2008 – 2012

Boston College
Lynch School of Education

Courses supported:

Teaching about the Natural World – Elementary Science Methods;
Restructuring Classrooms with Technology;
Animal Behavior;
Ecology of a Dynamic Planet.

Graduate Assistant 2006 - 2008

Syracuse University
L.C. Smith College of Engineering and Computer Science

Courses supported:

Statistics II;
Introduction to Chemical Engineering.

PUBLICATIONS

PEER-REVIEWED ARTICLES AND BOOK CHAPTERS

*indicates a graduate student or non-research collaborator

**indicates a peer-reviewed book chapter

23. Rodriguez, A., **Mark, S. L.**, & Restrepo Nazar, C. (**co-editors**; *in press*). Exposing and dismantling systemic racism in science education. *Journal of Science Teacher Education*.
22. ****Mark, S. L.**, *Trzaskus, M., *Archer, L., & *Azmani, P. (*in press*). *Fostering social connectedness and interest in science through sports*. In Alberto J. Rodriguez & Regina Suriel (Eds.). Supporting STEM education with limited resources: Research-based and practical suggestions for advocacy and transformative change. Springer.

21. **Mark, S. L.** (*in press*). New geography for resistance: The engagement of diversity in an out-of-school STEM setting. *Cultural Studies of Science Education*.
20. **Mark, S. L.** (*in press*). High-revenue athletics institutional policies and practices aligned with key resources for STEM career development. *Journal of Higher Education Athletics and Innovation*.
19. **Mark, S. L.**, Lee, C-W. J., & Azmani, P. A. (*in press*). Growing Capacity in Gifted and Talented Education Through Science, Technology, Engineering, Arts, and Mathematics (STEAM). *Kentucky Teacher Education Journal*.
18. **Mark, S. L.** (2021). Preparing for Inclusivity and Diverse Perspectives on Social, Political, and Equity Issues in Higher Education. *College Teaching*, 69(2), 78-81. <https://doi.org/10.1080/87567555.2020.1820433>. *College Teaching* (2018 CiteScore: 0.8 – values from Scopus).
17. **Mark, S. L.** (2021). Supporting middle and secondary science teachers to implement sustainability-themed instruction. *Innovations in Science Teacher Education*, 6(1). Retrieved from <https://innovations.theaste.org/supporting-middle-and-secondary-science-teachers-to-implement-sustainability-themed-instruction/>. [Official practitioners' journal of the Association of Science Teacher Educators](#).
16. **Mark, S. L.**, *Constantin, G. M., *Tinnell, T. L., & *Alexander, O. A. (2020). It got me back to science and now I want to be a plant scientist: Arts-integrated science engagement for middle school girls. *Journal for Learning through the Arts: A Research Journal on Arts Integration in Schools and Communities*, 16(1). <http://dx.doi.org/10.21977/D916145329>. Retrieved from <https://escholarship.org/uc/item/0pd9v0bt>
15. **Mark, S. L.** & Id-Deen, L. A. (2020). Examining Pre-service Mathematics and Science Teachers' Plans to Implement Culturally Relevant Pedagogy. *Educational Action Research*, 1-19. <https://doi.org/10.1080/09650792.2020.1775670>. (2019 CiteScore 2.3 - values from Scopus)
14. **Mark, S. L.**, Tretter, T., *Eckels, L., & *Strite, A. (2020). An Equity Lens on Science Education Reform-Driven Classroom-Embedded Assessments. *Action in Teacher Education*, 42(4), 405-421. <https://doi.org/10.1080/01626620.2020.1756527>. [2019 CiteScore 1.1 - values from Scopus; Official research journal of the Association of Teacher Education](#).
13. **Mark, S. L.** (2020). How do some Black male student-athletes explore and plan for careers in sports and in science, technology, engineering, and mathematics? Editor: Kirk E. Mathias. *Journal of Physical Education, Recreation & Dance*, 91(3), 59-60. <https://doi.org/10.1080/07303084.2019.1705136>. [Official journal of the Society of Health and Physical Educators \(SHAPE America\) and the largest, most frequently published of all of SHAPE's publications](#).
12. **Mark, S. L.**, Id-Deen, L., & Thomas, S. (2019). Getting to the root of the matter: pre-service teachers' experiences and positionalities with learning to teach in culturally diverse contexts. *Cultural Studies of Science Education*. doi:10.1007/s11422-019-09956-5. **(2019 impact factor = 0.437; 2020 journal downloads = 128,220)**

11. **Mark, S. L.**, & *Alexander, O. (2019). A critical race case study exploration of two Black male student-athletes' STEM career development. *Journal for the Study of Sports and Athletes in Education*, 1-30. doi:10.1080/19357397.2019.1633508
10. **Mark, S. L.** (2018). A bit of both science and economics: a non-traditional STEM identity narrative. *Cultural Studies of Science Education*, 13(4), 983-1003. doi:10.1007/s11422-017-9832-2 (**2018 impact factor = 0.51; 2018 journal downloads = 95,764**).
9. ****Mark, S. L.** (2017). Who am I? I am . . . : Activist Art to Author ELL Identities. In T. Dell'Angelo, L. Ammentorp, & L. Madden (Eds.), *Using photography and other arts-based methods with English Language Learners*: Rowman & Littlefield.
8. **Mark, S. L.** (2016). Psychology of Working Narratives of STEM Career Exploration for Non-dominant Youth. *Journal of Science Education and Technology*, 1-18. doi:10.1007/s10956-016-9646-0 (**2016 impact factor = 1.080**).
7. **Barnett, M., Houle, M., **Mark, S. L.**, Minner, D., Hirsch, L., Strauss, E., . . . Hufnagel, B. (2014). Participatory professional development: Geospatially enhanced urban ecological field studies. In J. MaKinster, N. Trautmann & M. Barnett (Eds.), *Teaching science and investigating environmental issues with geospatial technology: Designing effective professional development for teachers* (pp. 360). Springer Science+Business Media B.V.
6. **Barnett, M., MaKinster, J., Trautmann, N., Houle, M., & **Mark, S. L.** (2013). Geospatial technologies: The present and future roles of emerging technologies in environmental education. In R. B. Stevenson, M. Brody, J. Dillon, & A. E. J. Wals (Eds.), *The International Handbook of Research on Environmental Education* (331 – 348). New York and London: Routledge.
5. **Mark, S. L.**, DeBay, D., Zhang, L., Haley, J., Patchen, A., Wong, C., & Barnett, M. (2013). Coupling social justice and out-of-school time learning to provide opportunities to motivate, engage and interest under-represented populations in STEM fields. *Career Planning and Adult Development Journal*, 29(2), 93 - 105. ([Official journal of the Career Development Network](#)).
4. Blustein, D. L., Barnett, M., **Mark, S. L.**, Depot, M., Lovering, M., Lee, Y., et al. (2013). Examining urban students' constructions of a STEM career development intervention over time. *Journal of Career Development*. 40 (1): 40 – 67 (**impact factor = 0.846 in 2013**).
3. **DeBay, D., Haley, J., **Mark, S. L.**, Barnett, M., Anderson, A., Strauss, E., et al. (2012). Engaging youth in visualizing sustainable urban plans using geographic information systems coupled with computer visualization. In A. Wals, P. Corcoran & H. Brandon (Eds.), *Learning for sustainability in times of accelerating change*: Springer.
2. Barnett, M., Houle, M., **Mark, S. L.**, Strauss, E. & Hoffman, E. (2010). Learning about urban ecology through the use of visualization and geospatial technologies. *Journal of Technology & Teacher Education*. 18 (2): 285 – 314. ([Official journal of the Society for Information Technology and Teacher Education \(SITE\)](#) and ranked #1 journal in ["Teacher Education and Technology" \(H-Index\)](#)).
1. Hou, S., Liu, Z., Young, A. W., **Mark, S. L.**, Kallenbach, N. R., & Ren, D. (2010). Effects of Trp-and Arg-containing antimicrobial-peptide structure on inhibition of Escherichia coli

planktonic growth and biofilm formation. *Applied and environmental microbiology*, 76 (6), 1967-1974. (**impact factor = 3.778**).

NEWSLETTERS AND MAGAZINES

1. **Mark, S. L.** (2016). Advancing out of poverty through sport and STEM. *Envision Equity – Jefferson County Public Schools Diversity, Equity, and Poverty Newsletter*.
 - **Distribution = 4908. Range of Views Online: 09/2015 issue = 24,661 - 01/2017 issue = 546.** Audience: JCPS teachers, administrators, and families.

GRANTS AND GRANT-FUNDED OUTCOMES (**Total Grant Funding Acquired = \$1,021,310**)

RESEARCH GRANTS

Total funding acquired = \$771,310

Creating a more inclusive undergraduate biology curriculum 2020
National Science Foundation, RCN-UBE Incubator (Key Personnel, \$69,003.00)
PI Sarah Eddy (FIU), Co-PI Linda Fuselier (UofL),
Susan Jarosi (Hamilton) and Aramati Casper (CSU)

Targeting key dispositions, knowledge, and skills for transforming the STEM workplace 2018
Research and Faculty Development (RFD) Funds (PI, \$1400)
University of Louisville

| **Developed and submitted a 2018 NSF ITEST proposal**

Formative Assessment Strategies for Science Teachers (FAS²T) 2016 – 2018
Mathematics and Science Partnerships (Co-PI, \$399, 617)
Kentucky Department of Education (PI, LeeAnn Nickerson, Jefferson County Public Schools)

| **Resulting publication: Mark, S. L.,** Tretter, T., *Eckels, L., & *Strite, A. (2020). An Equity Lens on Science Education Reform-Driven Classroom-Embedded Assessments. *Action in Teacher Education*. [Official journal of the Association of Teacher Education](#).

Culturally-Responsive STEM Education: A Place for Art and Social Justice 2016 – 2017
Women Investing in Education (WIE) (PI, \$2700)

| **Resulting publication: Mark, S. L.,** *Constantin, G. M., *Tinnell, T. L., & *Alexander, O. A. (accepted 06-2020). It got me back to science and now I want to be a plant scientist: Arts-integrated science engagement for middle school girls. *Journal for Learning through the Arts*.

Culturally-Responsive STEM Education: A Place for Art and Social Justice 2015
Nystrand Offutt Scholarship (PI, \$500)
Nystrand Center of Education Excellence
College of Education and Human Development
University of Louisville

Resulting publication: Mark, S. L. (2017). Who am I? I am . . . : Activist Art to Author ELL Identities. In T. Dell'Angelo, L. Ammentorp, & L. Madden (Eds.), *Using photography and other arts-based methods with English Language Learners*: Rowman & Littlefield.

Non-traditional Scientific Context of Sport to Support STEM Thinking 2015 – 2017
Research and Faculty Development (RFD) Funds (PI, \$3000)
College of Education and Human Development
University of Louisville

Resulting work: **Mark, S. L., *Trzaskus, M., *Archer, L., & *Azmani, P. (under review, following invitation to submit). *Fostering social connectedness and interest in science through sports*. In Alberto J. Rodriguez & Regina Suriel (Eds.). *Supporting STEM education with limited resources: Research-based and practical suggestions for advocacy and transformative change*. Springer or Harvard Ed (TBD).

The Value of Urban Parkland: A Park User Survey Study of the Baldwin Hills 2014
The Baldwin Hills Conservancy, Los Angeles, CA (Co-PI*, \$295,090)
(PI, Eric Strauss, Loyola Marymount Univ.)
***as post-doc, unable to be named as PI**

Resulting publication: Romolini, M., Ryan, R. L., Simso, E. R., & Strauss, E. G. (2019). Visitors' attachment to urban parks in Los Angeles, CA. *Urban Forestry & Urban Greening*, 41, 118-126.

TEACHING GRANTS

Total funding acquired = ~\$250,000

Cards2Create2 @ Seneca High School 2015 – 2017
Council for Post-Secondary Education (Key Personnel, \$150,000)
University of Louisville (PI, Harrie Bueker, University of Louisville)

Resulting publication: Mark, S. L., Id-Deen, L., & Thomas, S. (2019). Getting to the root of the matter: pre-service teachers' experiences and positionalities with learning to teach in culturally diverse contexts. *Cultural Studies of Science Education*. doi:10.1007/s11422-019-09956-5. (**2018 impact factor = 0.51; 2018 journal downloads = 95,764**)

Science Teaching for English Learners – Leveraging Academic Rigor (STELLAR) 2012 – 2015
United States Department of Education (Key Personnel, ~\$100,000)

(PI, Magaly Lavadenz. Loyola Marymount University)

GRANTS SUBMITTED, NOT FUNDED
Total additional funding sought = \$4,066,755.39

Data Science for Diverse Students (DS²) 2020
National Science Foundation (Co-PI, \$1.5M)
Innovative Technological Experiences for (PI, Dr. Wei Zhang, Professor and Chair,
Students and Teachers (ITEST) Dept. of Computer Science and Engineering,
Speed School of Engineering)

Second Year Success in Biology 2019
National Science Foundation (SSTEM) (Co-PI, \$ 998,056)
(PI, Dr. Linda Fuselier, University of
Louisville, Department of Biology)

*Making Changes: Computer-aided Human-centered design As Next Generation Engineering and
Science for Equity in STEM (CHANG(ES)²)* 2019
Spencer Foundation
Small Research Grant (PI, \$49,957)

*Making Changes: Computer-aided Human-centered design As Next Generation Engineering and
Science for Equity in STEM (CHANG(ES)²)* 2018
National Science Foundation (PI, \$399,920)
Innovative Technological Experiences for Students and
Teachers (ITEST)

ACCESS (Academic Career and Community Empowerment for STEM Scholars) 2017
National Science Foundation (SSTEM) (Co-PI, \$999,998)
(PI, Dr. Linda Fuselier, University of
Louisville, Department of Biology)

*Transdisciplinary exploration and application of social epistemology to science teacher
education* 2017
The Center for Education and Ethics (Co-PI, \$39,957)
University of Wisconsin Madison (PI, Dr. Linda Fuselier, University of
Louisville, Department of Biology)

Culturally-Responsive STEM Education: A Place for Art and Social Justice Spring, 2016
Executive Vice President for Research and Innovation Internal Grant Program
Research – Type I Grant (PI, \$2,999.39)

*Non-traditional Scientific Context of Sport to Support STEM Thinking, STEM Career
Development, and Social Connectedness* Spring, 2016
Executive Vice President for Research and Innovation Internal Grant Program
Research – Type I Grant (PI, \$2,934)

Non-traditional Scientific Context of Sport to Support STEM Thinking, STEM Career Development, and Social Connectedness Fall, 2015
Executive Vice President for Research and Innovation Internal Grant Program
Research – Type I Grant (PI, \$2,934)

Mobile Data Art August, 2015
Knight Foundation: Journalism & Technology Innovation
Prototype Fund (Co-PI, \$35,000)
(PI, Veronica Combs, Institute for Healthy Air, Water and Soil)

WeSport August, 2015
Knight Foundation: Journalism & Technology Innovation (PI, \$35,000)
Prototype Fund

ADDITIONAL GRANT-FUNDED RESEARCH EXPERIENCES

RCN-UBE Incubator Research Collaborator 2021
Creating a More Inclusive Biology Curriculum RCN Incubator
National Science Foundation (grant award #2018693)

Informal STEM Program Research Observer 2011 – 2012
Program in Education, Afterschool and Resiliency/Harvard University

Graduate Research Assistant, Boston College 2008 – 2012
Information Technology and College Pathways through Application of
Technology to Explore Urban Ecological Challenge
National Science Foundation (NSF) Innovative Technology Experiences
for Students and Teachers (ITEST)
PI: Dr. Mike Barnett, Grant #0833624

Graduate Research Assistant, Boston College 2008 – 2012
Urban Ecology Course Materials Created with a Universal Design for
Learning Framework
National Science Foundation (NSF), Instructional Materials Grant (IMD)

Graduate Research Assistant, Boston College 2008 – 2011
Urban Ecology, Information Technology and Inquiry Science for Students
and Teachers
National Science Foundation (NSF), Innovative Technology Experiences
for Students and Teachers (ITEST)
PI: Dr. Mike Barnett, Grant #0525040

Graduate Research Assistant, Boston College 2008 – 2010
Improving Teacher Quality (ITQ)

The United States Department of Education

INVITED RESEARCH PRESENTATIONS AND INTERVIEWS

- Mark, S. L.** (January 21st, 2021). [Black male college athletes' STEM career development](#). Interview conducted by **Emily Laber-Warren**, Director, Health & Science Reporting Program. Craig Newmark Graduate School of Journalism at CUNY, 219 West 40th Street, New York, NY 10018. (646) 932-4043. emily.laberwarren@journalism.cuny.edu, @elaberwarren
- Mark, S. L.** (February 28th, 2017). Psychology of Working Narratives of STEM Career Exploration for Non-dominant Youth. In the **STEM Learning and Research Center (STELAR) Webinar: *Stories from ITEST - Culturally Competent Projects that Inspire Young People to Pursue STEM Careers (Journal of Science Education and Technology Special Issue)***
- Mark, S. L.** (December 9th, 2016). Social justice-STEM education: Modeling and enacting it. **2017 Nystrand-Offutt Fellow Award Ceremony**. University of Louisville, Louisville, KY.
- Mark, S.** (2016). Representing Race and Ethnicity, STEM in Children's Television, and Healthcare: Potential and Setbacks. Poster presented in the Jhumki Basu Scholars Symposium - Equity and Justice: Perspectives From Emerging Scholars, an invited symposium sponsored by the **Ethics and Equity committee of the National Association for Research in Science Teaching (NARST)**. Baltimore, MD.
- Mark, S. L.** (2013). STEM Careers and Education. Second Annual Legacy Ladies, Inc. **Just For Girls Teen Conference**. Loyola Marymount University, Los Angeles, CA.
- Barnett, M., Blustein, D., & **Mark, S.** (2010). Enhancing youth motivation for STEM career development. Presented as a part of the **Learning Resources Center at the Educational Development Center ITEST** webinar series. In ITEST Program Findings on Youth Motivation, Interest, and Identity as it relates to STEM Career Development.
- Barnett, M., **Mark, S.**, Blustein, D., Strauss, E., & Hoffman, E. (2010). Citizen science in urban ecology: Intersection between environmental and STEM education and career development. Presented at the 2010 annual meeting of the **National Association for Research in Science Teaching (NARST)**, Philadelphia, PA.

INTERNATIONAL CONFERENCE PRESENTATIONS (PEER-REVIEWED)

*indicates a graduate student or non-research collaborator

- Mark, S. L.** (Feb, 2021). *Preparing for inclusivity and diverse perspectives on social, political, and equity issues in higher education*. **University of Louisville, Delphi Center of Teaching Excellence**, Celebration of Teaching and Learning.
- Mark, S. L.** & Tretter, T. (Apr, 2020 – cancelled due to COVID-19 pandemic). *An Equity Lens on NGSS-Focused Classroom-Embedded Assessments*. Paper to be presented as part of the **NARST-NSTA Symposium** at the 2020 Annual **National Conference of the National Science Teachers Association (NSTA)**, Boston, MA.
- Mark, S. L.** & Tretter, T. (2019). *An Equity Lens on NGSS-Aligned Classroom-Embedded Assessments*. Paper presented at the 2019 Annual meeting of the **National Association for Research in Science Teaching (NARST)**, Baltimore, MD.
- Mark, S. L.**, *Constantin, G., *Tinnell, T., & *Alexander, O. A. (2019). *It got me back to science: arts-integrated science engagement for middle school girls*. Poster presented at the 2019 Annual meeting of the **National Association for Research in Science Teaching (NARST)**, Baltimore, MD.
- Id-Deen, L. A. & **Mark, S. L.** (2019). Examining Mathematics and Science Prospective Middle/Secondary Teachers Plans to Implement Culturally Responsive Lessons. Paper accepted for presentation at the 2019 national meeting of the **American Association for Colleges of Teacher Education (AACTE)**. Louisville, KY.
- Id-Deen, L. A. & **Mark, S. L.** (2019 – accepted, not presented). Examining Mathematics and Science Prospective Middle/Secondary Teachers Plans to Implement Culturally Responsive Lessons. Paper accepted for presentation at the 2019 national meeting of the **American Educational Research Association (AERA)**. Toronto, Canada.
- Mark, S. L.** & Alexander, O. A. (2019 – accepted, not presented). *Black male student-athletes navigating STEM education and the education-sport industry*. Roundtable presentation for the 2019 national meeting of the **Critical Race Studies in Education Association (CRSEA)**. Political Economies of Higher Education strand, Los Angeles, CA.
- Lee, C.-W. & **Mark, S.** (2019). *Come, thou fount of culturally responsive STEAM education*. Poster session presented at the **Annual Convention of the National Association for Gifted Children**, Albuquerque, NM.
- Troxclair, D. A., Lee, C.-W., & **Mark, S.** (2019). *Transdisciplinary made possible: When gifted education meets culturally responsive STEAM education*. Paper session presented at the **Biennial World Conference of World Council for Gifted & Talented Children**, Nashville, TN.
- Mark, S. L.**, *Constantin, G., & *Alexander, O. A. (2018). Culturally-responsive science education: Restructuring science in interdisciplinary contexts. Poster presented for the 2018 annual meeting of the **National Association for Research in Science Teaching (NARST)**. Atlanta, GA.

- Mark, S. L.**, Id-Deen, L. A., & Thomas, M. S. (2018). Pre-service Science Teacher Candidates' Beliefs about Teaching in Culturally Diverse Contexts. Paper presented at the 2018 annual meeting of the **Association for Science Teacher Educators (ASTE)**. Baltimore, MD.
- Mark, S. L.**, Id-Deen, L. A., & Thomas, M. S. (2018). Targeting teacher candidates' beliefs and dispositions to improve teacher preparation. Paper presented at the 2018 annual meeting of the **American Association of Colleges for Teacher Education (AACTE)**. Baltimore, MD.
- Thomas, M. S., Id-Deen, L. A., & **Mark, S. L.** (2018). Disrupting the Deficit: Examples and counter examples of clinical experiences' potential to transform thinking. Paper presented at the 2018 annual meeting of the **American Educational Research Association (AERA)**. New York, NY.
- Mark, S.L.** (2017). Intentionality is not the issue here: Race and ethnicity in informal multicultural STEM education. Paper presented for the 2017 **Critical Race Studies in Education Association (CRSEA)** National Conference. Indianapolis, IN
- Mark, S.L.** (2017). New geography for resistance: Race and ethnicity in informal multicultural STEM education. Paper presented for the Thirteenth **International Congress of Qualitative Inquiry (ICQI)**. Champaign-Urbana, IL
- Mark, S. L.** (2017). Formulating a Personalized STEM Education and Career Development Plan from a Lens of Identity Development. Paper presented for the 2017 annual meeting of the **National Association for Research in Science Teaching (NARST)**. San Antonio, TX.
- Id-Deen, L. A., **Mark, S. L.** , Thomas, M. S., & Stevens, A. (2017). "Walking on Eggshells": An Approach Towards Building Authentic and Trusting Relationships with a High School Clinical Model. Paper accepted for the 2017 annual meeting of the **American Association of Colleges for Teacher Education (AACTE)**. Tampa, FL.
- Id-Deen, L. A., **Mark, S. L.** , Thomas, M. S., & Stevens, A. (2017). Advancing Equity through Establishing Trusting Relationships with School Partnerships. Paper presented for the 2017 **Professional Development Schools (PDS) National Conference**. Myrtle Beach, SC.
- Mark, S.** (2016). One Step Forward, Three Steps Back: Engaging Race and Ethnicity in STEM Television Programming. Paper presented at the 2016 annual meeting of the **National Association for Research in Science Teaching (NARST)**. Baltimore, MD.
- Mark, S.** (2015). Making science authentic, local, and relevant: Evaluation of CityEco teacher professional development design and impact. Paper presented at the 2015 annual meeting of the **National Association for Research in Science Teaching (NARST)**, Chicago, IL.
- Mark, S.** (2014). A psychology of working perspective on the development of science career interests amongst diverse students. Paper presented at the 2014 annual meeting of the

American Educational Research Association (AERA) in Philadelphia, PA within the symposium: A New STEM Education Model for a New Era: Integrating Social Justice, Urban Ecology, and Career Development.

- Mark, S.** (2014). Qualitative examination of diverse students' science career interests. Paper presented at the 2014 Annual Meeting of the **Ethnographic and Qualitative Research Conference** in Las Vegas, NV.
- Mark, S.** (2013). An examination of the processes of student STEM career interest development within an informal science learning community. Paper presented at the 2013 annual meeting of the **American Educational Research Association (AERA)** in San Francisco, CA within the symposium: Working toward Social Justice in Technologically Rich Settings.
- Mark, S.** (2011). Identity formation and motivation in an informal learning community: Buy-in, bridging and becoming. Paper presented at the 2011 annual meeting of the **Ethnographic and Qualitative Research Conference (EQRC)**, Cedarville, Ohio.
- Mark, S.,** Lee, Y., Barnett, M., Blustein, D., Strauss, E. & Wong, C. (2011, April). Exploring high school students' development of STEM-related career interests. Paper presented at the 2011 annual meeting of the **American Educational Research Association (AERA)**, New Orleans, LA.
- Mark, S.,** Lee, Y., Barnett, M., Blustein, D., Strauss, E. & Wong, C. (2011, April). Exploring high school students' development of STEM-related career interests. Paper presented at the 2011 annual meeting of **Innovative Technology Experiences for Students and Teachers (ITEST) Symposium**, Washington, D.C.
- Mark, S.,** Blustein, D., & Barnett, M., (2010, May). Barriers, resources and challenges that urban youth experience and overcome in STEM career development. In M. Barnett's (chair) symposium: STEM career development: Lessons learned from the NSF ITEST program. Paper presented as a part of a symposium at the 2010 annual meeting of the **American Educational Research Association (AERA)**, Denver, CO.
- Mark, S.,** Barnett, M., Houle, M., Strauss, E., Hirsch, L., & Minner, D. (2010, May). Technology-enhanced urban ecology field studies: Impacts on students' science self-efficacy and ecological mindset. In M. Barnett's (chair) symposium: Improving student interest towards science: Results from the NSF ITEST program. Paper presented as a part of a symposium at the 2010 annual meeting of the **American Educational Research Association (AERA)**, Denver, CO.
- Barnett, M., Houle, M., **Mark, S.,** & Chen, S. (2010, May). Using geographic information systems to support student learning through urban ecology. Paper presented at the 2010 annual meeting of the **American Educational Research Association (AERA)**, Denver, CO.
- Mark, S.,** Blustein, D. Backus, F. Barnett, M., & Hoffman, E. (2010, March). Helping minority students get into the game: Research outcomes of a technology-enhanced STEM

development program. Paper presented at the 2010 annual meeting of the **National Association for Research in Science Teaching (NARST)**, Philadelphia, PA.

REGIONAL CONFERENCE PRESENTATIONS (PEER-REVIEWED)

Mark, S. (2016). Culturally-responsive STEM education: A place for art and social justice. Paper presented at the 2016 annual meeting of the **Mid-Atlantic Association for Science Teacher Educators (MA-ASTE)**, Gatlinburg, TN.

Mark, S. (2015). Race, ethnicity, and culture in STEM children's television. Paper presented at the 2015 annual meeting of the **Mid-Atlantic Association for Science Teacher Educators (MA-ASTE)**, Lore City, OH.

Mark, S. (2014). Sourcing STEM career interests among diverse students. Paper presented at the 2014 Annual Meeting of the **Northeastern Educational Research Association (NERA)** in Trumbull, CT.

TEACHING EFFECTIVENESS

DOCTORAL STUDENT EDUCATION

Dissertation Committee Membership 2017 – present
Stephanie White (2021), Peter Azmani (2021), Amanda Lacey (2021), Cynthia Thomas (2020), Melissa Michael, Katherine Ray King, Terri Tinnell, Matthew Trzaskus, Anetria Swanson

Doctoral Program Committee Membership 2016 – present
Cynthia Thomas (2020), Stephanie White (2021), Sydni Morris (2021), Rachelle Wood (adviser), Mary Mills (co-chair), Tytianna Smith, Terri Tinnell, Katherine Ray King, Breanna Ausbrooks, Matthew Trzaskus

Doctoral Program Comprehensive Exams Reader
William Thornburg 2015
Melissa Michael 2016
Katherine Ray King 2017
Terri Tinnell, Mary Mills 2018
Matthew Trzaskus, Breanna Ausbrooks 2020

Independent Studies
Cynthia Thomas Fall, 2021
Terri Tinnell Summer – Fall, 2017

Graduate Research Supervisor

Tytianna Smith	2015 – 2016
Olivia Alexander	2016 – 2018
Matt Trzaskus	2018 – 2019
Peter Azmani	2019 – present

Research Mentorship/Collaboration

Alisia McClain	2018 – 2019
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TEACHER PROFESSIONAL DEVELOPMENT

Mark, S. L. & *Trzaskus, M. (Feb 15th, 2019). *Culturally Relevant Pedagogy in Middle/Secondary Education*. **University of Louisville, Delphi Center of Teaching Excellence**, Celebration of Teaching and Learning.

Mark, S., Marksberry, A., Tretter, T., Philipp, S., Robinson, B., & McFadden, J., (2017, November). *Developing middle school classroom embedded assessments (CEA)*. Presented at Kentucky Science Teachers Association annual conference, Lexington, KY.

Philipp, S., Tretter, T., **Mark, S.**, Robinson, B., & McFadden, J., (2017, November). *Developing high school classroom embedded assessments (CEA)*. Presented at Kentucky Science Teachers Association annual conference, Lexington, KY.

McFadden, J., Wingo, R., Robinson, B., **Mark, S.**, Philipp, S., & Tretter, T. (2017, November). *Developing grade K-2 classroom embedded assessments (CEA)*. Presented at Kentucky Science Teachers Association annual conference, Lexington, KY.

McFadden, J., Crice, J., Robinson, B., Philipp, S., **Mark, S.**, & Tretter, T. (2017, November). *Developing grade 3-5 classroom embedded assessments (CEA)*. Presented at Kentucky Science Teachers Association annual conference, Lexington, KY.

Kentucky Teacher Intern Program (KTIP) 2015 – 2016
University Teacher Educator
Part of a 3-person mentoring team for 5 in-service teacher candidates seeking certification

Communicating Urban Ecological Conceptual Understanding through Writing 11/2014
Center for Equity for English Learners (CEEL)
Loyola Marymount University

Urban Sprawl 10/2014
Center for Equity for English Learners (CEEL)
Loyola Marymount University

Urban Ecology Teacher Summer Institute 08/2014
Center for Equity for English Learners (CEEL)
Loyola Marymount University

Urban Ecology Teacher Summer Institute Center for Equity for English Learners (CEEL) Loyola Marymount University	08/2013
Urban Ecology Summer Bridge Program – Middle School Center for Equity for English Learners (CEEL) Loyola Marymount University	07/2013
Urban Ecology Teacher Professional Development Center for Urban Resilience (CUREs) Loyola Marymount University	2012 – 2013
Urban Ecology Summer Teacher Institute Boston College	07/2009

GUEST TEACHING

Guest Lecturer - Advanced Qualitative Research Methods Demonstrated the effectiveness of NVivo Qualitative Research Software College of Education and Human Development University of Louisville, Louisville, KY	2020 (virtual video-based demo) 2019 (in person)
Guest Lecturer – Urban Ecology – Homelessness Seaver College of Science and Engineering Loyola Marymount University	2014
Guest Lecturer – Urban Ecology – Environmental Justice Seaver College of Science and Engineering Loyola Marymount University	2013
Guest Lecturer – Urban Ecology Lab – Qualitative Research Methods Seaver College of Science and Engineering Loyola Marymount University	2013
Guest Lecturer – Qualitative Research Methods – Theoretical Frameworks Lynch School of Education Boston College Chestnut Hill, MA	2011

ADDITIONAL TEACHING EXPERIENCES

Post-Doctoral Teaching Assistant – Urban Ecology Seaver College of Science and Engineering	2012
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Loyola Marymount University

STEM Instructor 2011 - 2012
Boston College - College Bound

Freshman Instructor 2011
Cristo Rey Boston High School
Savin Hill, Boston, MA.

HIGHER EDUCATION PROGRAM DEVELOPMENT

Urban Ecology Graduate Program Development 2013
Loyola Marymount University

KECK Interdisciplinary Undergraduate Course Development 2013
Ecology of Homelessness
Loyola Marymount University

TRAININGS SOUGHT & PARTICIPATION IN HIGHER EDUCATION TEACHING PROFESSIONAL DEVELOPMENT

Dean's Forum on Educational Excellence Spring, 2020
Semester-long collaborative and reflective work on improving one's teaching with peers across UofL colleges. Work products included: peer review of teaching, development of a teaching philosophy statement, and proposals to Deans regarding ways to improve university-wide teaching effectiveness and culture.
*Delphi Center for Teaching and Learning
University of Louisville*

Population Education Trainer 07/2019
Trained to prepare K – 12 (pre- and in-service) and post-secondary educators to teach their subject matter through a lens of sustainability and population education
*Population Connection
Racine, WI*

Delphi U 05/2017
Professional development in designing student-centered online courses
*Delphi Center for Teaching and Learning
University of Louisville*

Green Threads Professional development in integrating sustainability into higher education courses <i>Sustainability Council</i> <i>University of Louisville</i>	08/2017
Science Professional Development Provider Institute Preparation in designing and implementing science professional development and adult education focused on <i>Next Generation Science Standards</i> <i>Biological Sciences Curriculum Study</i> <i>Louisville, KY</i>	10/2016
Association for Teacher Education New Professors Summer Workshop Effectiveness in teaching, research, and service as new teacher educators <i>Association for Teacher Education</i> <i>Louisville, KY</i>	07/2016
Community-Engaged Scholarship Using Community-Engaged Work in Support of Promotion and Tenure <i>Delphi Center for Teaching and Learning</i> <i>University of Louisville</i>	04/2016
Mentoring Teacher Candidates through Co-Teaching Kentucky Education Professional Standards Board <i>Louisville, KY</i>	2015
Kentucky Teacher Internship Practicum (KTIP) Certification Kentucky Education Professional Standards Board <i>Louisville, KY</i>	2015

SERVICE TO THE PROFESSION

INTER/NATIONAL

National Science Foundation Grant Proposal Reviewer	2015, 2021
COMMITTEE MEMBERSHIP	
National Association for Research on Science Teaching (NARST) International Standing Committee (IC) Board Member	2020 – 2023
IC Representative on the NARST Elections Committee	2021 - 2022
Cultural Studies in Science Education Journal Best Paper of the Year Award Selection Committee Invited Committee Member	2017 – present

National Association for Research on Science Teaching (NARST) 2018 – 2020
Equity and Ethics Standing Committee Board Member

National Association for Research on Science Teaching (NARST)
Equity and Ethics Volunteer Sub-Committees

- Jhumki Basu Scholar Award Committee 2019 – 2020
- Pre-conference workshop co-planner 2017 – 2020
- Social Action Project co-planner 2016 – 2019

STEM Learning and Research Center (STELAR) 2018
2018 NSF ITEST PI and Evaluator Summit Co-Planner
Alexandria, Virginia
Invited Committee Member

PEER REVIEWER

EDITORIAL BOARD MEMBER

Innovations in Science Teacher Education 2018 - 2021

INVITED JOURNAL REVIEWER

Science Education 2021
Journal of Teacher Education 2019
Educational Action Research 2018, 2021
Journal of Science Education and Technology 2015

AD-HOC JOURNAL REVIEWER

Journal of Teacher Action Research 2020 - present
Journal for the Study of Sports and Athletes in Education 2020 - present
School Science and Mathematics 2019 - present
Journal of Career Development 2014 - present
Urban Education 2013 - present

CONFERENCE PAPER REVIEWER

Critical Race Studies in Education Association (CRSEA) 2018 – present
National Association for Research on Science Teaching (NARST) 2017 – present

PROFESSIONAL ORGANIZATION MEMBERSHIPS

National Association for Research in Science Teaching (NARST)
Critical Race Studies in Education Association (CRSEA)
American Educational Research Association (AERA)
Association for Science Teacher Education (ASTE)
Mid-Atlantic Association for Science Teacher Education (MA-ASTE)
American Association for Colleges of Teacher Education (AACTE)

National Science Teachers Association (NSTA)

UNIVERSITY OF LOUISVILLE

Cardinal Core Assessments Reviewer for Natural Sciences (n = 73)	2021
University Student Academic Grievance Committee Committee Member	2020 – 2023
Muhammad Ali Institute for Peace and Justice Curriculum Reviewer	2017
Black Graduate Student Association (BGSA) Faculty Volunteer assisting with recruiting	2017

**COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT
University of Louisville**

Open Rank Faculty in EPME Developmental Psychology (ECPY) Search Committee Member	2021
Assistant Dean of Diversity, Equity, and Inclusion Search Committee Member	2020 – 2021
Director of the Nystrand Center of Excellence in Education Search Committee Member	2019
Honors and Scholarships Committee Chair (2019 – 2020)	2018 – 2020
CEHD Research Advisory Group	2018 – present
CEHD Spring Research Conference Discussant	2018
CEHD Grawemeyer Award in Education Committee Member Read and reviewed 5 academic books and recommended award nominees	2017
Assessment Review Committee Committee Member	2016 – 2018

Initial Teacher Certification Admissions Ad-Hoc Committee 2016 – 2018
Committee Member

Minority Teacher Recruitment Project 04/2016
Faculty Meet, Eat, and Greet
Volunteer Attendee

**DEPARTMENT OF ELEMENTARY, MIDDLE & SECONDARY TEACHER EDUCATION
(EMSTED)**

Formerly Department of Middle and Secondary Education (MISE)
University of Louisville

Department Chair and Open Rank Faculty Member for EMSTEd 2021
Search Committee Member

Assistant Professor of Elementary Mathematics Education 2020
Search Committee Member

Bachelor of Science in Middle/Secondary Education Program Revision Committee 2020
Committee Member

Director of Alternative Teacher Certification Program 2018
Search Committee Member

MAT Transcript Content Review 2017 – present
Committee Member

Personnel Committee (Department Level) 2016 – present
Committee Member

Science, Technology, Engineering, and Mathematics (STEM) C&I PhD Program 2015 – present
Committee Member

Content Teaching Methods Instruction Ad Hoc Committee 2015 – present
Committee Member

B.S. and MAT (Traditional, Alt. Certification & Teach KY) Admissions 2015 – present
Admissions Interviews, Student Orientations

COMMUNITY

Tech-nique 2019 – present
Advisory Board Member
Non-profit organization
Alisia McClain (Founder)
Louisville, KY

- Girls STEM Club 2018 – 2020
Lt. Governor of Kentucky (formerly) and Kentucky Science Center (*presently*)
Yoda (Women of Color in STEM Mentor for Middle School Girls)
Led one-hour hands-on STEM activities annually
- Ballard High School Science and Engineering Fair 2018, 2020
Louisville, KY
Faculty Judge
- Jefferson County Public Schools Human Resources, Recruitment, and Staffing (HRRS) 2017
Louisville, KY
University Teacher Education Program Representative
Collaborated with JCPS staff (Anetria Swanson, Dr. Gwen Goffner) to recruit teacher candidates from Historically Black Colleges and Universities (HBCUs) and in-service teachers from Puerto Rico
- Regional Junior Science and Humanities Symposium 2016 – 2018, 2020
Louisville, KY
Faculty Judge
- Seneca High School 2015 – 2018
Louisville, KY
Faculty Member
Cards2Create2@Seneca Clinical Partnership for Teacher Preparation
- Los Angeles Unified High School Science Student Mentorship Aug, 2012
Loyola Marymount University
Los Angeles, CA
Science faculty mentor for high school student National Oceanic and Atmospheric Administration (NOAA) research project
- College Bound – Boston College 2009 – 2012
Recruitment, Teaching, and Program Support
Boston, MA
- NSF ITEST Convening on Youth Motivation in STEM Education Aug – Sept, 2011
Program Support and Student Mentorship
Boston College
Boston, MA