NE-ASTE

CONFERENCE

Northeast Region
Association for Science Teacher Education Conference
Friday, September 30, 2022

9am - 2pm
Mercy Hall, Mercy College

ASTE
Association for Science Teacher Education
Welcome!

We are excited to welcome you as we return to an in-person regional ASTE Conference! We are grateful to offer this conference to our wonderful community of science educators and we hope that you are inspired by colleagues, ideas, and questions that can help your students reach their maximum potential. We know the return to in-person is not smooth but we appreciate your willingness to join us here. We wish you a great 2022-23 school year and hope to see you in person at one of our future events or at the national ASTE conference in Salt Lake City, Utah in January 2023!

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We are honored to have Dr. Eugenia Etkina, Distinguished Professor of Science Education at Rutgers, the State University of New Jersey as our keynote speaker this year. Dr. Eugenia Etkina holds a Ph.D. in Physics Education from Moscow State Pedagogical University and has more than 35 years of experience teaching physics at all education levels. She is a recipient of the 2014 Millikan Medal, awarded to educators who have made significant contributions to teaching physics, and is a fellow of the American Association of Physics Teachers. She is also a recipient of the 2010 AAAS award for the best science teaching technology resource for the physics video website that she co-developed with D. Brookes.
Preparing science teachers to teach their subjects in the 21st century

Dr. Eugenia Etkina

Being science teacher educators, we all wish to prepare teachers who will engage their students in learning science by practicing it. How do we make this preparation subject-specific, so biology teachers are prepared to engage their students in learning by practicing biology and physics teachers are prepared to engage their students in learning physics by practicing physics? In my talk, I will describe a conceptual framework developed together with S. Vokos and B. Gregorcic aimed at providing a better understanding of the process of science teacher formation. Literature on teacher preparation suggests that pre-service teachers (PSTs) learn best when they have prolonged experiences immersed in a community that shares a common vision of good teaching and helps PSTs develop requisite knowledge, skills, and dispositions consistent with that vision. There are two issues with these findings. First is that in the traditional model of science teacher education, pre-service teachers who will be certified to teach different science subjects (physics or biology, for example) enroll in the same program and do not have opportunities to develop knowledge, skills, and dispositions pertinent to their subject of certification. Second is even when the PSTs have some preparation in helping students learn their subject matter, when they start teaching, due to the time pressures and complexities of classroom environment, they cannot afford multiple considerations and deliberations with oneself before every decision and slip into traditional transmissional modes of teaching. Therefore, we suggest that good teacher preparation programs should, in addition to the subject-specific knowledge for teaching, skills, and dispositions, strive to develop productive habits in PSTs. We group these habits into habits of mind, practice, and maintenance and improvement. Many of those habits are subject-specific. I will present examples of those and describe the structure and features of the Rutgers Physics Teacher preparation program that is focused on the development of productive habits. I will also provide evidence from their teaching practice that PSTs develop these habits in the program.
Schedule at a Glance

9am - Coffee with Light Breakfast & Check-in
9:30am - Welcome and Keynote
10:45am - 11:30am Presentations One
11:30 - 1pm - Lunch and Business Meeting
1 -2:20pm - Presentations Two
2:20pm - Farewell

10:45 - 11:30am - Presentations One

In Room MeH 30: Dr. Eugenia Etkina
Continue the conversation with our keynote speaker about developing habits of mind in preservice science teachers. Dr. Etkina will be available via Zoom for specific questions and to help you think about your preservice teacher program and methods courses.

In the Rotunda:
NSF Noyce Scholarship Program Panel: Discussion on Proposal Preparation and Projects by Principal Investigators
Drs. Meghan Marrero, Bill Farber, Amanda Gunning
Dr. Jackie DeLisi, Education Development Center
Moderated by Dr. Seema Rivera

Capturing instructional variation in secondary STEM teaching using the STEM Observation Protocol (STEM-OP)
Drs. Jeffrey Radloff & Dominick Fantacone, SUNY Cortland

11:30am - 1pm - Lunch and Business Meeting
1:00 - 2:20pm - Presentations Two

In the Rotunda:
The Black Doll White Doll Experiment Becomes Personal: Addressing Race in Science Teacher Education
Dr. Felicia Mensah, Teachers College, Columbia University

Exploring Science Teacher Leaders' Identity Development within a Community of Practice
Drs. Latanya Brandon, SUNY New Paltz & Cindy Kern, Quinnipiac University

Exploring Elementary Preservice Teachers’ Perceptions of AI in STEM Education
Drs. Jeffrey Radloff, SUNY Cortland & Ibrahim Yeter, National Institute of Education in Singapore

The Origin of the 1200 Minute Laboratory Requirement
Dr. Keith Sheppard & Monica Bartoli, Stony Brook University

2:20pm - Farewell!
Thank you to all who presented and attended our conference today! We look forward to meeting again next year when our new leadership team leads the conference!

HOPE TO SEE YOU IN JANUARY 2023!

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