2022 CADRE FELLOWS BIOGRAPHIES

Alonzo Brandon Alexander

North Carolina State University

Dr. Alonzo Brandon Alexander is the director of the Imhotep and Kyran Anderson Academies K-12 STEM outreach programs at North Carolina State University. He works to promote increased STEM participation among students traditionally underrepresented in the STEM fields. He received his PhD from North Carolina State University in STEM Education, where he studied how participation in STEM outreach programs shapes student attitudes towards and future participation in STEM careers. Before transitioning fully to education research, Alonzo was a practicing fusion physicist and a classroom educator at the secondary and post-secondary levels. His current research interests include further explorations of his dissertation work, including improving survey and measurement methods for outreach programs to develop a better understanding of how effective STEM programming improves student persistence.

Recommender: Eric N. Wiebe

Tasnim Alshuli

University of Arizona

Tasnim Alshuli is a doctoral student in the Teaching and Teacher Education program at the University of Arizona. She also holds an MA in Mathematics Education and a BS in Applied Mathematics from University of North Carolina at Charlotte. She has broad research experience in the areas of: English language learners and preservice mathematics teacher education, environmental science, and informal STEM education, as well as 3D printing and informal STEM education for students with visual impairments (SVI). Tasnim's PhD research specifically focuses on mathematics education, visual impairments, learning sciences, and cognitive science. She is interested in mathematics experiences and learning of SVI, as well as access and inclusion involving mathematics materials, technology, and instruction. Tasnim is deeply involved in various research projects, STEM programs, and community service where she advocates and educates for access, equity, diversity, inclusion, and rights for the blind/visually impaired and other underrepresented groups.

Recommender: Marcy B. Wood

Dara Bright

Drexel University

Dara Bright is a PhD student at Drexel University in the Education program. Dara earned her BA in Government from the College of William and Mary and her MS in Public Policy from the Georgia Institute of Technology. While at Drexel University, she is a research assistant in the Methods Lab. Dara's research interests focus on developing culturally sustaining educational assessments, closing the opportunity gap for minoritized students in STEM, integrating technology-mediated intervention into the curriculum, and studying policies impacting students with disabilities.

Recommender: Toni May

Diana M. Crespo-Camacho

Oregon State University

Diana M. Crespo-Camacho is a doctoral candidate in the Language, Equity, and Educational Policy program in the College of Education at Oregon State University. Diana's dissertation research focuses on exploring how multilingual family engagement in science learning during informal nature field trips could improve students' science learning and increase their interest in nature and in science. She is a doctoral research assistant on the DRK-12 project, *Supporting Students' Language, Knowledge, and Culture through Science (LaCuKnoS)*, that explores how a model of multilingual meaning-making can help teachers support all learners in pursuing academic and occupational STEM pathways. Diana's emphasis on the LaCuKnoS team is on exploring the engagement of multilingual learners and their families during science co-learning experiences. Diana holds a BS in Biochemistry Engineering in Aquatic Resources Management from ITESM, Mexico, and an MS in Recreation Resources from the Human Dimensions of Natural Resources program at Colorado State University.

Recommender: Cory A. Buxton

Shalece S. Kohnke

University of Central Florida

Shalece S. Kohnke is a doctoral student in Exceptional Education at the University of Central Florida. She holds an MEd in Special Education with a concentration in Learning Behavior Disorders from the University of Louisville and a BS in Interdisciplinary Studies with an emphasis on Special Education from Texas A&M University-Corpus Christi. Shalece is a research assistant supporting a USDOE Office of Special Education grant focusing on improving the skill of STEM coaches working with special educators through identifying High Leverage Practices in STEM and providing self-driven individualized professional development. In addition, she is the principal investigator for a study under review, exploring if an augmented reality app can close the science learning gap between students with and without disabilities at the college level. Shalece's research interests focus on improving science outcomes, both academic and professional, for secondary students with disabilities by increasing access to science content.

Recommender: Lisa Dieker

Guillermo Lopez

Claremont Graduate University

Guillermo Lopez is a doctoral student at Claremont Graduate University and completing a second master's in Education Evaluation and Data Analysis. He is passionate about dismantling barriers for students of color of low socioeconomic status (SES) in STEM, which guides his current research that includes cross-disciplinary theories from sociology and psychology to understand how social capital and growth mindset interact to improve the STEM outcomes of these students. He is a teaching assistant for quantitative research methods and a research assistant for Dr. Guan Saw's NSF project that centers on enhancing social capital and motivational factors of secondary students in an out-of-school STEM program. He remains a practitioner, serving low SES communities as a K-12 math instructional specialist, math adjunct at the community college, and math methods instructor for teachers serving these communities. He holds a BS in Mathematics from University of California, Los Angeles, and a masters in Math Education from Stanford University.

Recommender: Guan Saw

Vanessa Louis

Georgia State University

Vanessa Louis is a doctoral student at Georgia State University (GSU) majoring in Teaching and Learning with a concentration in Science Education. She holds a BS in Biology from Kennesaw State University and an MEd in Science Education from GSU. Vanessa utilizes abolitionist teaching and action research to assist novice science teachers in developing cultural competence as part of the NSF-funded project, *Developing STEM Professionals as Educators and Teacher Leaders (DSPETL)*. Vanessa is a graduate research assistant under the advisement of Dr. Natalie King, where she is engaged in a research-practice partnership to address problems of practice surrounding STEM literacy in Black and Brown communities. She also collaborates with the CREATE Teacher Residency Program to examine the experiences of Black teacher fellows as they navigate a social justice-oriented program. Vanessa served six years as a middle/high school science teacher before her current role as an instructional coach.

Recommender: Natalie King

Janice Mak

Arizona State University

Janice Mak is a postdoctoral scholar with the *Accessible Computational Thinking in Elementary Science Classes within and across Culturally and Linguistically Diverse Contexts (ACT)* project at Arizona State University. On this project, she works with a team to support science teachers in Arizona and Maryland in integrating computational thinking and culturally relevant teaching into science instruction. She earned her PhD in Curriculum and Instruction (STEM Education) from Texas Tech University, MEd from George Mason University, and BA from Rutgers University. Prior to her postdoc work, she was a K-12 STEM educator, assistant principal, and science curriculum specialist. She has been honored to serve on several boards including the Arizona State Board of Education, Computer Science Teachers Association, NCWIT K-12 Alliance leadership team, and the National Science Teaching Association (NSTA) Technology Advisory Board.

Recommender: Brian Nelson

Sophia Raymond

Tufts University

Sophia Raymond is a doctoral student in Mathematics Education in the Department of Education at Tufts University. Her research interests are broadly focused on factors which influence the construction of mathematical identity for Black female K-12 students, specifically on how they navigate the mathematical community while doubly minoritized as both Black and female. She is a graduate research assistant on an elementary algebra project with Dr. Bárbara M. Brizuela, and her role in this project consists of reviewing literature for conceptualizing a framework and analyzing and interpreting data. She is also a research development associate at TERC on the DRK-12 project, *Doing the Math with Paraeducators: Enhancing and Expanding and Sustaining a Professional Development Model in PreK to Grade 3 Math Classrooms*. Sophia holds an MEd in Education Policy and Management from the Harvard Graduate School of Education, and a BA in Mathematics from Georgetown University.

Nominating PI: Bárbara M. Brizuela

Sara Salisbury

Middle Tennessee State University

Sara Salisbury is a doctoral candidate in Mathematics and Science Education at Middle Tennessee State University. She is committed to designing learning environments where children experience the contextualized, complex, and dynamic nature of ecology in ways that are personally meaningful, locally embedded, and disciplinarily authentic. To do this, she uses theories about place-based education and scientific modeling to guide the development of investigations where middle school children explore their schoolyard ecosystem. While working as a research assistant for Dr. Ryan "Seth" Jones, Sara has designed and tested curriculum, cotaught alongside partner middle school science teachers, and lead the team's qualitative analysis efforts. Prior to graduate school, Sara worked as an environmental scientist in New Jersey, where she also spent her time volunteering with local middle school science classes to teach aquatic ecology. Sara holds a BS in Environmental Science from Allegheny College, and a MS in Biology from Texas State University.
Recommender: Ryan "Seth" Jones

Rachel Sparks

University of Nebraska-Lincoln

Rachel Sparks is a postdoctoral research associate working on the NSF-funded project, *Bridging Science Education and Psychology Perspectives to Support Science Literacy Theory & Instruction*. She earned her PhD from Illinois State University, where she developed and implemented a curriculum for an introductory biology course taught through an evolutionary perspective for pre-service elementary teachers (PSETs). This curriculum utilized the Teaching for Transformative Experiences in Science model to engage with and support students' identities and experiences to foster connections between evolutionary ideas and students' everyday lives. She has also explored how students engage in scientific practices, which she continues to do in her postdoctoral position investigating how students' stakeholder identities influence their evidence evaluation, reasoning strategies, and scientific argumentation when controversial socioscientific issues are used in the classroom. Rachel's interests integrate literature regarding student identities, engagement in scientific practices, and PSET preparation to consider how PSETs can enact justice-oriented science education.
Recommender: Rebekka Darner

Meng-Yang Matthew Wu

Miami University

Meng-Yang Matthew Wu is a postdoctoral researcher in the Chemistry Education division in the Department of Chemistry and Biochemistry at Miami University. He has currently been working as a research assistant on a DRK-12 project that supports in-service high school chemistry teachers across the US via intensive, modeling-based professional development. His role in the project primarily consists of contributing to the design and facilitation of PD activities and resources, investigating teacher artifacts (e.g., learning designs) with respect to uptake, fidelity, and authoring of the recommended pedagogy, and analyzing literature to theoretically build upon extant frameworks. Matt's work aims to identify specific, accessible, and practical ways to promote teacher lesson planning for chemistry sensemaking opportunities. Prior to his postdoctoral work, Matt received his PhD in Chemistry from Purdue University, his MS in Chemistry from University of California, San Diego, and his BS in Biochemistry from University of California, Los Angeles.
Recommender: Ellen J. Yezierski

Lili Yan

Utah State University

Lili Yan is a PhD candidate and doctoral scholar in the Department of Instructional Technology and Learning Sciences at Utah State University (USU). Lili is broadly interested in research at the intersection of culture, technology, and learning with an emphasis on inclusion and equity. She is currently a doctoral research assistant on two research projects about centering culture in learning through research-practice partnership and community-driven approaches. Lili's research focuses on creating learning environments by making culture visible in various facets of learning. In her current dissertation study, she investigates youth's learning experiences in culturally centered learning activities. Lili aims to bring in cultural perspectives to develop transformative learning experiences, including engaging with science and technology. She was recently named as an Intersections Graduate Fellow by the Center for Intersectional Gender Studies & Research at USU. Prior to her PhD program, Lili taught English at the post-secondary level in Shanghai, China.

Recommender: Breanne Litts

Meghan Zarnetske

University of Utah

Meghan Zarnetske (she/her) has been working in public schools as a teacher and instructional coach for 15 years. She loves learning, so she's attended most higher education institutions in Utah for two masters, as well as a school administration license. Currently, she is a second-year PhD student at the University of Utah in the Department of Education, Culture, and Society. Meghan is constantly agitated by systems of oppression, and she strives to disrupt them through words, actions, and ways of being, though she recognizes how her own whiteness may complicate those actions. Meghan's research centers around queering K12 pedagogy and finding ways to decenter and disrupt whiteness in school spaces. A former science teacher, Meghan also seeks ways to undo the settler-colonial constructs inherent in teaching and learning science. She often uses scientific processes as a way to write about and desettle whiteness as an organizing force in education.

Recommender: José Francisco Gutiérrez

Sandra Zuñiga-Ruiz

University of California, Berkeley

Sandra Zuñiga-Ruiz is a doctoral candidate in Mathematics Education at University of California, Berkeley's Graduate School of Education. Broadly, her research agenda sits at the intersection of design, social and racial justice, and mathematical learning. Her dissertation, funded by the NAEd/Spencer Foundation, seeks to understand how prospective self-identified Mexicana maestras (educators) make sense of issues of race and social justice with and of mathematics. Such understanding comes from taking a proactive role in designing a counterspace that aims to leverage their repertoires of practice and affirm their marginalized identities as Mexicanas. Sandra's work is informed by her experiences growing up in a predominantly Mexican immigrant community and her commitment to support and serve the next generation of maestrxs teaching in the barrio. Prior to her doctoral studies she obtained an MA in Mathematics from San Francisco State University and a BS in Mathematics from California State University, Monterey Bay.

Recommender: Alan H. Schoenfeld