

Workshop Speakers, Panelists, and Poster Presenters

Speakers



HILARIE DAVIS: President of TLC Inc.

Dr. Hilarie Davis, President of TLC Inc. focuses on intensive, research-based evaluations of interactive materials, courses and learning environments. She has evaluated long-term projects in the use of technology, online environments, reading interventions, NASA-based materials with high needs students, Earth systems science for post-graduate educators, and environmental health for high school students. Hilarie specializes in collaborative evaluation that establishes feedback loops and examines the effects of interventions over time and in different contexts. She uses video as well as advanced qualitative and quantitative tools to provide insight into the nature and extent of effects. She has designed digital portfolios for after-school programs, literacy development, school change, and online courses. She has conducted professional evaluations for projects funded by NSF, NIEHS, NASA, NOAA, and USDOE, as well as universities and school systems. As a former middle school teacher, department head, and Director of Curriculum, Hilarie brings a strong practical background to understanding the context for educational change. Hilarie has worked with large national projects, such as the Earth System Education Alliance (IGES), the Science Mission Directorate forums (NASA), the Digital Learning Network (NASA K-12), and virtual environments such as INSPIRE (NASA), and PBLU (Buck Institute of Education). Dr. Davis received her Ed.D. from the University of Rochester in 1984 and their distinguished alumni award in 1986. She attended the State University of New York, receiving her B.A. in Philosophy in 1974, MS in Reading Education in 1976, CAS in Educational Administration in 1984. She has published on literacy, educational technology, curriculum design, evaluation, and teacher training methodology.



EDNA DeVORE: Director of Education and Public Outreach at the SETI Institute

Edna DeVore is an astronomy educator and the Director of Education and Public Outreach at the SETI Institute. Her work includes NASA's Kepler Mission, Astrobiology Institute, and Stratospheric Observatory for Infrared Astronomy, NASA & NSF Research Experience for Undergraduates, and Co-I for Voyages Through Time, an integrated high school curriculum. She has served on boards for the ASP, AAS and Foundation for Microbiology. She has published more than 30 papers on science, and astronomy education and presented over 200 invited talks, teacher workshops and short courses. She received her BA from Raymond College at University of the Pacific, her teaching credentials from San Jose State University, her MA in Instructional Technology/Education from SJSU, and her MS in Astronomy at University of Arizona.



KRISTEN J. ERICKSON: Director, Science Engagement and Partnerships, NASA Science Mission Directorate

Recently selected in a new position as NASA's Director for Science Engagement and Partnerships, Ms. Erickson will oversee restructuring of science education and communications for NASA's Science Mission Directorate. Since 2009, Ms. Erickson has led the science engagement efforts for NASA's Planetary Science. Successes include the 2012 Mars Curiosity Landing awareness campaign, comet encounters, recent Moon launches, the 2012 Transit of Venus celestial event, and other Jupiter, Mercury, Saturn and Mars missions. From 2006 to 2009, she led the NASA's Strategic effort including leading NASA's 50th Anniversary and the 40th Anniversary of the Apollo program celebrations. Previously, she held leadership positions in the Space Shuttle Program, Office of Biological and Physical Research, and various staff offices. Starting her career at the Johnson Space Center, Houston, Texas; she has college degrees from Texas A&M University and Harvard.



GORDON KINGSLEY: Associate Professor, School of Public Policy, Georgia Tech

Dr. Kingsley's research explores the development and implementation of effective partnerships across the public, private and non-profit sectors. Current research projects examine the impact of partnerships on 1) organization structure; 2) the development and allocation of scientific and technical human capital; 3) the transfer of knowledge across projects, teams, and partner organizations; and 4) the use of communities of practice to support organization learning and performance. His work focuses upon three policy domains: higher education innovation, STEM education and engineering design of transportation systems. This work is currently supported by the Bill and Melinda Gates Foundation, the National Science Foundation, and the Georgia Department of Transportation. Dr. Kingsley teaches classes in public management, business-government relations, policy implementation, and STEM education policy.



JOHN MATHER: Senior Astrophysicist in the Observational Cosmology Laboratory, NASA Goddard Space Flight Center

Dr. John C. Mather is a Senior Astrophysicist in the Observational Cosmology Laboratory at NASA's Goddard Space Flight Center. His research centers on infrared astronomy and cosmology. As an NRC postdoctoral fellow at the Goddard Institute for Space Studies, he led the proposal efforts for the Cosmic Background Explorer, and came to GSFC to be the Study Scientist, Project Scientist, and also the Principal Investigator for the Far IR Absolute Spectrophotometer (FIRAS) on COBE. He showed that the cosmic microwave background radiation has a blackbody spectrum within 50 ppm. As Senior Project Scientist for the James Webb Space Telescope, he leads the science team, and represents scientific interests within the project management. He has served on advisory and working groups for the National Academy of Sciences, NASA, and the NSF (for the ALMA, the Atacama Large Millimeter Array, and for the CARA, the Center for Astrophysical Research in the Antarctic). He has received many awards including the Nobel Prize in Physics, 2006, for his precise measurements of the cosmic microwave background radiation using the COBE satellite.



WILLIAM PENUEL: Professor of Educational Psychology and Learning Sciences at the University of Colorado Boulder

Bill Penuel is Professor of Educational Psychology and Learning Sciences. He joined the faculty in the School of Education at the University of Colorado Boulder in 2011. He was formerly the Director of Evaluation Research at the Center for Technology in Learning at SRI International, where he developed a broad program of education research in STEM education. His current research focuses on teacher learning and organizational processes that shape the implementation of educational policies, school curricula, and afterschool programs. He examines learning and development from sociocultural, social capital, and complex social systems perspectives. Two of Dr. Penuel's current projects, Synergies and the Longitudinal Study of Connected Learning, are examining how children's interests develop over time and across different kinds of settings. He recently edited two National Society for the Study of Education Yearbooks: Learning Research as a Human Science (2010) and Design-Based Implementation Research (2013). Dr. Penuel serves on the editorial board for Teachers College Record, American Journal of Evaluation, and Cognition and Instruction.



LAURA PETICOLAS: Science Education and Public Outreach Forum Lead for Heliophysics, University of California, Berkeley

Dr. Peticolas is Director of Multiverse, housed at the Space Sciences Laboratory at University of California Berkeley. She has been studying the aurora (on Earth, Mars, and Io) and teaching physics to undergraduates, K-12 teachers, and the public for over 10 years. She has led NASA large-scale and small-scale Education and Public Outreach (E/PO) programs such as the E/PO efforts for FAST, STEREO, Wind, and RHESSI. She currently leads an effort to coordinate and support the Heliophysics E/PO programs and projects of NASA's Science Mission Directorate (SMD) and co-leads NASA's MAVEN to Mars satellite mission E/PO program. She also works with the Indigenous Education Institute (IEI) and 'Imiloa Astronomy Center on an NSF informal science education professional development project, called Native Universe, bringing together multiple world-views to create better access to science and ways of understanding Earth and the Universe in museum settings. This project builds on a previous professional development project with similar goals, called Cosmic Serpent.



STEPHEN PRUITT: Senior Vice President at Achieve

Stephen Pruitt was named Senior Vice President for Content, Research and Development at Achieve in April 2013. He is leading the development of the Next Generation Science Standards. Stephen began his career as a high school Chemistry teacher in Georgia, where he taught for 12 years. In 2003, he joined the Georgia Department of Education (GaDOE) as the Program Manager for Science and later served as the Director of Academic Standards. In 2008, he became the Associate Superintendent of Assessment and Accountability, responsible for directing all state assessments and overseeing the No Child Left Behind accountability process. In April 2009, Stephen became Chief of Staff to State School Superintendent Kathy Cox, coordinating the work of the agency and a variety of projects such as Georgia's third-ranked Race to the Top application. In addition to his state-level work, Stephen also served as President of the Council of State Science Supervisors and a member of the writing team for the College Board's Standards for College Success Science Standards. Most recently, he served on the National Academies of Science's Committee on Conceptual Framework for New Science Education Standards, which has developed the Framework for K-12 Science Education. This document is the basis for the development of the Next Generation Science Standards. Stephen joined Achieve in 2010.



STEVE SCHNEIDER: Senior Program Director at WestEd

Steve Schneider is the Senior Program Director of the Science, Technology, Engineering, & Mathematics program at WestEd. He also serves as the Principal Investigator (PI) of the National Science Foundation's (NSF's) Center for Assessment and Evaluation of Student Learning (CAESL). Steve directs the National Center on Cognition and Mathematics Instruction, and serves as the Principal Investigator and Content Expert for the Science Review Team for the U.S. Department of Education's What Works Clearinghouse. He previously served as the evaluation chairperson for the National Network of Eisenhower Mathematics and Science Consortia and Clearinghouse, and represented the Network on the Department of Education's Mathematics and Science Expert Panels.



THERESA SCHWERIN: Science Education and Public Outreach Forum Lead for Earth Science, The Institute for Global Environmental Strategies

Theresa Schwerin is a founding officer and vice president of Education Programs for the Institute for Global Environmental Strategies (IGES). She has over 20 years of experience in the areas of science applications and education, communication, and information science. She leads IGES education initiatives, particularly the NASA Earth Science Education and Public Outreach Forum, IGES science contests for students, the Earth System Science Education Alliance (ESSEA), a NASA-NOAA-NSF sponsored project providing professional development for K-12 teachers, NASA Earth and Space Science Education Product Review, and a variety of NASA professional development and communication activities. She is also a key leader of nasawavelength.org - a digital library developed by IGES with the University of California, Berkeley. Wavelength provides robust tools for science educators - K-12, higher education and out-of-school - for searching, browsing and creating custom pathways and collections from NASA's Science Mission Directorate portfolio of over 2,000 educational resources, in ways that are most meaningful for educators. Ms. Schwerin has led a wide range of new efforts for organizations such as NASA, NOAA, the United Nations, WGBH Education Foundation, and the former Japanese National Space Development Agency (now part of the Japanese Aerospace Exploration Agency, or JAXA). Her work has led to the planning, development and implementation of international and national education programs, products, workshops, reviews, and conferences. Ms. Schwerin is a member of the American Geophysical Union, the National Science Teachers Association, Astronomical Society of the Pacific, American Association for the Advancement of Science and the American Library Association. Ms. Schwerin's related education experience also includes conducting children's programs in a public library system. Ms. Schwerin holds a M.S. in library and information science from the University of Maryland and a B.S. in sociology from the College of Charleston.



STEPHANIE SHIPP: Science Education and Public Outreach Forum Lead for Planetary Science, Lunar and Planetary Institute

Stephanie's background is in Earth science, specializing in glacial geology for her doctoral degree in Geology and Geophysics from Rice University. While there, she became interested in making a connection between the public and scientific research. She collaborated with the Education Development Center and the American Museum of Natural History to develop an Internet-based middle-school curriculum — Antarctica: The Farthest Place Close to Home - that centered on Antarctica as a theme to engage students in earth science. For eight years, Stephanie also directed the Teachers Experiencing Antarctica and the Arctic Program (TEA), a program in which K-12 teachers work in the field with polar researchers and transfer the experience of research to the classroom. Working closely with educators taught Stephanie the value of collaboration between researchers and teachers in the development of strong science educational materials and programs. Stephanie's management of education programs at the Lunar and Planetary Institute ranges from oversight to design to development and implementation. LPI has an energetic, talented education team that is devoted to building the community and capacity of teachers and informal educators to enable them to offer high quality STEM experiences for their audiences, and to engaging the general public in the excitement of STEM.



DENISE SMITH: Science Education and Public Outreach Forum Lead for Astrophysics, Space Telescope Science Institute

Dr. Denise Smith is an astronomer working in the Space Telescope Science Institute Office of Public Outreach (OPO) as a member of the OPO management team. She currently leads NASA's Astrophysics Science Education and Public Outreach Forum, one of four Forums charged with organizing NASA Science Mission Directorate education and public outreach programs into a coordinated, efficient, and effective nationwide effort. Dr. Smith is also the principal investigator for "Visions of the Universe: Four Centuries of Discovery", a traveling exhibit for public libraries that illustrates how our views and understanding of the universe have changed over the past four hundred years. Over the past fifteen years, she has contributed her expertise in conveying cutting-edge science discoveries from NASA's Astrophysics missions to the development and implementation of a wide range of formal and informal science education materials and professional development experiences. Dr. Smith received her Ph.D. in astronomy from Cornell University, and held postdoctoral research appointments at NASA's Goddard Space Flight Center and the Space Telescope Science Institute prior to assuming a position in education and public outreach. Her scientific research has focused on rapid episodes of star birth in galaxies, as observed across the electromagnetic spectrum.

Panelists



ANNETTE deCHARON: Senior Marine Education Scientist, University of Maine

Annette's academic background is in earth sciences (B.S. Geology, M.S. Oceanography). Her early professional experience supported the use of space-borne technology to study Earth and other planets. Overseeing outreach efforts for the Jet Propulsion Laboratory's Earth Science Flight Projects during the 1997-98 El Niño sparked a new focus on multimedia-based science communication. Over the past 15 years, she has focused on piloting and sustaining grant-funded (e.g., NSF Centers for Ocean Sciences Education Excellence, COSEE; NASA Aquarius) educational products, software tools, and models for in-person and online interaction. These endeavors have not only broadly disseminated scientific information but also fostered novel interdisciplinary collaborations.



BONNIE EISENHAMER: Deputy Head and Education Program Manager

As the Deputy Director for the Office of Public Outreach at the Space Telescope Science Institute, Bonnie leads the Space Telescope Education Program and the evaluation programs for the Office of Public Outreach and the Astrophysics Science Education and Public Outreach Forum. Bonnie came to the Institute eighteen years ago as the evaluation specialist for the Office of Public Outreach and for the past eight years and has been instrumental in transforming the Amazing Space education Website into a comprehensive education program for K-12 educators. The team that she manages develops curriculum support products for the K-12 education community and offers training for both pre-service and in-service teachers. The focus of the enhanced Space Telescope Education Program is to communicate new and creative ways for classroom teachers to integrate the latest Hubble Space Telescope science discoveries into the classroom. In addition, a new emphasis for her work includes establishing and implementing an E/PO plan and STEM project for the upcoming James Webb Mission. Bonnie's previous professional experience includes serving as an evaluation specialist for the Federal Court Interpreters Project and as an education specialist for the Los Angeles Community College District. In addition, she served as a program evaluation consultant for both state and federal agencies.



KATHRYN FLANAGAN: Deputy Director of the Space Telescope Science Institute

Dr. Kathryn Flanagan is the Deputy Director of the Space Telescope Science Institute (STScI). She is responsible for the Office of Communications and Public Outreach. She is a Senior Scientist and served as head of the Mission Office for the James Webb Space Telescope from 2007 to 2012. In that capacity she was responsible for the development of the Science and Operations Center for this NASA mission. She earned her Bachelor's degree and Ph.D. in Physics at MIT, where she began working in the field of X-ray astronomy, with special interest in supernova remnants and the development of new instruments in space. She became part of the science research staff at the Harvard-Smithsonian Center for Astrophysics and MIT, and has worked on flight instruments for the Einstein Observatory, the Chandra X-ray Observatory, and future X-ray missions. She has been active in education, first as a Peace Corps volunteer teaching math and physics in the Democratic Republic of the Congo, and later as Director for Education and Public Outreach for MIT's Kavli Institute for Astrophysics and Space Research. She has participated in NASA's advisory structure; co-chaired strategic planning documents and served on the Astrophysics Subcommittee. She also participated in the National Academy of Sciences Astronomy and Astrophysics Decadal Survey Astro2010. She was appointed Deputy Director of the STScI in 2012. Photo credit to Rosa Diaz.

MAYA GARCIA: STEM Specialist for the Office of the State Superintendent of Education for D.C

Maya M. Garcia is the STEM Specialist for the Office of the State Superintendent of Education for the District of Columbia, and was most recently instrumental in the adoption process of the Next Generation Science Standards. She has served nationally on the Committee for Multicultural Equity for National Science Teachers Association, and has recently completed her tenure as the President of the DC Science Teachers Association. She is currently an adjunct professor in the School of Education at American University, in Washington, DC. She is the recipient of numerous awards and fellowships, including a Fulbright Distinguished Teaching Award, in which she studied how South African educators use hands-on, field based learning opportunities to teach STEM science initiatives, and how schools can leverage local resources to support embedded STEM curriculum. In 2010, Ms. Garcia joined the DC STEM Advisory group to help develop a strategic vision for STEM education in DC Public Schools, and participated on the State Science Leadership Team as a teacher leader prior to joining DC' OSSE in 2013. She currently serves on the NRC Science Education Board Committee on Out of School STEM Learning.



JENNY GUTBEZahl: Senior Research Associate at the Center for Youth and Communities at Brandeis University

Jenny Gutbezahl is a Senior Research Associate at the Center for Youth and Communities of the Heller School for Social Policy and Management at Brandeis University, where she oversees and supports research on programs such as the Teen Futures Initiative, AmeriCorps, the FIRST Robotics Challenge, and YouthBuild. Dr. Gutbezahl is a strong proponent of the multi-method approach to research and evaluation: collecting data from multiple sources and using a variety of qualitative and quantitative methods to address research questions. She has worked extensively with NASA's Office of Space Science where she was responsible for evaluating its educational efforts from 1999 to 2008, overseeing the evaluation of a wide range of programs, curricula, museum exhibits, and public outreach efforts. She has also helped to develop or refine education tools and programs for museums, colleges, public school districts, and the Department of Defense.



BETH JOHNSTON: Principal at Endeavour Elementary School

Beth Johnston is the principal at Endeavour Elementary School, an award winning public school which has an emphasis on Science, Space, and Technology. Beth was recently awarded the National Distinguished Principal of the Year award in Washington D.C. representing Utah and she has been honored for her leadership by the Utah Association of Elementary School Principals. Endeavour Elementary is an innovative school serving over 1,100 K – 6 students. The school has used various materials created by the Space Telescope Science Institute to focus on STEM themes, with an emphasis on math and science content. These materials have been shared with other schools and have supported Space Camp, Space Month, “Geek Squad” and Math and Science Olympiads. Endeavour and the Davis School District have continued their partnership with the STScl Education Program.



SHERI KLUG-BOONSTRA: Director of the Arizona State University Mars Education Program

Sheri Klug Boonstra has worked for over a decade as the Director of the ASU Mars Education Program within the Mars Space Flight Facility, School of Earth and Space Exploration at Arizona State University. Ms. Klug Boonstra is the formal education lead for the Mars Public Engagement Team at the Jet Propulsion Laboratory in Pasadena, CA. The ASU Mars Education Program at Arizona State University, in collaboration with JPL, leads the formal education outreach efforts to K-16 teachers and students for NASA’s missions to Mars. The ASU Mars Education Program provides hands-on, inquiry-based Mars professional development for K-16 in-service and pre-service educators nationally. Ms. Klug Boonstra serves as the Education and Public Outreach Lead for the ASU NASA Astrobiology Institute Team. She currently serves on the NASA Headquarters Science Mission Directorate - Science Education and Public Outreach Forum Planetary Team advising on K-12 science education efforts. From 2008 to 2010, Sheri Klug Boonstra was the USRA Director and NASA Project Administrator of the NASA Undergraduate Student Research Program (USRP) located at NASA's Johnson Space Center in Houston, TX. Ms. Klug Boonstra previously served as the Education and Public Outreach representative on the Solar System Exploration Subcommittee for NASA Headquarters for 3 years.



FRANCES LAWRENZ: Associate Vice President for Research at the University of Minnesota

Frances Lawrenz is the Associate Vice President for Research at the University of Minnesota and a professor in the Department of Educational Psychology. She has prior administrative experience as Department Chair, Associate Research Dean of the College, and Associate Dean of the Graduate School of the University. Her specialization is science and mathematics program evaluation and she received the international Myrdahl award for outstanding evaluation practice and the international Distinguished Contributions to Science Education award. She has conducted numerous evaluations of NSF projects and programs and has twice served at NSF in a rotator position. She has received College of Education and Human Development recognition as the Wallace Professor of Teaching and Learning and the University wide award for outstanding contributions to graduate education which makes her a member of the University Academy of Distinguished Teachers. She also was selected as a Fulbright scholar to South Africa. She is currently the PI or lead evaluator for 5 federally funded projects and has numerous publications.



JAMES LOCHNER: Universities Space Research Association

Dr. James Lochner has devoted his professional career to astronomy and astronomy education. He has been involved with NASA education programs since 1996. As E/PO Lead for the Astrophysics Science Division at NASA/Goddard, he led the development of both formal and informal education programs, managed the development of a variety of curriculum support materials, and gave numerous educator workshops nationwide. He has also served as the Program Manager for Education and Public Outreach programs within the Science Mission Directorate at NASA. He is currently with USRA as the Director of University Communications and Engagement.



MORDECAI MAC LOW: Curator in Astrophysics at the American Museum of Natural History, Adjunct Professor at Columbia

Mordecai Mac Low is a curator and professor in the Dept. of Astrophysics at the American Museum of Natural History, and adjunct professor in the Dept. of Astronomy at Columbia U. He studies the dynamics of circumstellar and interstellar gas in order to understand the formation and evolution of planets, stars and galaxies, primarily using large-scale numerical simulations. He has curated two Space Shows for the Hayden Planetarium (attracting roughly a million visitors a year, including 100K from NYC schools). He helped found and teaches in the Museum's free-standing Master of Arts in Teaching Earth Science program (which includes substantial space science content). Photo courtesy of D. Finnin at AMNH.



MARIEL MILANO: Director of Digital Curriculum and Instructional Design for Orange County Public Schools, Florida

Mariel Milano, as Director of Digital Curriculum and Instructional Design for Orange County Public Schools, serves as the program manager for the district's digital curriculum efforts, including the managing of the vertical and horizontal cross-functional governance process and overseeing a team of four innovative instructional design resource teachers. Ms. Milano's team has deployed over 8,000 digital devices to enable anytime, anywhere learning for students at seven local schools. This effort was not only exciting but also garnered promising results with marked improvement to student engagement data including discipline and mobility after one school year. Her team is currently working on plans for expansion of the digital curriculum program using a personalized learning model. Before joining the district's digital curriculum program team, Ms. Milano conducted STEM work in the Curriculum & Instruction department and served as a classroom teacher. Outside of Orange County Public Schools, she has collaborated with Achieve, Inc. to develop the Next Generation Science Standards and has also developed curriculum with local museums and state universities. Ms. Milano received a BS in Early Childhood Education from the University of Central Florida, and is also a part of the Lockheed Martin K-8 Mathematics and Science Academy M.Ed program. She holds endorsements from the Florida Department of Education in Gifted Education, Reading Education, and ESOL Education.



JOHN RISTVEY: Director of the University Corporation for Atmospheric Research (UCAR)

John Ristvey is currently the Director of the UCAR Center for Science Education. In this role, he is responsible for leadership and the day-to-day operation of the Center, including supervision of staff and management of budgets. Large areas of work in the Center include formal education (professional development, instructional materials development), informal education (NCAR Mesa Lab exhibits, school/public programs), Education Technology, and Undergraduate Education (SOARS). Prior to his current position he managed McREL's education and public outreach (E/PO) team. He was responsible for managing the work and resources of multiple contracts including the Planetary Science Education and Public Outreach Forums (SEPOF) led by the Lunar and Planetary Institute, E/PO for NASA's Dawn mission, EPOXI mission and Stardust/NEXT mission. He has also worked on E/PO for NASA's Deep Impact and Genesis missions. John is currently the PI for NanoExperiences a National Science Foundation (NSF)-funded ITEST grant that developed an out-of-school-time (OST) program that combines academic learning in emerging STEM content with additional supports—setting high expectations, building background knowledge, and motivating students—to prepare high school Career and Technical Education (CTE) students for postsecondary learning and credentials leading to participation in the STEM workforce. He was the Co-Principal investigator for Visualizing Science with Adapted Curriculum Enhancements grant with the US Department of Education as well as Co-Principal Investigator for Cosmic Chemistry: Engaging Summer Learning for High School Students sponsored by the US Department of Education. He has co-written two online courses and has co-facilitated an online professional development coursework in Earth Systems Science for middle school teachers in partnership with the Colorado School of Mines and IGES.



HOLLY RYER: Education Specialist at the Space Telescope Science Institute

Holly Ryer is an Education Specialist at the Space Telescope Science Institute (STScI) in Baltimore, Maryland, and has been a member of the Office of Public Outreach's education team since 2006. As an Education Specialist, Holly's responsibilities include assisting with the development of curriculum support tools for the K-14 community and researching national and state-level education standards. She specializes in aligning curriculum support tools to national education standards for STScI and the product analysis team for NASA Wavelength. She also assists with evaluation projects, and is responsible for the maintenance of files, records, and databases for the HST Cycle E/PO Grant Program. Holly is a former elementary level classroom teacher with eight and a half years of experience teaching in Baltimore area schools. During that time, she served on various committees, worked in teams to develop district-level curriculum, and participated in the scoring of the Maryland State Performance Assessment Program.



SAM SHAW: Team Leader - Division of Learning and Instruction, South Dakota Department of Education.

Sam has served as the State Science education specialist for four years and has recently moved to a Team Leader position to oversee professional learning and standards development. He has developed initiatives involving teacher trainings to build instructional capacity. His current operations include advising state and national grants, online learning, Advanced Placement, remediation, and implementing statewide professional development. His role as Team Leader within the Department of Education allows him to stay informed and consult with parties involved in research and initiatives in not only K-20 science education, but also in all other core subject areas. He has regular presentations at both the National and State Science Teacher Associations and has recently presented to the National Research Council committees of "Literacy for Science" and also "Building a Science Teacher Learning Continuum." Sam led South Dakota's NGSS work as a lead state, coordinated a South Dakota workgroup to create science standards based on *A Framework for K-12 Science Education*, and is currently staging long-term plans for professional development for South Dakota teachers. He is also serving as 1st year Director for the Council of State Science Supervisor where he acts as Board Liaison for the Committee on Professional Learning.



CASSANDRA SOEFFING: K-12 Science Education Specialist, Institute for Global Environmental Strategies

Ms. Soeffing has been an IGES employee since 2009, where she leads K12 educational activities related to the NASA Earth Science Education and Public Outreach Forum. Her NASA Earth Forum work includes leading a working group on K-12 education and professional development on the Next Generation Science Standards (NGSS) for NASA science education product developers. She is an accomplished science educator, with 30 years teaching experience as a middle school teacher in Sioux Falls, South Dakota, and a strong background in Earth science, education and leadership. She is proactive in integrating and supporting the use of geoscience technologies in K-12 education and teacher professional development programs. Ms. Soeffing has demonstrated solid abilities in leading, developing, planning, implementing and assessing innovative programs for the middle school through graduate school levels. She is active in several professional associations, and currently on the board of directors for the National Earth Science Teachers Association (NESTA), and has given numerous presentations on GIS, remote sensing, 3D spatial technologies and GPS. Ms. Soeffing has completed numerous professional development programs and institutes, including NSTA institutes related to the NGSS, the American Meteorological Society's Project DataStreme, NOAA Teacher at Sea, and the Center for Image Processing Education. She has accumulated numerous professional accomplishments, including the following awards and recognition: Albert Einstein Distinguished Educator Fellowship Award, Presidential Award for Excellence in Science and Mathematics Teaching, Bush Leadership Fellowship Award, and the NASA Space Grant Fellow.



MICHELLE THALLER: Assistant Director of Science at NASA's Goddard Spaceflight Center

Dr. Michelle Thaller is a nationally recognized spokesperson for astronomy and science, and the Assistant Director of Science at NASA's Goddard Spaceflight Center. Michelle has a Bachelor's in astrophysics from Harvard, and a Ph.D. from Georgia State University. After a post-doctoral research fellowship at Caltech, Michelle became particularly interested in public outreach and science communication and served as the public outreach lead for the Spitzer Space Telescope at NASA's Jet Propulsion Laboratory before moving to Goddard. She is currently serving a one-year leadership fellowship in the Science Mission Directorate at NASA Headquarters in D.C. Michelle is one of the regular hosts of "The Universe," series on the History Channel, NatGeo's "the Known Universe" and Discovery Science Channel's "How the Universe Works," and "The Stripped Universe." She also serves as a science advisor for John and Hank Greene's Crash Course series on PBS Home Video, which reaches several million online viewers each month. She has received several high profile awards for on-line science journalism and science leadership. Behind the scenes, Michelle has led efforts to develop high-quality apps for smartphones and tablets, as well as involve NASA missions in social media. In her current role, Michelle represents all of NASA's science themes, from Earth science and climate change, the Sun and space weather, solar system exploration, all the way out to cosmology and the deep universe.



BELINDA WILKES: Director, Chandra X-Ray Center

Dr. Wilkes is the Director of the Chandra X-Ray Center. Her primary science interests are X-ray and multi-wavelength studies of quasars along with lower luminosity active galactic nuclei. She has successfully competed for observing time on three of NASA's Great Observatories -- Chandra, the Hubble Space Telescope, and the Spitzer Space Telescope -- as well as many other space- and ground-based facilities. She has served on many committees including the AAS HEAD Executive Committee, the Astrophysics Subcommittee of the NASA Advisory Council, the NRC Review Panel on NASA's SMD Science Plan, and various user, advisory, and review committees for space and ground-based telescopes. She is a Fellow of the Royal Astronomical Society and the Cambridge Philosophical Society, and a member of the American Astronomical Society and the International Astronomical Union. She has received several NASA Achievement awards, the NASA MSFC Director's Commendation, and many Smithsonian Institution awards including the Exceptional Accomplishment Award.

Poster Presenters



NANCY ALIMA ALI: Coordinator of Public Programs at Multiverse at the Space Sciences Lab

Nancy Alima Ali, M.Ed., is a Coordinator of Public Programs at Multiverse at the Space Sciences Lab at the University of California, Berkeley. For over 15 years, Ms. Ali has been active in both formal and informal education as a classroom teacher, college instructor, museum educator, curriculum developer and program manager. She is the Principal Investigator of the NASA-funded "Five Stars Pathway" project, the Education/Public Outreach Lead of the THEMIS-ARTEMIS mission, a content contributor to the "Calendar in the Sky" project and leads the diversity professional development team for NASA's Science Mission Directorate Education/Public Outreach. Prior to joining the Multiverse team, she served as the Science Education Manager at Bishop Museum in Honolulu, Hawaii. Ms. Ali also managed the Imaginarium planetarium and taught archaeoastronomy at Windward Community College in Kaneohe, Hawaii. A graduate of Lesley University in Cambridge, Massachusetts, her Master of Education thesis focused on integrating astronomy and culture in informal education settings. Ms. Ali has a particular interest in projects that explore the ways in which multiple worldviews contribute to our understanding of the cosmos.



LINDSAY BARTOLONE: Education and Public Outreach Lead for NASA's Interstellar Boundary Explorer Mission, Southwest Research Institute

Lindsay Bartolone serves as the Education and Public Outreach Lead for NASA's Interstellar Boundary Explorer Mission. She manages a national team of partners to share the exploration and discovery aspects of the mission in ways which make the science relevant to the learner. She leads a number of activities related to this mission including the creation of a nationally field tested integrated space science curriculum guide for grades 6-8 (with GEMS and the Learning Design Group at Lawrence Hall of Science), teacher professional development and after school club program, an internationally distributed digital planetarium show, a kit of educational materials to support the show in museums, the creation of materials for people with visual impairment and a website and social media effort. Lindsay Bartolone is also Co-I on two of NASA's Science Education and Public Outreach Forums: Astrophysics and Heliophysics. These teams of Education and Public Outreach Professionals are formed to increase the awareness, knowledge, and understanding of scientists, researchers, engineers, technologists, educators, product developers, and dissemination agents of best practices, existing NASA resources, and community expertise applicable to E/PO. By coordinating and supporting the NASA E/PO community, the NASA SEPOF partnerships will lead to more effective, sustainable, and efficient utilization of NASA science discoveries and learning experiences. Lindsay Bartolone was a part of Adler Planetarium's Education Dept. for 14 years, and participated in a number of museum project and program teams.



DAVID BEGAY: VP of the Indigenous Education Institute

Dr. David Begay is VP of the Indigenous Education Institute located in Friday Harbor, WA and Santa Fe, NM. He is currently working on the NASA project "Imagine Mars Through Indigenous Eyes," connected to MAVEN in coordination with UC Berkeley, Space Sciences Laboratory. He is co-author of "Sharing the Skies: Navajo Astronomy, A Cross Cultural View." He is Co-PI of the NSF funded "Native Universe - Indigenous Voice in Science Museums." He is PI of the NASA funded "Navajo Sky: Education Modules for Digital Planetariums." Dr. Begay is adjunct faculty at Northern Arizona University, Flagstaff, in the Department of Physics and Astronomy and Associate Research Professor in the Department of Pharmacy, University of New Mexico. He is a cultural consultant to many organizations and corporations in the United States and internationally. He is raised with the deep cultural knowledge, tradition, and language of his people as a member of the Navajo Nation.



LIN CHAMBERS: Science Directorate at NASA Langley Research Center

Dr. Lin H. Chambers is a physical scientist in the Science Directorate at the NASA Langley Research Center where she has worked for more than 30 years. She received her Ph.D. in Aerospace Engineering from North Carolina State University in 1991. Dr. Chambers has worked in a variety of radiative transfer applications, including nonequilibrium flows and cloud inhomogeneity effects. She is a member of the Clouds and the Earth's Radiant Energy System (CERES) Science Team. Her research activities have focused on assessing the effect of inhomogeneous cloud cover on satellite remote sensing and cloud/radiation parameterizations, as well as on better understanding the radiative properties of Tropical cloud systems. Previously she developed methods to predict nonequilibrium radiative heating of vehicles entering planetary atmospheres. Dr. Chambers is director of the outreach component of the CERES project, the Students' Cloud Observations On-Line (S'COOL) Project, was the Contrail Scientist for the GLOBE program and currently leads a GLOBE partnership at NASA Langley, and leads the MY NASA DATA project to make real NASA Earth-observing data accessible to the K-12 and citizen science communities. From 2009-2013 she served as the Project Scientist for the NASA Innovations in Climate Education project.



TROY CLINE: Education and Public Outreach Lead for the Magnetospheric Multiscale Mission

Troy Cline is currently the Education and Public Outreach Mission Lead for the Magnetospheric Multiscale (MMS) mission. He is responsible for mission level public outreach activities and coordination of overall EPO efforts. His responsibilities include planning, coordinating, implementing, and managing the MMS mission's outreach activities to meet NASA's EPO goals and guidelines. He also serves as the Educational Technology Integration Specialist for NASA's Sun-Earth Day, Space Weather Living History program and Space Weather Action Center program. His research based approach led to the development of a new education products designed to help students learn about NASA's MMS mission, magnetism, solar power and space weather through a variety of inquiry and engineering design methods. Many of these projects are enhanced through model building and digital fabrication: the translation of digital designs into physical objects via 2D and 3D printing. He continues to lead his teams in educational technology applications, social media and podcasting.



ANITA DAVIS: Lead of the Earth to Sky Interagency Partnership, Sigma Space

Anita has over 25 years of experience as an education specialist, approximately half with NASA and half with National Park Service. Anita began working with NASA's education and outreach efforts in Earth science, in 2000, serving as a coordinator for informal education across the agency. She later led the award-winning NASA Landsat satellite mission Education and Public Outreach team in public outreach efforts; classroom and teacher training materials; designing and conducting teacher workshops; and hosting and mentoring Tribal college interns. In 2004 Anita joined with Ruth Paglierani (UC Berkeley) to lead the Earth to Sky NPS-NASA-USFWS interagency partnership, and now devotes 100% of her energy to interagency work on behalf of NASA's Earth Science Education, primarily on Earth to Sky. Prior to her work with NASA, Anita worked in Interpretation and Visitor Services for the National Park Service (NPS). At Grand Canyon National Park she created and produced interpretive programs and products, serving as liaison between the science and interpretive communities, and conducted interpretation training with special emphasis on science content. On a one-year detail as the NPS Liaison to NASA, she initiated and coordinated an Introduction to Remote Sensing pilot course for NPS and US Fish and Wildlife Service, held at the National Conservation Training Center, and provided NASA science content to interpreters across the nation through a variety of venues.



DORIAN JANNEY: Formal Education Specialist for the Global Precipitation Measurement Mission

Dorian Janney is the Formal Education Specialist for the Global Precipitation Measurement (GPM) Mission. She retired from teaching after three decades, and currently works fulltime at the NASA Goddard Space Flight Center, Greenbelt, MD. Her work involves developing educational activities that help to communicate the science and engineering of the GPM mission to the public in both formal and informal settings, and coordinating these efforts with a wide variety of education professionals across the country. Dorian taught for thirty-three years across multiple grade levels and with diverse groups of students. She was selected to head the science department for a new middle school program that focused on astronomy and aerospace technology. Dorian achieved her National Board Certification in Science, was an Einstein Fellow finalist, and served on many educational projects with NSTA, JHU, MD Space Grant, and several other organizations. She has a B.S. in General and Special Education from the University of Maryland, a M.S. in Special Education at the Early Childhood level from the University of Houston, a second M.S. from Johns Hopkins University in Teaching Earth/Space Sciences, and some doctoral level work in Science Curriculum and Instruction from the University of Maryland.



ANDREA JONES: Education Specialist at the Planetary Science Institute

Andrea Jones is an Education Specialist at the Planetary Science Institute, based out of NASA's Goddard Space Flight Center in Greenbelt, Maryland. She conducts education and public outreach (E/PO) activities for NASA Earth and planetary science missions and programs. Jones is the E/PO Lead for the Lunar Reconnaissance Orbiter and E/PO co-Lead for the Sample Analysis at Mars (SAM) instrument team of the Mars Science Laboratory Curiosity rover. She is the Informal Education Lead for the NASA Earth Science E/PO Forum, and represents both the NASA Earth and Planetary Science E/PO Forums on a Diversity Task Force. Jones leads the E/PO program for the NASA Solar System Exploration Research Virtual Institute (SSERVI) teams, Field Investigations to Enable Solar System Science and Exploration (FINESSE) and Remote, In Situ, and Synchrotron Studies for Science and Exploration (RIS4E). She is also a member of the SSERVI Dynamic Response of Environments at Asteroids, the Moon, and moons of Mars (DREAM2) E/PO team. Andrea Jones received her undergraduate degree in Geology from the College of William & Mary, and a Master's degree in Geosciences, with a focus in planetary geology, from the University of Arizona.



KELIANN LaCONTE: Informal Education lead at the Lunar and Planetary Institute

Keliann LaConte leads the Lunar and Planetary Institute's informal education efforts, including developing educational materials for use in out-of-classroom learning experiences and conducting training events. Keliann received her B.S. in chemistry from the University of Denver and her M.S. in environmental science and engineering from Caltech. She began helping others connect to the wonders of the natural world during her previous work as a park naturalist and museum and aquarium docent.



KATHLEEN LESTITION: Education and Outreach program Lead for NASA's Chandra X-Ray Observatory

Kathleen Lestition is the lead of the education and outreach program for NASA's Chandra X-ray Observatory located at the Smithsonian Astrophysical Observatory's Chandra X-ray Center. She joined the Chandra program in 1986 at its Phase A/B stage. In 1996 she drew on her training and prior experience in education to write the development and implementation plan for the comprehensive Chandra education and outreach program which she has managed since.



NANCY C. MARYBOY: Executive Director of the Indigenous Education Institute

Dr. Nancy C. Maryboy is the Executive Director of the Indigenous Education Institute, located in Friday Harbor, WA and Santa Fe, NM. She is the PI of the NSF funded "Native Universe - Indigenous Voice in Science Museums." She is Co-PI of the NASA funded "Navajo Sky: Education Modules for Digital Planetariums." She is also Co-PI of the NSF funded project "Conference Support: Indigenous Views in Informal Science Education (I-WISE): Integration, Synthesis, and Opportunity." She was the PI of the NSF project "Cosmic Serpent: Bridging Native Ways of Knowing and Western Science in Science Museums." She is working on the NASA project "Imagine Mars Through Indigenous Eyes," connected to MAVEN. She is co-Author of "Sharing the Skies: Navajo Astronomy, A Cross Cultural View." Maryboy teaches Indigenous Astronomy for the Dept. of Physics and Astronomy at Northern AZ University. She is Cherokee and Navajo.



TONY MURPHY: Director of the GLOBE Program

Dr. Tony Murphy is the Director of The GLOBE Program Implementation Office in Boulder, Colorado. Murphy has been associated with GLOBE since its inception in 1995, as a National Oceanic and Atmospheric Administration (NOAA) Knauss Policy Fellow, and has served as Director since October 1, 2012. Prior to coming to GLOBE, he served as founding Executive Director of the National Center for STEM Elementary Education at St. Catherine University in St. Paul, Minnesota. Murphy is internationally known for his work in STEM education. Hailing from Ireland, where he earned his undergraduate and MA graduate degrees at the University of Limerick, he moved to the United States to complete his Ph.D. studies in Science and Environmental Education at Ohio State University and, in the process, learned first-hand the value of international experience in shaping a global perspective.



LUISA REBULL: Associate Research Scientist at the Spitzer Science Center

Luisa Rebull received her PhD from the University of Chicago in 2000. After a post-doc at JPL, she took a staff scientist job at the Spitzer Science Center (SSC), at the Infrared Processing and Analysis Center (IPAC), Caltech. Now an associate research scientist, she has most recently been working with the vast archives of data at the Infrared Science Archive (IRSA), also part of IPAC. She has more than 90 refereed astronomy publications. She has been doing education and outreach, formal and informal, paid and unpaid, for nearly 20 years. A unifying thread through many of those efforts has been working with teachers to share the experience of real research. Most recently, she has been running the NASA/IPAC Teacher Archive Research Program (NITARP; 2009-date), which grew out of the Spitzer Teachers Project (2004-2008). This program partners small groups of educators with a research astronomer for a yearlong authentic research project. Her poster will share information about NITARP.



DANIELLA SCALICE: Education, Outreach, and Communication lead for the NASA Astrobiology Institute at NASA Ames Research Center

Since 2000, Daniella Scalice has been the Education, Outreach, and Communication Lead for the NASA Astrobiology Institute at NASA Ames Research Center. As such she manages NAI's extensive portfolio of educational projects, oversees curriculum and website development, provides content to media and educational outlets, and delivers programs to educators and students all over the world. In 2005, Daniella developed the NASA and the Navajo Nation project, an ongoing, NASA-funded initiative wherein cultural and scientific knowledge about our origins are brought together into new classroom materials for Navajo teachers and summer field camps for Navajo students. Daniella believes these two ways of knowing the world have more in common than not, but leaves the making of connections between the two up to the learner. In 2011, Daniella began managing the FameLab initiative for the NASA Astrobiology Program – the first ever in the United States! Akin to American Idol (but for scientists), FameLab builds communication skills for early career scientists within the unique construct of an international competition. In 2012, Daniella began working with an educational evaluation specialist to create a grassroots system to improve the impact of STEM education projects by building capacity in evaluation among STEM education practitioners. After rigorous testing of the system, its efficacy has been validated and it is actively deployed in STEM education projects across NASA and elsewhere.
