



# **Geophysical Information for Teachers (GIFT) Workshop**

## **Hot Topics in Earth and Space Science!**

December 12-13, 2016

San Francisco Marriott Marquis

Room: Golden Gate A



**AGU-NESTA Geophysical Information For Teachers (GIFT) Workshop 2016**  
**Hot Topics in Earth and Space Science!**

Marriott Marquis, Golden Gate A

**Monday, December 12**

7:30 – 8:00 Continental Breakfast

8:00 – 8:05 **Welcome from AGU** – Dr. Pranoti Asher, AGU Education and Public Outreach Manager

8:05 – 8:10 **Welcome from NESTA** – Dr. Carla McAuliffe, Executive Director, NESTA

8:10 – 8:15 **Logistics** – Dr. Pranoti Asher, AGU Education and Public Outreach Manager

8:15 – 9:45 **Planet Impact: Galvanize Everyone to Explore Science** – Dr. Britney Schmidt (Georgia Institute of Technology), Whitney Cobb (McREL International), Theresa Summer (Astronomical Society of the Pacific), Dr. Sanlyn Buxner (Planetary Science Institute), and Dr. Jake Noel- Storr (InsightSTEM)

9:45 – 10:00 BREAK

10:00 – 11:30 **The Shale Hills Critical Zone Observatory Virtual Fieldwork Experience: A Gateway to the NGSS's Three Dimensional Science**– Dr. Tim White (Pennsylvania State University), Dr. Don Duggan- Haas (The Paleontological Research Institution), and Sarah Sharkey (Pennsylvania State University)

11:30 – 12:15 LUNCH

12:15 – 1:15 **Share – a – Thon**

1:30 – 3:00 **Can Humans Cause Earthquakes? An Argument Driven Inquiry Lesson to Target 3D-NGSS- Learning**– Dr. Danielle Sumy (IRIS Consortium) and Michael Hubenthal (IRIS Consortium)

3:00 – 3:15 Discussion, Closing for Day 1

3:30 – 5:30 Optional Field Trip – **A Ramble through San Francisco's Geology**– Dr. John Karachewski (EPA) - meet in lobby of Marriot Marquis near luggage check-in / concierge.

## Tuesday, December 13

7:30 – 8:00 BREAKFAST

8:00 – 8:10 Overview of Plans for Day 2, Logistics – Dr. Carla McAuliffe, Executive Director, NESTA

8:10 – 9:40 ***Climate Detectives: Solving a Climate Mystery on the JOIDES Resolution***– Dr. Sean Gulick (UT- Austin), Alison Mote (UT- Austin), Sharon Cooper (Lamont- Doherty Earth Observatory), and Dr. Katherine Elliins (UT- Austin)

9:40 – 10:00 Break

10:00 – 11:30 ***Images of a Changing Planet: Using Remote Sensing Data and Images to Investigate Land Surface Changes*** – Dr. John Bailey (Google Geo Education), Dr. Ed Robeck (American Geosciences Institute, Center for Geoscience and Society), Peder Nelson (Oregon State University), Aida Awad (Einstein Distinguished Educator Fellow, Department of Energy), and Dr. Susan Sullivan (University of Colorado)

11:30 – 12:15 LUNCH

12:15 – 1:15 ***Earth Cache Demonstration***- Matthew Dawson, Program Officer, Education and Outreach at Geological Society of America

1:15 – 2:45 ***GIS for Earth and Environmental Sciences*** – David DiBiase, Dr. Tom Baker (Esri), and Roger Palmer (Bishop Dunne High School)

2:45 – 3:00 Discussion, Closing, Next Steps

3:00 – 3:20 Workshop Evaluation

## The AGU-NESTA Team



**Dr. Pranoti Asher**, AGU Education and Public Outreach Manager. AGU's education and public outreach (EPO) programs capitalize on the intrinsic allure of the Earth and space sciences, and their fundamental relevance to daily life. Through education- and career-focused events at annual AGU meetings, professional development workshops for teachers, special programs for pre-college and post-secondary students, awards for science educators, and printed and electronic resources, AGU offers an array of opportunities that expose students, teachers, and life-long learners to the freshest, most accurate scientific knowledge and the excitement of discovery. AGU's EPO programs nurture the next generation of Earth and space scientists. As AGU Education and Public Outreach Manager, Dr. Asher oversees the entire EPO portfolio for the organization. This includes not only creating and organizing programming for AGU's Fall Meeting held in December each year but also taking the lead on other initiatives and events that take place the rest of the year.



**Cheryl Manning**, NESTA President, has a Master's and bachelor's degree in geology plus a secondary science certification. Cheryl has taught middle and high school for over twenty years and is Nationally Board Certified. Cheryl's approach to teaching encourages students to start with what they *think* they already know, understand their misconceptions, and then rebuild their understanding from a more solid foundation of knowledge and skills. She encourages students to choose their own learning path using new technologies with problem-based learning strategies. Cheryl is an experienced teacher who has participated in many professional development programs, such as GLOBE, CIRES-Earthworks, and URI's ARMADA Program. She also has led numerous workshops and presented to other teachers via her involvement in a number of geoscience professional societies, currently serving as the president of the National Earth Science Teachers Association (NESTA).



**Dr. Carla McAuliffe**, is the Executive Director of NESTA, an organization devoted to facilitating and advancing excellence in K-12 Earth and Space education. She currently works for TERC, a nonprofit research and development organization based in Cambridge, Massachusetts, dedicated to STEM (Science, Technology, Engineering, Mathematics) and STEAM (Science, Technology, Engineering, Arts, Mathematics) education. At TERC since 2001, Dr. McAuliffe leads, manages, and works on a number of science education projects. Dr. McAuliffe has led many professional development, curriculum development, and research programs focused on Earth science education. She has taught middle school and high school science along with university science education courses for teachers. Dr. McAuliffe holds a Ph.D. in Learning and Instructional Technology with an emphasis in Science Education from Arizona State University.