### CONFERENCE Preview

# 2018

AREA CONFERENCES ON SCIENCE EDUCATION

### **Elevating Science**

**Digging Deeper** 

RENO, NV OCT. 11-13

### **Science Education**

A National Priority NATIONAL HARBOR, MD NOV. 15–17

### **Energize Science**

Educate and Engage

CHARLOTTE, NC NOV. 29-DEC. 1



REGISTER EARLY AND SAVE \$\$ www.nsta.org/conferences





### NSTA District Professional Learning Packages

NSTA offers tailored packages of books, onsite presentations and workshops, and online experiences on popular topics—including three-dimensional instruction and science and literary in the elementary classroom—for schools, districts, or states. Using a blended approach, NSTA combines a face-to-face component with additional online opportunities to extend learning. Implementing this approach promotes sustained change in classroom practice.

- Keynote Presentations
- One- and Two-Day Workshops
- Train-the-Trainer Opportunities
- Online Options: Web Seminars, Virtual Conferences, Book Studies, and more

Authors and experts are available throughout the year to bring these classroom-tested approaches to your school or district. To learn how, contact NSTA at *professionallearning@nsta.org*.

Learn more about NSTA's District Professional Learning Packages at **www.nsta.org/district**.



### **Picture-Perfect Author Workshops**

### Tempe, AZ • October 9–10

Learn more at www.nsta.org/district/pps.aspx

### **Picture-Perfect Science Online Course**

Fall Course Dates:

- Alternate Wednesdays at 7:00 p.m.
- September 26-November 7

Learn more at www.nsta.org/district/pps.aspx

### **Three-Dimensional Instruction Workshops**

Reno, NV • October 12–13

National Harbor, MD • November 16–17

Charlotte, NC • November 30-December 1

Learn more at www.nsta.org/conferences

I finally understood the 3D instruction piece, and I can already see ways to better explain the emphases and process to my colleagues. To me, the book is like having the seminar to live over again, and I'm sure that I'll be referencing it often.

- Past NGSS Workshop Participant, Minneapolis, MN



## Table of Contents

### Reno

Speakers
Special Offers
NSSTA Welcome Reception
Special Events
Short Courses
Graduate Credit Opportunity/Committee Leaders
Schedule at a Glance1

### National Harbor

Speakers1	3
Special Events	6
Short Course	7
Graduate Credit Opportunity/Committee Leaders1	8
Schedule at a Glance	9

### Charlotte

Speakers	21
Special Events	23
Graduate Credit Opportunity/Committee Leaders	24
Short Courses	25
Special Event at Discovery Place	26
Schedule at a Glance	27

NSTA's Science Store and NSTA Press® Sessions
Exhibitors
Registration and Travel Arrangements

The environment is important to science educators. These programs are recyclable and were printed on recycled paper.

### SPONSORS

















### Reno Speakers

Follow your favorite speaker on Twitter! See our featured speakers' Twitter handles on these pages or search on #NSTA18.

### **KEYNOTE SPEAKER**

### Wild Technology: Adventures with Open-Source Sensors, Drones, and National Geographic



Speaker is sponsored by National Geographic Learning | Cengage

#### Shah Selbe @shahselbe

FOUNDER, CONSERVIFY, AND NATIONAL GEOGRAPHIC EXPLORER AND FELLOW

Over the last few years, Conservify has built open-source conservation technologies for use in the field on National Geographic expeditions and through our network of scientists and conservationists. This has taken us to places like Peru's Boiling River, Botswana's Okavango Delta, Canada's Banff National Park, Congo's lowland gorilla reserves, and many more. Shah Selbe will discuss some of our experiences in building open-source sensors/IoT, drones, and other tools to help better protect and understand the planet we live in. Shah is the founder of Conservify and a National Geographic Explorer and Fellow. He started his career as a spacecraft propulsion engineer but is now a conservation technologist, where he works with communities, NGOs, and developing countries to identify and deploy technologies that can help with their greatest conservation challenges.

### FEATURED PRESENTATION Experience: The Brain's Most Powerful Influence



#### **Kenneth Wesson**

EDUCATIONAL CONSULTANT: NEUROSCIENCE

Although a famous author once said, "you are what you read," evidence-based research from cognitive science informs us instead that "you are what you experience." Our past experiences not only shape who we become, they also literally shape the very architecture and processing idiosyncrasies inside each human brain. A former faculty member and administrator in higher education, Kenneth Wesson will address the neuroscience of learning for educational organizations and institutions throughout the United States and

overseas. His audiences range from early childhood specialists to college and university-level educators, and his international audiences have included educators and administrative officers from six of the world's seven continents. Kenneth's research is frequently published and referenced in *Parents* Magazine, HealthNet, and the journal *Brain World*. He can be seen on PBS specials on human learning and the teenage brain. In 2017, Kenneth was selected to receive the Marquis Who's Who Lifetime Achievement Award.

### FEATURED PRESENTATION A Woman in Mission Control



#### Marianne Dyson @mariannedyson AUTHOR AND FORMER NASA FLIGHT ACTIVITIES OFFICER

Author Marianne Dyson shares her personal experience earning a degree in physics and becoming one of the first women to join the problem-solving team in Mission Control prior to and during the first Space Shuttle flights. Marianne was one of NASA's first female flight controllers, serving as a Flight Activities Officer during the first Space Shuttle flights, the subject of her memoir, *A Passion for Space*. Since leaving NASA, she has shared her passion through writing and appearances. Her children's nonfiction books have won top awards

for writing and science content. She has coauthored two books with *Apollo* 11's Buzz Aldrin for National Geographic (including *Welcome to Mars,* which was an NSTA Best STEM Book). Marianne speculates about the future through articles and science fiction published most often in *Ad Astra,* the magazine of the National Space Society, and *Analog Science Fiction* magazine.

### STRAND: Developing Persistence: The Power of Experience

Failure or delayed success has surprising benefits to students, teachers, and administrators—it often initiates meaningful learning experiences. Nurturing such experiences is part of threedimensional learning; educators should support students in developing their own explanations, ideas, and solutions. Sessions in this strand will focus on the struggles and triumphs that drive learning and explanation development. Learn from your peers' experiences in persisting as they negotiate the terrain of facilitating science learning for the next generation.

### FEATURED PRESENTATION

### Supporting Equitable 3-D Science Learning Using Assessment, Phenomena, and Community Engagement



#### **Philip Bell** @philipIbell; @STEMteachtools shauna c. Larson chair in learning sciences, university of washington

All students have the right to develop a deep understanding of the natural world in ways that support their goals and those of their community. Philip Bell will highlight how formative assessment, meaningful phenomena, and community engagement can support equity and justice in science education. Philip is a professor of the Learning Sciences & Human Development and holds the Shauna C. Larson Chair in Learning Sciences. He is executive director of the UW Institute for Science & Mathematics Education, which has

created partnerships to envision, cultivate, and study equity-focused innovation in K–12 STEM education, and he is co-director of the Learning in Informal and Formal Environments (LIFE) Science of Learning Center.

### STRAND: Advancing Three-Dimensional Classroom Culture

Educator understanding of three-dimensional learning is a continuum—from having a firm grasp of the structure of the three dimensions, to integrating appropriate science practices and crosscutting concepts, to developing grade-level storylines based on phenomena. In this strand, participants will be able to choose hands-on/interactive sessions based on their needs.

### FEATURED PRESENTATION How Do You Scale Innovation?



#### Sarah Young @YoungUTed

COORDINATOR FOR DIGITAL TEACHING AND LEARNING, UTAH STATE BOARD OF EDUCATION

Do you have a great idea? Of course you do, you are a SCIENCE TEACHER! Sarah Young will focus on how to take that great idea and scale it with constructive partnerships. Come learn how to take your innovation to the next level by creating a community of leaders that support your students. Sarah provides leadership as digital teaching and learning coordinator with the Utah State Board of Education, and was previously the K–12 science specialist and the STEM liaison for Utah. As coordinator for digital teaching

and learning, she plans, develops, promotes, implements, and evaluates programs in digital and personalized learning. Sarah also coordinates with colleges, universities, and other educational institutions to improve the preservice and inservice education of teachers, administrators, and other school personnel.

### **STRAND:** Cultivating Constructive Partnerships

Teaching can be isolating. Learn how to move beyond your four walls and collaborate with colleagues, informal educators, scientists, and the community. Increase opportunities to advocate for your students' science learning while you build your leadership skills. Learn how to enhance your professional growth by using the expertise in your building and your community. In this strand, presenters will showcase collaboration with business and industry, informal science organizations, policy stakeholders, and colleagues.

### **SPECIAL OFFERS FOR RENO!**

The Reno conference committee has arranged these special offers for Reno conference attendees.

#### Nevada Space Center<sup>®</sup> and National Automobile Museum

The Nevada Space Center<sup>®</sup> and National Automobile Museum are offering a special combo admission to all NSTA Reno Area Conference attendees and their family members for the entire month of October as part of October Skies Aerospace Month. Please show your badge at the reception desk to receive tickets—\$10 for adults and \$4 for youth (ages 6–18). Experience science, technology, engineering, and math through some of the most amazing vehicles ever conceived!

#### Terry Lee Wells Nevada Discovery Museum (The Discovery)

The Discovery is offering reduced admission to NSTA Reno Area Conference attendees for \$6 per adult (must show conference badge at admissions desk). This offer is valid October 11–14, 2018. The Discovery boasts 67,000 square feet of ever-changing hands-on galleries and exhibits focused on science, technology, engineering, art, history, and invention—all designed to inspire curiosity, creativity, and the joy of lifelong learning in all who visit.

Visit www.nsta.org/reno for additional details on both of these offers.

### Check out more than 200 sessions and other events with the Reno Session Browser

www.nsta.org/renobrowser

### FEATURED PANEL Children's Literature: Using Phenomena to Uncover Student Questions









Dennis Schatz



**Kelly Milner Halls** 

Patricia Newman

### Steve A. Rich

Pamela Turner

#### Moderator: Christine Anne Royce, NSTA PRESIDENT; CO-DIRECTOR, MAT IN STEM EDUCATION; AND PROFESSOR, **DEPT. OF TEACHER EDUCATION, SHIPPENSBURG UNIVERSITY** Panelists:

- Kelly Milner Halls (@KellyMilnerH), Nonfiction Author for Young Readers
- Patricia Newman (@PatriciaNewman), Children's Author
- Steve A. Rich (@bflyguy), Author; Science Methods Instructor, University of West Georgia; and Consultant, Georgia Math Science Partnership
- Dennis Schatz (@DinoManSchatz), NSTA President-Elect; Children's Book Author; and Senior Advisor at Pacific Science Center
- Pamela Turner, Children's Author

This innovative Author's Panel offers an opportunity for teachers to walk away with new and practical ideas of how to use the phenomena present in many children's books. Learn what to look for in good science literature, how to help students develop their own questions about phenomena, and how to formulate investigations to answer their questions. During this special session, children's authors will interact with teachers in an informal manner, collaborating on ways children's literature makes phenomena come alive.



### **Reno's FRIDAY Night on the Town!**

Start Your Evening with a Welcome Reception

Hosted by the Nevada State Science Teachers Association (NSSTA) Sponsored by National Geographic Learning Cengage

### Friday, October 12 • 6:00-8:00 PM Terry Lee Wells Nevada Discovery Museum\*

Tour the Terry Lee Wells Nevada Discovery Museum and join us for hors d'oeuvres and beer/wine. Enjoy a few stories with our guest speaker Zeb Hogan, a National Geographic Explorer and host of Monster Fish.

A limited number of tickets are available and may be purchased for \$10 from EventBrite (*bit.ly*/2*zruy8P*) through October 1, 2018.

All ticket fees will be donated to the Discovery Museum. Each ticket purchased includes a free drink token during the event. Pick up your drink token at the Cengage Booth (#408) by 3:00 PM on Friday.

Afterwards, attend our "Dine About Town" at some great Reno downtown restaurants. NSSTA has arranged reservations at several downtown restaurants close to the museum. Stop by the NSSTA booth to sign up with your friends or to make new ones.

\*Uber to the museum for approximately \$10

### Reno Conference + SPECIAL EVENTS



### NSTA NATIONAL CONFERENCE ON SCIENCE EDUCATION



**National Conference on Science Education**, the premier conference that offers the latest in science content, teaching strategy, and research to enhance and expand your professional growth.

For more information, please visit www.nsta.org/conferences



#NSTA19

### Short Courses

All short courses are filled on a first-come, first-served basis, so act now! For complete descriptions and to purchase tickets, visit *www.nsta.org/ renobrowser*. (Tickets Required)

### Developing Assessments to Advance Three-Dimensional Classroom Culture (SC-1)

### DATE: THURSDAY, OCTOBER 11, 2:00-5:00 PM TICKET PRICE: \$15 ADVANCE; \$20 ON-SITE

### Strand: Advancing Three-Dimensional Classroom Culture

A key way for teachers to support a three-dimensional (3-D) culture in their classrooms is to use 3-D assessments that are designed to meet the vision of the *NGSS*. However, there is a lack of high-quality 3-D assessments readily available to teachers. In this short course, you will learn how to design 3-D assessments by brainstorming scenarios for eliciting student understanding and using task formats to build questions that engage students with the scenario. Participants will receive resources such as STEM Teaching Tool #29: Steps to Designing a Three-Dimensional Assessment.

### Ocean Plastic Pollution: Issues and Solutions (SC-2)

#### DATE: FRIDAY, OCTOBER 12, 9:00 AM-12 NOON TICKET PRICE: \$25 ADVANCE; \$30 ON-SITE

Enrich your classroom with *NGSS*-focused activities surrounding plastic pollution issues and solutions. Activities will highlight plastic's physical and chemical properties, including density and buoyancy. Not only will we emphasize looking at the impacts of prolific plastic use, but we will also explore solutions to plastic pollution, alternatives to single-use plastics, and empowering students to tackle environmental problems without experiencing ecofatigue. This short course will include strategies to encourage critical thinking about environmental issues and methods to help students gain awareness and examination of everyday resources and uses. Empower your students to become part of the plastic pollution solution! Door prizes and resources!





-Photo courtesy of VisitRenoTahoe.com

### Graduate Credit Opportunity

Graduate Credit Sponsored by Dominican University of California

Reno conference attendees can earn one (1) or two (2) graduate-level credit/units in professional development through Dominican University of California course **#EDUO 8025.** To obtain credit/units, you must be registered for the NSTA Reno area conference, complete the required assignments, and pay a fee of \$95 for one credit/unit or \$190 for two credits/units. An NSTA transcript is also required. Your required assignments must be successfully completed and sent to the instructor within three weeks of the conference ending date. Deadline is **November 30, 2018.** Visit *bit.ly/2udgREG* for complete details.

### Reno Conference Committee Leaders

#### **Camille Stegman**

Conference Chairperson NSTA Director, District XVI, and Associate Director Raggio Research Center University of Nevada, Reno Reno, NV 89557 camille.stegman@aol.com

### Megan Beckam

Program Coordinator Master Teacher University of Nevada, Reno Reno, NV 89557 mbeckam@unr.edu

#### Sylvia Scoggin

Local Arrangements Coordinator K–12 Science Program Coordinator Washoe County School District Reno, NV 89502 sscoggin@washoeschools.net

### Reno Conference at a Glance

Conference at a Glance				ence	hnology	ucation	ucation		₽Ō
Ma Bro fori key	ke your own conference schedule using the Reno Session wser <i>(www.nsta.org/renobrowser).</i> Browse events by day, mat, subject, grade level, conference strand, sponsor, or word.	Life Science	Physical Science	Earth and Space Sci	Engineering and Tec	<b>General Science Ed</b>	Informal Science Ed	PRESENTATION	HANDS-ON WORKSI
	Thurs., 8:00–9:00 AM—A System for Systems Thinking	•							•
	Thurs., 12:30-1:30 PM—Revise, Refine, Rejuvenate, Repeat!				•				•
	Thurs., 2:00–3:00 PM—Snap Circuits and Such: Engaging Students with Science Clubs						•		•
	Thurs., 3:30–4:30 PM—Getting Your School Board on Board for NGSS					•			•
ntary	Fri., 8:00–9:00 AM—ASEE Session: Using Computer Modeling to Innovate Science Education				•				•
leme	Fri., 9:30–10:30 AM-NESTA Session: Ice Cores and Climate Change			•					•
Ε	Fri., 11:00 AM–12 Noon—NSTA Press® Session: Uncovering 3-D Ideas About Matter and Energy		•					•	
	Fri., 2:00–3:00 PM—Expanding Your Science Classroom Through Science Olympiad						•	•	
	Sat., 8:00–9:00 AM—Using Virtual Field Trips to Gather Inquiry-Based Evidence			•					•
	Sat., 11:00 AM–12 Noon—The Monarch Movement: A PBL Experience	•						•	
	Thurs., 8:00–9:00 AM—Stories in the Snow: Citizen Science in the Sierras						•	•	
	Thurs., 12:30–1:30 PM—Introducing the Teacher Institute for Evolutionary Science	•						•	
	Thurs., 2:00–3:00 PM—Making Redox Practical, Relevant, Engaging, and Fun Corrosion Chemistry!				•			•	
/el	Thurs., 3:30–4:30 PM—Launch into Engineering with Catapults		•						•
e Lev	Fri., 8:00–9:00 AM—How Did the Elk Cross the Road?	•							•
Aiddl	Fri., 12:30–1:30 PM—JetStream: An Online School for Weather			•					•
<	Fri., 2:00–3:00 PM—Chain Reactions: Failure That Leads to Success		•						•
	Sat., 8:00-9:00 AM-Natural Hazards and Their Lethality			•					•
	Sat., 9:30–10:30 AM—Integrating Technology with Engineering: "Con-Cushion"				•				•
	Sat., 11:00 AM-12 Noon-Phenomena, Questions, and Models					•		•	
	Thurs., 8:00–9:00 AM—Climate Literacy $\rightarrow$ Climate Solutions			•				•	
	Thurs., 12:30–1:30 PM—Creative Approaches to Teaching Science Methods to Preservice Teachers				•			•	
	Thurs., 2:00–3:00 PM—High School Teachers: Birds of a Feather					•		•	
lege	Thurs., 3:30–4:30 PM—Analyzing Hazards and Risks in High School Chemistry Labs		•						•
ol-Coll	Fri., 8:00–9:00 AM—Biomagnification in Ocean Food Webs: You Are What You Eat			•					•
Scho	Fri., 9:30-10:30 AM—Phenomenal Biology	•						•	
ligh (	Fri., 12:30–1:30 PM—Connecting Natural Selection and Speciation	•							•
	Fri, 2:00–3:00 PM—Polymers: Teaching "Hard" Concepts with Gooey Labs		•					•	
-	Sat., 9:30–10:30 AM—Advancing Scientific Literacy with Lesson Plans That Meet the CCSS and NGSS				•			•	
	Sat., 11:00 AM–12 Noon— <i>NGSS</i> Chemistry and Biology Model Making with Animation, Art, and Movie-Making						•	•	



## **#onlyatNSTA**

Your NSTA member benefits are begging to be used... like your Science Store discount to stock up on your book collection for the year. Also, as a member, you save up to \$95 on conference registration.

> Only at NSTA can you get these savings and top-notch professional development. Visit *www.nsta.org/conferences* to register.

RenoNational Harbor, MDCharlotteOct. 11-13Nov. 15-17Nov. 29-Dec. 1

Share your #onlyatNSTA moments with us on Twitter @NSTA

Learn about all your membership benefits at www.nsta.org/membership



### National Harbor Speakers

Follow your favorite speaker on Twitter! See our featured speakers' Twitter handles on these pages or search on #NSTA18.

### **KEYNOTE SPEAKER**

### WILD ABOUT SCIENCE: My Journey from NFL Cheerleader to National Geographic Explorer



MIREYA MAYOR @mireyamayor PRIMATOLOGIST AND NATIONAL GEOGRAPHIC EXPLORER

Join Mireya Mayor for a morning of adventure, as this one-time Miami Dolphins cheerleader shares how she went on to earn a Fulbright Scholarship, discover a previously unknown species of mouse lemur, and earn her PhD, proving there is more than one path to success. As an advocate for science and education, her passion is both inspiring and contagious. Mireya's talk aims to inspire teachers and students, particularly women and girls, to pursue their passions in the sciences, because "you ask people to name a female explorer, and they're pretty hard-pressed."

Speaker is sponsored by National Geographic Learning | Cengage

### FEATURED PRESENTATION

### Becoming Scientifically Literate: Insights from Research on Learning and Teaching



#### Heidi Schweingruber

### DIRECTOR, BOARD ON SCIENCE EDUCATION, THE NATIONAL ACADEMIES OF SCIENCES, ENGINEERING, AND MEDICINE

Science is a way of knowing about our world. In a society where science and technology now touch nearly every part of our lives, it is critical to understand the processes and practices of science and to become critical consumers of scientific research. Drawing on studies from the National Academies of Sciences, Engineering, and Medicine, Heidi's talk focuses on exploring what scientific literacy is and the kinds of learning experiences students need to become more scientifically literate.

### STRAND: Freedom to Become Scientifically Literate

Developing scientifically literate global citizens is increasingly critical in today's society. Opportunities for students to analyze data, make claims, engage in argument from evidence, and grapple with authentic science and engineering problems are essential to achieving this goal. Sessions in this strand will focus on creating environments that engage students in becoming connected to the world around them and prepare them to be the next generation of decision makers.

### FEATURED PRESENTATION Seven Touches to Enlightenment



#### Ned Tillman @nedtillman

AUTHOR, EARTH SCIENTIST, OUTDOOR GUIDE, AND ENVIRONMENTAL EDUCATOR

Ned Tillman is a tireless advocate and strong voice in support of sustainability, with special emphasis on watershed restoration and land preservation. He will share his seven strategies for getting students connected to the world around them. An accomplished environmental scientist and lifelong outdoorsman, his mantra is strength through organization. For 27 years, he provided energy and environmental consulting services to governments and corporations worldwide.

Now he applies those skills to give others the tools to save the waters, forests, and land they love. Ned has authored several books, including *The Chesapeake Watershed: A Sense of Place and a Call to Action* and *Saving the Places We Love, Paths to Environmental Stewardship*. He holds a master's degree in Earth and environmental sciences from Syracuse University. More information about his sustainability campaign is available at *www.savingtheplaces.com*.

Participants can sign up to meet one-on-one with Ned following his presentation in order to share ideas, explore opportunities to collaborate, or to learn more about his strategies. Sign up at the MAST booth or at the end of the talk. Anyone who cannot attend can reach Ned at *ned@ sustainable.us* or *www.savingtheplaces.com*.

### STRAND: Cultivating Curiosity in the Capital Region

Children are born with natural curiosity that is often "schooled out" of them. The challenge of science education is to provide opportunities that spark their sense of curiosity, hone their critical-thinking skills, and help them to make sense of the world in which they live. The national capital region is rich in resources and environments that invite students to wonder about the world around them. Local contexts and relevant phenomena use, build, and sustain student curiosity by providing opportunities to ask questions, solve problems in multiple ways, and deepen understanding. In this strand, participants will explore tools, strategies, and local resources to tap into and maintain their students' curiosity.



### FEATURED PANEL DISCUSSION Advocacy and Equity: Empowering Teachers to Speak Out



Roberto J. Rodríguez @RRodriguezTPlus PRESIDENT AND CEO OF TEACH PLUS



John B. King, Jr. aJohnBKing president and ceo of the education trust

During this panel discussion the CEOs of two leading advocacy groups—Teach Plus and The Education Trust—will discuss ESSA (Every Student Succeeds Act) and why classroom teachers must be the driving force behind the practice and policy changes needed to address the serious equity challenges we face today. *Additional panelists to be announced*.

**Roberto J. Rodríguez** served in senior roles in the United States Senate and in the White House. From 2009 to 2017, he developed and led President Obama's education initiatives to build systemic change and improve opportunity and outcomes across the educational continuum. Under his leadership, support for higher academic standards, enhanced teacher development and advancement, and deeper investment in America's schools ultimately led to the enactment by Congress of the bipartisan Every Student Succeeds Act of 2015. Prior to his service in the White House, Roberto spent eight years as principal education adviser to the late U.S. Senator Edward M. Kennedy. He holds an EdM from the Harvard Graduate School of Education.

John B. King, Jr. is the president and CEO of The Education Trust, a national nonprofit organization that aims to identify and close opportunity and achievement gaps, from preschool through college. He served as the U.S. Secretary of Education from 2016 through 2017. In tapping him to lead the U.S. Department of Education, President Obama called Dr. King "an exceptionally talented educator," citing his commitment to "preparing every child for success" and his lifelong dedication to education as a teacher, principal, and leader of schools and school systems. He holds a Master of Arts in the teaching of social studies and a PhD in education from Teachers College at Columbia University.

### **STRAND:** Monumental Challenge: STEM Equity, Diversity, and Advocacy via *NGSS*

"Arguably, the most pressing challenge facing U.S. education is to provide all students with a fair opportunity to learn" (Framework; NRC 2012, p. 282). Educators must advocate and take action to provide equity and access to STEM opportunities for students. The three-dimensional nature of the NRC Framework provides an incredible opportunity for teachers to engage ALL students in STEM education. To develop innovative and responsible citizens for tomorrow, we must foster creativity, academic risk-taking, and perseverance within ALL student groups today. This strand will focus on supporting teachers in creating inclusive classrooms that are culturally proficient and celebrate diverse ideas and solutions essential for STEM literacy.

Check out more than 200 sessions and other events with the National Harbor Session Browser at: www.nsta.org/natharborbrowser

### National Harbor Conference + SPECIAL EVENTS



### Short Course

This short course will be filled on a first-come, first-served basis, so act now! For a complete description and to purchase a ticket, visit *www.nsta.org/natharborbrowser*. (Ticket Required)

### Academic Vocabulary Through Engaging Phenomena (SC-1)

#### DATE: FRIDAY, NOVEMBER 16, 8:00–11:00 AM TICKET PRICE: \$12 ADVANCE; \$17 ON-SITE

We will explore owl pellets in a series of *NGSS* lessons designed to engage English language learners and build academic vocabulary through discussion, writing, and reading. This short course uses a 5E lesson plan to demonstrate how an inquiry into owl pellets and owl habitats can help grades 3–5 students access academic vocabulary, build their conceptual framework, and inspire reading and writing that will become the basis for further inquiry.





-Photo courtesy of Gaylord National Resort & Convention Center

### Graduate Credit Opportunity

Graduate Credit Sponsored by Dominican University of California

National Harbor conference attendees can earn one (1) or two (2) graduate-level credit/units in professional development through Dominican University of California course **#EDUO 8029**. To obtain credit/units, you must be registered for the NSTA National Harbor area conference, complete the required assignments, and pay a fee of \$95 for one credit/unit or \$190 for two credits/units. An NSTA transcript is also required. Your required assignments must be successfully completed and sent to the instructor within three weeks of the conference ending date. Deadline is **December 15, 2018.** Visit *bit.ly/2KT4tUD* for complete details.

### National Harbor Conference Committee Leaders

#### Jaclyn Austin

Conference Chairperson MAST President and Secondary Science Instructional Facilitator Howard County Public School System Ellicott City, MD jaclyn\_austin@hcpss.org

#### Jonathon Grooms

Program Coordinator Assistant Professor The George Washington University Washington, DC jgrooms@gwu.edu

#### Anisha Campbell

Local Arrangements Coordinator Associate Director University of Maryland College Park, MD amcamp10@umd.edu

### National Harbor Conference at a Glance

Conference at a Glance				ence	hnology	ıcation	ucation		đĐ
Ma Ses eve spc	ke your own conference schedule using the National Harbor sion Browser <i>(www.nsta.org/natharborbrowser)</i> . Browse nts by day, format, subject, grade level, conference strand, msor, or keyword.	Life Science	Physical Science	Earth and Space Sci	Engineering and Tec	<b>General Science Ed</b>	Informal Science Ed	PRESENTATION	HANDS-ON WORKS
	Thurs., 8:00–9:00 AM—Empowering the Engineers in Your Early Childhood Classroom				•				•
	Thurs., 12:30–1:30 PM—Taking Trade Books and Science Outdoors	•							•
	Thurs., 2:00–3:00 PM—Energy Explorations at the Primary Level		•						•
٨	Thurs., 5:00–6:00 PM—Strengthen STEM with Community Partnerships That Integrate Arts and Social Studies						•	•	
nentar	Fri., 8:00–9:00 AM—Engineering Success! Exploring Engineering Practices in Your Elementary Classroom				•				•
Eler	Fri., 9:30–10:30 AM—Let's Get Wet—Wind, Water, and Weather for Grades PreK–3			•					•
	Fri., 12:30–1:30 PM—Using the Chesapeake Watershed to Spark Curiosity in the Adventure of Learning	•						•	
	Fri., 2:00–3:00 PM—Building Scientifically Literate Students Through Unit Dissemination with Elementary Teachers					•		•	
	Sat., 8:00–9:00 AM—NASA's Educator Toolkit: Framing Phenomena-Based Student Investigations			•					•
	Thurs., 8:00–9:00 AM—Where's the Evidence?					•		•	
	Thurs., 2:00–3:00 PM—Teach Engineering Practices on the Cheap with Concrete				•			•	
	Thurs., 3:30–4:30 PM—Gaming STEM-FLEET, a Free Engineering Video Game				•				•
lel	Thurs., 5:00–6:00 PM—Teach Astronomy Kinesthetically, Using Direct Observations and Models			•				•	
e Lev	Fri., 8:00–9:00 AM—Cars: Science Lessons That DRIVE Science Concepts		•					•	
Middl	Fri., 9:30–10:30 AM— Becoming a Scientifically Literate Leader of TomorrowToday						•	•	
	Fri., 11:00 AM–12 Noon—From Harmony to Humpbacks: Using Technology to Study Sound and Music		•						•
	Fri., 12:30–1:30 PM—STEM-ulating Activities on Human Ecology	•							•
	Sat., 9:30–10:30 AM—JetStream: An Online School for Weather			•					•
	Sat., 11:00 AM-12 Noon—Teaching Evolution in Middle School	•							•
	Thurs., 8:00–9:00 AM—Using the NSTA Learning Center as an Online Textbook					•		•	
	Thurs., 12:30–1:30 PM—NGSS for Struggling Learners in Chemistry		•						•
	Thurs., 2:00–3:00 PM—Innovation in Biology	•							•
llege	Thurs., 5:00–6:00 PM—Kinesthetic Chemistry: Get Your Students Up and Moving		•					•	
0000	Fri., 8:00–9:00 AM—Hypothesis Testing and the Meaning of Statistical Significance					•		•	
h Scho	Fri., 9:30–10:30 AM— Analyzing X-Ray Pulses from Stellar Cores with NASA Data and STEM Tools			•					•
Hig	Fri, 11:00 AM–12 Noon—NGSS Professional Learning: An Innovative Approach					•		•	
	Fri., 2:00–3:00 PM—Engaging Students with Educational Games				•				•
	Sat., 8:00–9:00 AM—STEM Design Challenges				•			•	
	Sat., 11:00 AM–12 Noon—Connecting Natural Selection and Speciation	•							•

# JOIN US

- Experience hands-on sessions that enhance your on-going development and improve your STEM knowledge.
- Explore ways to foster integration of research-based methods into the STEM curriculum.
- Network with colleagues and hone your STEM leadership skills.
- Compare project- and researchbased activities that tackle issues of real-world relevance.
- Discover the aspirations of student who share their interests in STEM opportunities and careers.
- Check out the hottest tools and resources for STEM educators.
- Get the keys to success in developing partnerships with informal education groups, business, industry, and governmental agencies.

### Forum & Expo

**8TH ANNUAL** 

STEM

HOSTED BY NSTA San Francisco, CA July 24–26, 2019

This dynamic event brings together educators and organizations who are actively implementing STEM programs in their schools or districts.

Come prepared to learn tactics that work, build your professional learning network, connect with effective outreach programs and partnerships, discover new resources, and build a strong curriculum.

For information and to register, visit www.nsta.org/stemforum



### **#STEMforum**

### **Charlotte Speakers**

### KEYNOTE SPEAKER

### Scientific Research, Amazonian Conservation, and K–12 Classrooms: A Story of Potential Energy

Speaker is sponsored by National Geographic Learning | Cengage

Andrés Ruzo @georuzo Geothermal scientist and national geographic explorer

When disciplines meet—discovery often follows. A lot can be gained by stepping out of our comfort zone, but taking those steps is too often inherently difficult, requiring plenty of work to get in the right position. Join National Geographic Explorer Andrés Ruzo for a journey into the Amazon, to explore the forces threatening the jungle, and potential solutions that may come from crossing disciplines and grade levels. In 2011, Andrés became the first geothermal scientist granted permission to study the sacred Boiling River of the Amazon. He believes that environmental responsibility and economic prosperity can go hand in hand, and uses science to unite both aims.

### FEATURED PRESENTATION

### Novel Engineering and Integrated STEM Lessons for Developing Literacy and Problem-Solving Skills



#### Amber Leigh McFarland Kendall

COORDINATOR OF STEM PARTNERSHIP DEVELOPMENT, THE ENGINEERING PLACE, NORTH CAROLINA STATE UNIVERSITY

Novel Engineering is an NSF-funded and research-based, literacyfocused approach to integrated STEM lessons for K-8 classrooms with the term "integrated" meaning that engineering design challenges provide the opportunity for students to research and apply concepts and skills from literally any other content area, such as science, math, social studies, ELA, art, and music. Join Amber as she presents the guiding principles of integrated lesson planning, video and written examples of students engaged in Novel

Engineering, recent research and trends, and why in the world we think engineering should be a part of the K–8 classroom. A former physics teacher at North Carolina School of Science and Mathematics, she holds a PhD in engineering education from Tufts University.

### STRAND: Illuminate Literacy Through Science

Science provides an authentic and engaging context for literacy learning. Part of the science/literacy interface teaches students to use the language of science. Sessions will focus on demonstrating ways to use science investigations to strengthen the literacy skills of preK–12 science students. Sessions will highlight disciplinary practices that promote students' reading, writing, thinking, speaking, and listening as scientists.

Follow your favorite speaker on Twitter! See our featured speakers' Twitter handles on these pages or search on #NSTA18.

### FEATURED PRESENTATION Stepping Outside the Bounds: Character, Creativity, Community, and Culture



#### ChaMarra K. Saner

ASSSISTANT PROFESSOR OF CHEMISTRY, CATAWBA COLLEGE

It is ChaMarra Saner's belief that an environment stemmed from science education provides students with the stimulation and curiosity to explore their desired passion while developing the knowledge and technical skills to persevere. She will share how through teaching/ mentoring she strives toward the development and creative functions, as well as the simultaneous development of practical skills in supporting student growth. ChaMarra is actively involved in her college and the community as the faculty adviser for the Student Affiliates of the American Chemical Society and the National Organization for the

Professional Advancement of Black Chemists and Chemical Engineers, and regularly volunteers in the Rowan Salisbury and Iredell County schools systems. She holds a PhD in chemistry from Louisiana State University.

### STRAND: Amp Up Science Instruction

How can educators go beyond the science standards? By "amping up" science instruction through technology, best practices, and personalized learning, teachers can generate powerful learning experiences for their students. This strand will provide participants with extended learning opportunities for improving current instruction.

### FEATURED PRESENTATION

### Cultivating Curiosity: Practical Tips to Create High-Voltage Experiences for Students Outside the Classroom Through Community and Scientific Partnerships



#### Laura Kloepper @ProfLKloepper

BIOACOUSTICIAN AND ASSISTANT PROFESSOR OF BIOLOGY, SAINT MARY'S COLLEGE

Curiosity and learning is enhanced when students move beyond the classroom and into Project-Based Learning, which allows students to experience the messy realities of "real-world science." These immersive experiences allow students to ask questions, "do" hands-on science, and interpret information in their natural world. Laura Kloepper will give practical tips on how educators can initiate and form lasting community and scientific partnerships to enhance high-voltage student experiences outside the classroom. Her cur-

rent research investigates how bats use their echolocation in large swarms without interfering with one another.

#### **STRAND:** High-Voltage Science Strategies Beyond Standards

Purposeful learning takes place when students are able to apply the learned standards to situations, challenges, and problems beyond the science classroom. This requires the integration of mathematics, humanities, engineering, technological tools, and community relevance. This strand increases participants' understanding of and ability to facilitate student science learning and engagement in and beyond the classroom.

### Charlotte Conference + SPECIAL EVENTS





### Graduate Credit Opportunity

Graduate Credit Sponsored by Dominican University of California

Charlotte conference attendees can earn one (1) or two (2) graduate-level credit/units in professional development through Dominican University of California course **#EDUO 8208.** To obtain credit/units, you must be registered for the NSTA Charlotte area conference, complete the required assignments, and pay a fee of \$95 for one credit/unit or \$190 for two credits/units. An NSTA transcript is also required. Your required assignments must be successfully completed and sent to the instructor within three weeks of the conference ending date. Deadline is **February 15, 2019.** Visit *bit.ly/2KS0JD3* for complete details.

### Charlotte Conference Committee Leaders

#### Nancy Addison

Conference Chairperson Director of PreK–12 STEM Education Charlotte Mecklenburg Schools Charlotte, NC nancyh.addison@cms.k12.nc.us

#### Manley Midgett

Program Coordinator Instructor Meredith College Raleigh, NC midgettm@meredith.edu

#### Alisa B. Wickliff

Local Arrangements Coordinator Associate Director, Center for STEM Education The University of North Carolina at Charlotte Charlotte, NC abwickli@uncc.edu

### Short Courses

All short courses are filled on a first-come, first-served basis, so act now! For complete descriptions and to purchase tickets, visit *www.nsta.org/ charlottebrowser*. (Tickets Required)

### The IMAGINE-NC Project: Integrating Mathematics and Geology in Eastern North Carolina (SC-1)

#### DATE: THURSDAY, NOVEMBER 29, 2:00-5:00 PM TICKET PRICE: \$15 ADVANCE; \$20 ON-SITE

Developed by the Aurora Fossil Museum and East Carolina University science and education faculty, IMAGINE-NC activities link grade-appropriate mathematics with geology. This short course will include examples of hands-on activities and curriculum developed for the project. Important themes addressed are fossils, landforms, Earth materials, mapping, hydrologic cycle, and geologic time. Join us to learn about incorporating similar activities into your classroom. For more information, visit *bit.ly/2Iy1uvH*.

### Model Rocketry: A Highly Motivational STEM Teaching Tool (SC-2)

#### DATE: FRIDAY, NOVEMBER 30, 8:00-11:00 AM TICKET PRICE: \$25 ADVANCE; \$30 ON-SITE

### Strand: Amp Up Science Instruction

This is an introduction to model rocketry. Participants will design and build two types of model rockets—an ESTES solid fuel model rocket and NASA's air-powered paper stomp rocket. They will learn about model rocket launch techniques and Newton's laws of motion—forces like gravity, lift, thrust, and drag—as well as explore aerospace STEM concepts and principles relating to NASA/JPL's space exploration program. Due to safety restrictions, the ESTES model rocket will be built, but not launched, while the stomp rocket will be built and launched. For more information, visit *www.estesrockets.com* and *bit.ly/2Kdv3bC*.

Note: Participants should bring a pair of ANSI Z87.1 Eye Protection Goggles as presenters will have a limited supply on hand.



-Photo courtesy of Aurora Fossil Museum-East Carolina University IMAGINE-NC Project

### Not the Usual Suspects: Strategies to Cultivate New Community Partnerships (SC-3)

### DATE: FRIDAY, NOVEMBER 30, 2:00-5:00 PM TICKET PRICE: \$15 ADVANCE; \$20 ON-SITE

### Strand: High-Voltage Science Strategies Beyond Standards

How do you identify new partners? In this short course, we'll use the NAAEE Guidelines for Excellence for Community Engagement to work through strategies to identify new individuals/ organizations, strengthen relationships with existing partners, and reach beyond the "usual suspects" to make new connections. The goal is to help you identify the organizations and individuals and build relationships to achieve your goals for student learning. Please come to the short course with a general idea of who your current partners are. For more information, visit *www.eenc.org*.



### **DISCOVERY PLACE**

### Science Social, Tinkering, and Energy Extravaganza!

### Date: Thursday, November 29, 2018 Time: 6:00-8:00 PM

**Location: Education Studio, Discovery Place,** 300 N Poplar St., Charlotte, NC 28202

**RSVP by Monday, November 19** at *bit.ly/2zi4ux2 (case sensitive).* Questions? Contact us at 704-372-6261 or via e-mail at *douglast@ discoveryplace.org.* Space is limited.

Join us at Discovery Place's Education Studio, a museum center for innovation in education for a night of fun and science! Enjoy delicious treats and drinks while you learn by play! Engaging energy challenges will pique your interest and inspire you to try your hand at solving some of the major energy problems of the future. Record your ideas and solutions on social media and win a prize for the best tweet of the night!

Brought to you in partnership with the Association of Science-Technology Centers, Discovery Place Science, and BP America.





### Charlotte Conference at a Glance

Make your own conference schedule using the Charlotte Session Browser (*www.nsta.org/charlottebrowser*). Browse events by day, format, subject, grade level, conference strand, sponsor, or keyword.

кеу	keyword.				Eng	Ger	Info	PRI	HAI
	Thurs., 8:00–9:00 AM—Thinking Out of the "Mystery Box"!					•			•
	Thurs., 12:30–1:30 PM—Let's Get Wet—Wind, Water, and Weather for Grades PreK–3			•					•
	Thurs., 2:00-3:00 PM—Ecology Activities: Outside and In	•							•
y.	Fri., 8:00–9:00 AM—No Bones About It! Let's Study the Human Body								•
mentai	Fri., 9:30–10:00 AM—Take Learning Outside: Overcoming Barriers to Connecting Students and Nature			•				•	
Ele	Fri., 11:00–11:30 AM—Landing Sites for the 2020 Mars Rover				•			•	
	Fri., 12:30–1:30 PM—Energy Games, Chants, and Plays: Increasing Energy Literacy in Your Elementary Classroom		•						•
	Fri., 2:00–3:00 PM—The Science House Presents: Using Makey Makey Devices to Capture STEM Innovation		•						•
	Sat., 11:00 AM-12 Noon—Connecting Culture and Citizen Science						•	•	
	Thurs., 8:00–9:00 AM—STEM-ulating Activities on Human Ecology	•							•
	Thurs., 12:30–1:30 PM—The Highs and Lows of Weather: Project Atmosphere			•					•
	Thurs., 2:00–3:00 PM—Modeling Chemical Concepts with Toys		•						•
Level	Thurs., 3:30–4:30 PM—Learning Science, Learning Language: Changing Perspectives on English Language Learners					•		•	
	Fri., 8:00–8:30 AM—Learning Life Science Content Through the Integration of Computer Science and Computational Thinking Practices	•						•	
iddle	Fri., 9:30–10:30 AM—Rocking Through the Crust			•				•	
M	Fri., 11:00 AM–12 Noon—The Science House PresentsScience Olympiad: The Excitement of Competition!						•		•
	Fri., 2:00–3:00 PM—Launch into Engineering with Catapults				•				•
	Sat., 9:30–10:30 AM—The Future Is Bright! Exploring the Sun and Its Energy		•						•
	Sat., 11:00 AM-12 Noon—Cars: Science Lessons That DRIVE Science Concepts				•			•	
	Thurs., 8:00–9:00 AM—Electronic Cigarettes: Biology and Chemistry Connections	•						•	
	Thurs., 1:00–1:30 PM—"Do We Have to Work in Groups?" Keys to Promoting Equitable Access Through Structured Collaboration					•		•	
	Thurs., 2:00–3:00 PM—DNA, Proteins, and the Molecular Unity of Life	•							•
age	Thurs., 3:30–4:00 PM—Find the Fund\$ for STEM: Grant Writing 101					•		•	
I-Colle	Fri., 8:00–9:00 AM—NESTA Weather @ Home-Data Collection, Visualization, and Weather Forecasting			•				•	
Schoo	Fri., 9:30–10:30 AM—Analyzing X-Ray Pulses from Stellar Cores with NASA Data and STEM Tools				•				•
High	Fri., 12:30–1:30 PM—Explaining El Niño and La Niña: The Maury Project			•					•
	Fri, 2:00–3:00 PM—Citizen Science: Creating Authentic Learning Opportunities for Students						•		•
	Sat., 9:30–10:30 AM—Forces of a Slinky: A Physics <i>NGSS</i> Unit with Modeling and Inquiry		•					•	
	Sat., 11:00 AM–12 Noon—Analyzing Hazards and Risks in High School Chemistry Labs		•						•

neering and Technology

and Space Science

cal Science

Science

ral Science Education mal Science Education

**DS-ON WORKSHOP** 

ENTATION

# Visit NSTA's SCIENCE STORE



ence

ASTA =

We have the latest resources for science teachers, including new releases and bestsellers!

- Purchase fun NSTA-branded gear unique hats, shirts, mugs, and more.
- Join NSTA to get member pricing: 20% off bestseller NSTA Press<sup>®</sup> titles.
- Ask about our NSTA gift cards great gift idea!

Download the conference app or follow #NSTA18 for special giveaways, contests, and more throughout the conference!

> Visit *www.nsta.org/store* to make a purchase today, or call 800-277-5300.



### Visit NSTA's Science Store

### STORE HOURS

Wednesday	4:00-7:00 PM
Thursday	7:30 AM-5:30 PM
Friday	7:30 AM-5:00 PM
Saturday	8:00 AM-12:30 PM

- Award-winning books filled with best practices, science content, teaching tips, and lesson plans.
- T-shirts, totes, and other science gifts to take back to your classroom.
- All attendees get member pricing—20% off all NSTA Press<sup>®</sup> products.

### NSTA PRESS SESSIONS



### Reno

Plan on attending one or more of these sessions offered by our NSTA Press<sup>®</sup> authors, including *Argument-Driven Inquiry in Grades 3–5; Engage Your Students! Designing Effective STEM Lessons; Engineering in the Life Sciences for Grades 9–12,* and more! For details, visit us online at *www.nsta.org/renobrowser*.

### National Harbor, MD

Don't miss out on sessions offered by our NSTA Press<sup>®</sup> authors, including Instructional Sequence Matters— Structuring Lessons with the NGSS in Mind; From Flower to Fruit; Be a Winner: Get a Grant and Your Students Win, Too; and more! Visit us online at www.nsta.org/ natharborbrowser for details.

### Charlotte

NSTA Press<sup>®</sup> sessions are a "must-see"! Make plans to attend one or more of these sessions offered by our NSTA Press<sup>®</sup> authors, including Once Upon an Earth Science Book; sessions on the Argument-Driven Inquiry series; Eureka! Grades K–2 and 3–5 Science Activities and Stories; and more! Visit us online at www. nsta.org/charlottebrowser for details.



### EXHIBITORS

The NSTA Exhibit Hall, with more than 125 of the leading science education companies and organizations in the world, has the newest products to show and share with educators.

#### **EXHIBIT LOCATION**

The exhibits are located in: Reno

Hall 2 of the Reno-Sparks Convention Center

#### National Harbor

Hall C of the Gaylord National Resort & Convention Center

**Charlotte** Hall A of the Charlotte Convention Center

#### VIRTUAL EXHIBIT HALL

Preview and create your own list of exhibitors before the conferences using these links:

www.nsta.org/renoexhibits www.nsta.org/natharborexhibits www.nsta.org/charexhibits Don't miss exclusive hands-on Exhibitor Workshops to take a deep dive into exciting new products!

#### THIS IS A PARTIAL LIST OF EXHIBITING COMPANIES FOR THE **2018** AREA CONFERENCES.

3D Molecular Designs Accelerate Learning, Inc. American Book Company American Chemical Society American Lab Design Amplify Anatomology Arbor Scientific Army Educational Outreach Program (AEOP) BioNetwork **Bio-Rad Laboratories** Britannica Digital Learning Carolina Biological Supply Co. Carolina® Curriculum **Cognitive Surplus Disney Youth Programs** Drone System Technologies Edvotek Inc. Fisher Science Education Flinn Scientific. Inc. Forestry Suppliers Inc. Grand Classroom Houghton Mifflin Harcourt Howard Hughes Medical Institute Impact Science Education, Inc.

Lab-Aids, Inc. Minerals Education Coalition MiniOne Systems miniPCR Montana State University - MSSE MSOE Center for BioMolecular Modeling NASCAR Hall of Fame Nasco National Geographic Learning | Cengage NOAA Office of Education Ohaus Corporation PASCO scientific Pearson Penn State Center for Science and the Schools PurSolutions. LLC School Specialty Science **STEM Supplies** TCI Texas Instruments The Dana Foundation The Markerboard People **Twig Education Inc** Vernier Software & Technology WorldStrides





Thursday, Oct. 11 11:00 AM-5:00 PM

Friday, Oct. 12 9:00 AM-4:00 PM

Saturday, Oct. 13 9:00 AM-12 Noon

Exclusive exhibit hall and exhibitor workshop hours

Thu. Oct. 11 11:00 AM-12:30 PM Fri. Oct. 12 3:00-4:00 PM



Thursday, Nov. 15 11:00 AM-5:00 PM Friday, Nov. 16 9:00 AM-4:00 PM Saturday, Nov. 17 9:00 AM-12 Noon

Exclusive exhibit hall and exhibitor workshop hours

Thu. Nov. 15 11:00 AM-12:30 PM Fri. Nov. 16 3:00-4:00 PM



Thursday, Nov. 29 11:00 AM-5:00 PM

Friday, Nov. 30 9:00 AM-4:00 PM

Saturday, Dec. 1 9:00 AM-12 Noon

Exclusive exhibit hall and exhibitor workshop hours

Thu. Nov. 29 11:00 AM-12:30 PM Fri. Nov. 30 3:00-4:00 PM

### **Registration + Travel Arrangements**

## Register

The fastest way to register 24 hours a day register online with a credit card at: www.nsta.org/renoreg www.nsta.org/natharborreg www.nsta.org/charlottereg



Fax your registration form<sup>\*</sup> with purchase order information to 703-243-3924.



Mail your registration form<sup>\*</sup> and payment to:

NSTA Conference Department PO Box 90214 Washington, DC 20090-0214

\* Registration forms are available as PDFs at: • www.nsta.org/renoreg • www.nsta.org/natharborreg • www.nsta.org/charlottereg

### PRICE LIST

	EARLYBIRD	ADVANCE	ON-SITE
Reno	AUG. 31	SEPT. 21	After SEPT. 21
National Harbor	OCT. 5	OCT. 26	After OCT. 26
Charlotte	OCT. 19	NOV. 9	After NOV. 9
FULL REGISTRATION			
NSTA Member	\$190	\$200	\$235
Affiliate members**	\$190	\$200	\$235
Nonmember	\$285	\$295	\$325
Retired NSTA Member	\$135	\$135	\$160
Full-time Student	\$100	\$110	\$130
ONE DAY ONLY (THU OR FRI)			
Nonstudent (member or nonmember)	\$170	\$180	\$190
Full-time Student	\$70	\$80	\$90
LAST DAY ONLY (SAT)			
Nonstudent (member or nonmember)	\$105	\$110	\$115
Full-time Student	\$45	\$55	\$65
Nonteaching Spouse/Guest	\$95	\$100	\$115

Save on your registration fees by taking advantage of special earlybird and advance rates! Also—save up to \$95 on your registration fees when you become an NSTA member!

For a description of the categories listed above, please visit the websites listed above.



NSTA has made arrangements with several major airlines and Amtrak to offer discounted fares to NSTA conference attendees.

For complete details on these discounts as well as the best way to get around town, visit:

#### www.nsta.org/renotravel

#### www.nsta.org/natharbortravel

#### www.nsta.org/charlottetravel

#### \*\*Affiliate members include...

#### For Reno only:

- AACT Members (American Association of Chemistry Teachers)
- AAPT Members (American Association of Physics Teachers)
- ACS Members (American Chemical Society)
- ASEE Members (American Society for Engineering Education)
- NABT Members (National Association of Biology Teachers)
- NSSTA Members (Nevada State Science Teachers Association)

#### For National Harbor only:

- AACT Members (American Association of Chemistry Teachers)
- AAPT Members (American Association of Physics Teachers)
- ACS Members (American Chemical Society)
- ASEE Members (American Society for Engineering Education)
- MAST Members (Maryland Association of Science Teachers)
- NABT Members (National Association of Biology Teachers)

#### For Charlotte only:

- AACT Members (American Association of Chemistry Teachers)
- AAPT Members (American Association of Physics Teachers)
- ACS Members (American Chemical Society)
- ASEE Members (American Society for Engineering Education)
- NABT Members (National Association of Biology Teachers)
- NCSTA Members (North Carolina Science Teachers Association)
- SCSC Members (South Carolina Science Council)



### Housing

#### Reno Housing Deadline: Sept. 21, 2018 www.nsta.org/renohousing

### National Harbor Housing Deadline: Oct. 22, 2018

www.nsta.org/natharborhousing

#### Charlotte Housing Deadline: Nov. 7, 2018

www.nsta.org/charlottehousing

Make your hotel reservations now and save! NSTA has negotiated special discounted room rates with hotels near the convention centers in Reno and Charlotte and at the Gaylord National Resort & Convention Center for the National Harbor conference.

\*\*\* Housing forms for Reno and Charlotte are available as PDFs at the above websites.



Visit the websites listed above and have your credit card and arrival/departure information ready.



For Reno and Charlotte, call 877-352-6710 (toll free) or 801-505-4611 (international) between 7:00 AM and 6:00 PM Mountain Time, Monday-Friday. Be prepared to provide all the information on the housing form\*\*\*. For the National Harbor, please visit www.nsta.org/ natharborhousing.



Mail CHECKS ONLY— Download housing form\*\*\* and mail with check (one form per room request) to:

#### Orchid.Events—NSTA/Reno 175 South West Temple, Suite 30

Salt Lake City, UT 84101

Do not mail to NSTA

#### Orchid.Events-NSTA/Charlotte

175 South West Temple, Suite 30 Kansas City, MO 84101

**BOLINGBROOK, IL PERMIT #1200 US POSTAGE** Non-Profit PAID

**B** 

JOIN NSTA AND SAVE!

SAVE UP TO \$45 VHEN REGISTERING BY THE EARLYBIRD DEADLINES

substantial discounts on registration. Did you know? NSTA members get

Become an NSTA member at www.nsta.org/membership.

LISTED BELOW

Arlington, VA 22201-3000 Vational Science Teachers Association

1840 Wilson Blvd.

OCT. 11-13 Reno

EARLYBIRD AUG. 31 National Harbor, MD NOV. 15-17

đ

0CT. 5

**NOV. 29-DEC. 1 Charlotte, NC** 

0CT. 19

**ON SCIENCE CONFERENCES** AREA EDUCATION