



Regional Meeting
Birmingham AL.
October 13, 2018

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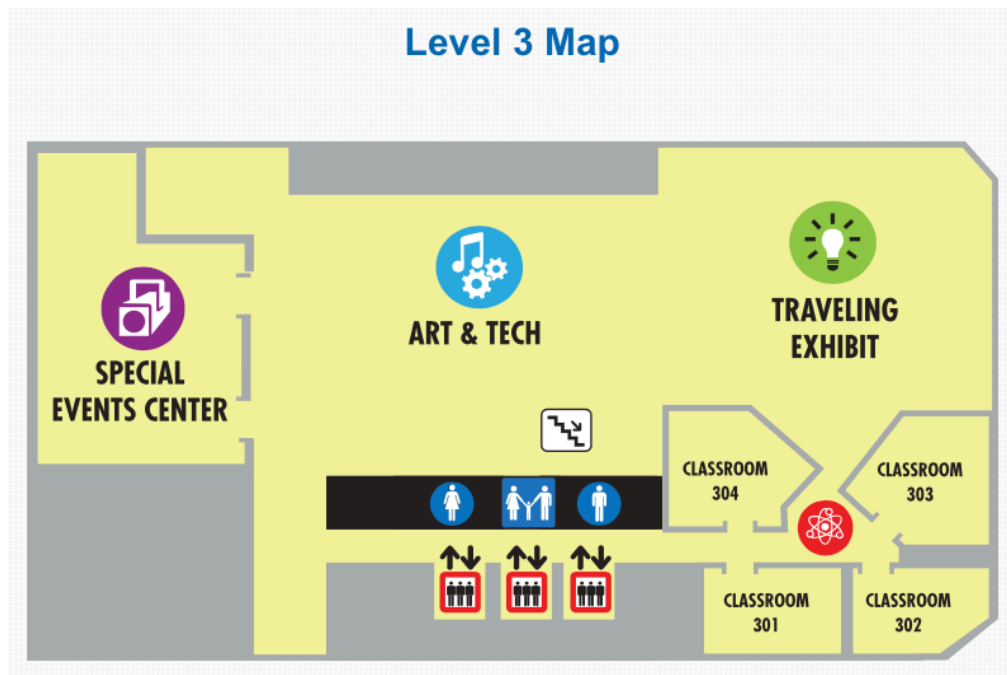
Jennifer Mesa, Ph.D., University of West Florida

McWane Science Center
3117, 200 19th St N, Birmingham, AL 35203

Redmont Hotel
2101 5th Ave N, Birmingham, AL 35203



SASTE registration and Meetings space are located on the 3rd floor.



 SASTE Meeting Rooms

Welcome 8:00-8:15

Keynote 8:15-9:15

Nigel A. Fields currently serves as the Resource Education Chief at Great Smoky Mountains National Park where he directs the award-winning Parks-as-Classrooms program, citizen science for all ages and interpretive programs at the busiest national park in the county. Prior to joining the National Park Service, he served 15 years as an environmental health scientist at the US Environmental Protection Agency. At EPA Nigel led cutting edge research programs in children's environmental health, molecular epidemiology, environmental justice and tribal science. Many of the research program findings led to health protective policies at the federal, state and local levels. In post-Katrina New Orleans, Nigel was a champion for education and served as the charter Vice President of the Homer Plessy Community School located in the French Quarter. Nigel holds a BS and MSPH in the fields of ecology and environmental health sciences respectively from Tulane University.

Morning Session 1 9:15-10:15

Room 301

Preparing Elementary Preservice Teachers to Facilitate Socioscientific Issues

Melanie Kinskey, *University of South Florida*

Using a multiple case study approach, this proposal explores elementary PSTs as they engage in a learning community and begin to facilitate SSI.

Preservice teachers' use of UDL strategies to provide accessible science instruction

Jennifer Mesa, *University of West Florida*

This study examined preservice teachers' use of the Universal Design for Learning framework to plan science instruction for diverse K-5 learners.

Teaching Evolution in Southern Classrooms

Lee Meadows, *University of Alabama at Birmingham*

An overview of the knowledge, secondary teachers need to teach evolution in Southern classrooms, especially where students resist learning it.

Morning Session 1 9:15-10:15

Room 304

The Complexity of the Relationship between Graduate Teaching Assistants' Epistemological Beliefs, Instructional Practice, and Classroom Context

Velta Napoleon-Fanis, *Middle Tennessee State University*; Cindy Smith-Walters, *Middle Tennessee State University*

With increased dependence on GTAs at universities, an exploration of their epistemological beliefs, instructional practice, and context is appropriate

Room 304 (continued)

STEM for All

Stacey Britton, *University of West Georgia*; Brent Gilles *University of West Georgia*

This project explores how individuals in education see STEM, by identifying common factors among the different participant groups.

Racial Microaggression in Science Teacher Education

Mary Atwater, *University of Georgia*;

The goals of this paper are to share the research findings on racial microaggression of Black science teacher educators and my personal experiences.

20 Minute Break

Morning Session 2

10:35-11:15

Room 301

Bridging the Divide: Interactive Science and Engineering Seminars for the Blind and Visually Impaired

Heather Lavender, *Louisiana State University*;

Investigating the science interest of blind and visually impaired students through science and engineering seminars with tactile interactions.

Promoting Active Learning Through the Use of the DASTT-C

Nate Carnes, *University of South Carolina*;

This presentation seeks to draw attention to use of the DASTT-C to promote active learning.

Room 304

Science and the Community: Engaging the Public through Science Festival Experiences

Gina Childers, *University of North Georgia*; Macey Jarrard, *University of North Georgia*; Tony Sacchitello, *University of North Georgia*; Donna Governor, *University of North Georgia*;

Science Festivals connect scientists and the community. Interest in science motivates participants to attend festival events.

Informal Science Learning on the Appalachian Trail

Michel Dias, *Kennesaw State University*; John Pecore, *University of West Florida*

This research investigated experiential science learning among Appalachian Trail thru-hikers.

Teaching Evolution in a Southern Rural Classroom: Approach Makes a Difference

Christine Lord, *University of Florida*;

This mixed method study examines how teaching approach impacts students' understanding of evolution in a southern rural classroom.

Validity of Evaluating Physics Teacher Lessons: Does Repetition Increase Validity?

Haley Harville-York, *University of Alabama*; Rachael Tawbush, *University of Alabama*;

This poster will compare multiple classroom observations scores using the Reformed Teaching Observation Protocol (RTOP) and discuss implications.

Integrating technology into blood spatter analysis

Lori West, *Lee University*; Kyra Williams, *Lee University*

This research utilized accessible technology including a phone and MS Word to capture and analyze blood droplets for angle of impact determination

Implementing State Science Standards

Carolanne Grogan, *Texas Tech University/ Saraland High School*;

This poster evaluates the effectiveness of the implementation process for improving teachers' self-efficacy and practices for scientific argumentation

Plankton Exploration at Swan Lake Iris Gardens: A Mentoring Summer Research Project for Teachers and Students

Daniel Kiernan, *University of South Carolina Sumter*; Pearl Fernandes, *University of South Carolina Sumter*;

The project was created to give college students and local school teachers the opportunity to do research with college professors over the summer.

Help Teachers Overcome "Climate Confusion"

David Devraj Kumar, *Florida Atlantic University*

Lunch from B&A Warehouse

- Cesar salad with shaved Parmesan cheese and homemade croutons
- Vegetable lasagna
- Beef lasagna
- Butter French bread and garlic French bread
- Cookies & brownies
- Ice tea & lemonade

Business Meeting Agenda

- Welcome
- Approval of 2016 Minutes
- Secretary-Treasurer's report
- Awards
- New Business
- Adjourn

Room 301

Current partnership with local urban school district to learn about watersheds

Stacey Britton, *University of West Georgia*; Rebecca Gault, *University of West Georgia*;
This project describes our work to develop a watershed education curriculum that fosters community partnerships and encourages interaction with nature and more specifically the shared stream; by providing professional development for teachers k-12 to experience stream field investigations and then developing an integrated curriculum that to be used in the district.

Teachers' Perceptions of Experiential Learning in Outdoor Spaces

Shana Lee, *Mississippi State University*; Ryan Walker, *Mississippi State University*
Embedded assessments from an intensive 1-year professional development program revealed unforeseen challenges and successes.

Applying Depth of Knowledge Level 4 to NESA Virtual Science & Engineering Fair Round 3

Randy Spaid, *Middle Georgia State University*; Sumitra Himangshu-Pennybacker, *Middle Georgia State University*

American International School teams reaching the final NVSEF judging stage are given a DoK level 4 prompt to address to extend higher-level thinking.

Room 304

Ensuring Quality Science Teaching: Online Professional Development for Middle Grade Science Teachers

Erin Mistry, *University of Florida*; Rose Pringle, *University of Florida*; Joanne LaFramenta, *University of Florida*;

A mixed methods study focused on strategies that were effective in engaging middle school teachers in an online PD certificate program.

Effectively Evaluating Science Professional Development

Rachael Tawbush, *University of Alabama*; Haley Harville-York, *University of Alabama*;
Dennis Sunal, *University of Alabama*

This investigation evaluated the effectiveness of a specialized statewide science professional development program.

Measuring the Impact of Long-term Professional Development on Formative Assessment: A Many-facet Rasch Analysis

Marilyn Stephens, *University of Alabama*;

Development of a valid and reliable instrument to measure physics teachers' knowledge of formative assessment of force and motion within their PCK.