



# Community for Advancing Discovery Research in Education

## 2018–2019 CADRE FELLOWS BIOGRAPHIES



### **Courtney P. Benjamin**

*Washington State University*

Courtney P. Benjamin is a PhD candidate in the Cultural Studies and Social Thought in Education program in the Department of Teaching and Learning at Washington State University. She is managing editor of *The Western Journal of Black Studies*, and research assistant for ADVANCE at WSU, a program established under an NSF ADVANCE IT grant to support WSU faculty women in STEM fields and underrepresented minority faculty members in any discipline. Prior to her doctoral studies, she worked eight years in human resources for several technology companies in the Seattle area. Her BA and MA have provided a diverse background in public relations, psychology, organizational communication, and education. This interdisciplinary lens contributes to her current research which looks at intersectional aspects of gender, race, and social class, with an emphasis on critical inquiry and discourse analyses of STEM participation at the K-12 and higher education levels.

**Nominating PI:** [Paula Groves Price](#)



### **Patricia M. Buenrostro**

*Vanderbilt University*

Patricia M. Buenrostro is a postdoctoral fellow with Project SIGMa (Supporting Instructional Growth in Mathematics) at Vanderbilt University. Through this project, she uses video-based formative feedback to support urban secondary mathematics teachers in their ambitious instructional goals. She earned her PhD in Curriculum Studies from the University of Illinois at Chicago in 2016. In her dissertation, *Humanizing Mathematics: Students' Perspectives on Learning Math for Social Justice*, she reported on students' retrospective meanings in using mathematics as a disciplinary lens to unpack socio-political issues impacting their communities. Prior to earning her doctorate, she was a high school mathematics teacher and coach in Chicago for 15 years in working-class Latinx and African American communities. Across schools, she collaborated with faculty to create counter-cultural spaces that support students' positive academic, cultural, and social identities. These experience have shaped her research interests in student-teacher relationality, teachers' orientations towards developing student in(ter)dependence, and justice-oriented curriculum design.

**Nominating PI:** [Ilana Horn](#)



### **James P. Bywater**

*University of Virginia*

James P. Bywater is a doctoral student in the Curry School of Education at the University of Virginia. After earning his master's degree in Physics from Oxford University, he taught high school mathematics for ten years at public schools across the U.S., and he is National Board certified. His current research focuses on supporting teachers' efforts to promote mathematical discourse in their classrooms. He is especially interested in how natural language processing technology can be harnessed in the design of tools that give teachers opportunities to practice guidance strategies and to develop skills that can promote student discourse. He is currently working as a graduate research assistant on the project, SmartCAD: Guiding Engineering Design with Science Simulations and researching the impact of using novel technology to support teachers and students.

**Nominating PI:** [Jennifer Chiu](#)



### **Carlson H. Coogler**

*University of Alabama*

Carlson H. Coogler is a doctoral student in the Department of Curriculum and Instruction at the University of Alabama, where she studies science and literature education. Currently, she is a research assistant under Dr. Jonathan Shemwell on the project, Abstraction in Modeling through Synthesis (AiMS), which develops secondary science practitioners' understanding of the affordances of abstract modeling for teaching challenging science topics. Her research interests focus on the liminal places where science and language interact: in particular, how science teachers use language to instruct and to interpret scientific mastery; how discursive agents metaphorize science to either deny or assert its authority, especially within the post-truth era; and what the study and practice of literature can offer science education. She is a graduate of Samford University, where she earned an MSE in English Language Arts and a University Fellows honors BA in English with a minor in biology.

**Nominating Co-PI:** [Jonathan Shemwell](#)



### **Christa Haverly**

*Michigan State University*

Christa Haverly is a doctoral candidate in the Curriculum, Instruction, and Teacher Education Department at Michigan State University, specializing in science education and urban education. She is a research assistant on the project, SOLID Start. Her role on the project is primarily as curriculum developer for K-2 science curriculum, and she also analyzes data to study how kindergarten teachers make use of educative features embedded in curriculum to facilitate classroom discourse during science lessons. Her own research examines urban elementary teachers' responsiveness to students during science instruction and their associated professional learning, utilizing both a disciplinary lens focusing on students' scientific sense-making and an equity lens focusing on teachers' cultural responsiveness. Prior to graduate school, Christa taught elementary students for about a decade in urban elementary schools and an outdoor environmental education program. She has a bachelor's degree in Elementary Education and a master's degree in Environmental Education.

**Nominating Co-PI:** [Amelia Gotwals](#)



### **Ashley D. Scroggins**

*University of Colorado Boulder*

Ashley D. Scroggins is a doctoral candidate at the University of Colorado Boulder where she studies mathematics curriculum and instruction, learning sciences and human development, and ethnic studies. After earning her BA in Mathematics, she taught middle school mathematics as she earned her MA in Educational Psychology with a focus on human development. She works as a graduate research assistant on the Access, Agency, and Allies in Mathematical Systems (A3IMS) project where she has designed and facilitated professional development, conducted interviews, worked on collaborative action research projects, taught students, collected and analyzed data, and disseminated conceptual and empirical work from the project at national and international conferences. Her research specializes in improvisation and teaching. She is specifically working to conceptualize, design, and study mathematics teacher professional development focused on critical improvisation that actively and unapologetically pushes against dehumanizing social norms.

**Nominating PI:** [Beth Herbel-Eisenmann](#)



### **Matthew Taylor**

*University of Central Florida*

Matthew Taylor is a postdoctoral scholar in STEM education and received his PhD in Exceptional Education from the University of Central Florida. His research and classroom instruction are influenced by his eight years of teaching experience in both elementary special education and general education. His research foci are early elementary students with intellectual disabilities using science, technology, engineering, and mathematics content; students with terminal illness or in the hospital for extended stays; and the professionals working with both of these populations (e.g., parents, teachers, and related service providers). His research is highlighted by several studies, including robotics/coding instruction for students with disabilities, research at Nemours Children's Hospital in Orlando, FL, collaboration with the Down Syndrome Foundation of Florida, and collaboration with the Department of Human and Public Affairs using TeachLivETM.

**Nominating Co-PI:** [Lisa Dieker](#)



## **Mavreen Rose S. Tuvilla**

*Purdue University*

Mavreen Rose S. Tuvilla is a doctoral candidate in the Division of Chemistry Education at Purdue University. She received her BS in Chemistry from University of San Carlos in the Philippines and MS in Chemistry from Texas A&M University, with a focus on analytical chemistry. Prior to pursuing her doctorate, she taught middle school and high school chemistry at BASIS Flagstaff in Arizona. Currently, she is a graduate research assistant working on the project, Professional Development for K-12 Science Teachers in Linguistically Diverse Classrooms. Previously, she worked on Project RESET: Refugee Youth Engaging in Critical STEM Literacy and Learning. Her dissertation work investigates how resettled refugee youth used multimodality (including translanguaging) in science engagement in an afterschool science program and what elements of the afterschool setting fosters productive science engagement. She is interested in informal/formal science education for minoritized learners, refugee education, professional development of teachers in superdiverse learning contexts, and school change.

**Nominating PI:** [Minjung Ryu](#)



## **Korah Wiley**

*University of California, Berkeley*

Korah Wiley is a doctoral student in the Graduate Group in Science and Mathematics Education (SESAME) program at the University of California, Berkeley. Prior to pursuing her doctorate, she earned a BS in Biochemistry, an MS in Molecular Cancer Biology, and taught for over 10 years as a biology instructor at the North Carolina School of Science and Mathematics. Her time teaching inspired her current research interests, namely how to promote equitable STEM classroom teaching and learning. She works on two projects: Graphing Research on Inquiry with Data in Science (GRIDS) and Supporting Teachers in Responsive Instruction for Developing Expertise in Science (STRIDES). On GRIDS, she investigates how to support middle school students' ability to interpret and use graphs in science. On STRIDES, she investigates how to support middle school teachers' implementation of learning analytics to make evidence-based instructional decisions in response to their students' diverse ideas.

**Nominating PI:** [Marcia Linn](#)



## **Wenmin Zhao**

*University of Missouri-Columbia*

Wenmin Zhao is a doctoral candidate in mathematics education at the University of Missouri-Columbia. Before attending MU, she received a master's degree in Mathematics Education from East China Normal University. She is currently a graduate research assistant working with Drs. Zandra de Araujo and Samuel Otten on the project, Examining Relationships Between Flipped Instruction and Students' Learning of Mathematics to investigate the relationships among various implementations of flipped instruction and student learning. Previously, she helped develop digital educative curriculum materials to support in-service teachers in more deeply understanding algebra content. She is primarily interested in mathematical modeling, classroom discourse, and teacher preparation. In her second-year study, she examined the evolution of prospective secondary teachers' understanding of mathematical modeling. For her dissertation, she seeks to understand the practical rationality that underlies how teachers engage students in mathematical modeling.

**Nominating PI:** [Zandra de Araujo](#)