

Dr. Dijanna Figueroa

St Matthew's Parish School

Dr. Dijanna Figueroa has made a career of exploring the mysteries of the deep. She was featured in James Cameron's documentary *Aliens of the Deep*, which follows Cameron and NASA scientists as they explore some of the deepest parts of the ocean and learn about the unique life forms that inhabit those spaces. She has participated in hundreds of deep-sea dives using various deep submergence vehicles. Currently, She works at the intersection of science, education, and entertainment. She is a science and nature consultant for various film and media production companies and serves as the Director of Education and Playful Learning for the Two Bit Circus Foundation. She is an advocate for STEAM education—adding art and design to the science, technology, engineering, and math equation. She's spent more than two decades teaching STEAM to grades K–8 in the greater Los Angeles area, formerly served as Global Director of the MUSE School National Geographic Society's Green STEAM program, and has advisory roles with many STEM/STEAM nonprofits. She was recently featured on MTV's Women Crush Wednesdays Women in STEM series as a female science "rock star."

She teaches middle school science at St. Matthew's Parish School and runs programs that teach students how to fly drones, scuba dive, and build underwater robots. If that isn't enough, Figueroa is the director of the Lucas Scholars STEM Program, a community based social justice and equity program designed to engage young people in science, engineering, design, and art. She has a Bachelor's degree in Marine Biology from UCLA and holds a Ph.D. in Marine Science from UC Santa Barbara. She loves the ocean, art, yoga, and exploration. She is committed to making science, technology, art, engineering, math, and music accessible to all people.

Brian Midson

National Science Foundation

Brian Midson is the Program Director for Ship and Submersible Support at the National Science Foundation, where he has worked for the past 19 years. Brian oversees funding for the National Deep Submergence Facility (NDSF) operated by the Woods Hole Oceanographic Institution. NDSF operates the Human Occupied Vehicle *Alvin*, the Remotely Operated Vehicle *Jason*, and the Autonomous Underwater Vehicle *Sentry*. Brian also manages various construction projects for NSF, such as the *Alvin* Upgrade, and the ongoing construction of three Regional Class Research Vessels.

Brian represents NSF on several interagency working groups including: IWG-Ocean and Coastal Mapping; National Ocean Mapping, Exploration, and Characterization Task Force; and the IWG-Facilities and Infrastructure.

Brian's experience with deep submergence science and technology began in the early 1990s at the University of Hawaii's National Undersea Research Center (HURL), where he was first a Graduate Assistant then later Manager of the Data Department.

Peter R. Girguis

*Professor of Organismic and Evolutionary Biology, Harvard University
Adjunct Research Engineer, Monterey Bay Aquarium Research Institute
Adjunct Oceanographer, Applied Ocean Engineering and Physics, Woods Hole Oceanographic Institution*



His research resides at the crossroads of microbial ecology, physiology, and biogeochemistry, and as such is highly interdisciplinary. He uses the appropriate combinations of molecular biology (e.g., genomics, transcriptomics, proteomics, qPCR, mutagenesis), as well as physiological and geochemical techniques (gas chromatography, in situ and laboratory mass spectrometry, in situ and laboratory isotope analyses, x-ray diffraction, atomic spectroscopy) to examine the relationship between microbial diversity/physiology and biogeochemical cycles. Due to the limitations of existing in situ measurement and incubation technologies, he and his lab have developed novel instruments and samplers that enable them to better study microbial-geochemical relationships. This includes high-pressure systems to mimic natural environments, in situ geochemical sensors,

in situ microbial fuel cells as experimental apparatus and power sources, and novel in situ preservation technologies.

He received his B.Sc. from UCLA, where he also worked with Drs. David Chapman and William Hamner. He received his Ph.D. from the University of California Santa Barbara, where he worked with Dr. James Childress on the physiological and biochemical adaptation of deep-sea hydrothermal vent tubeworms and their microbial symbionts to the vent environment. He did postdoctoral research at the Monterey Bay Aquarium Research Institute with Dr. Edward Delong on the growth and population dynamics of anaerobic methanotrophs.

John Mace Grunsfeld PhD

President/CEO

Endless Frontier Associates

Astronaut/Scientist/Explorer

john.m.grunsfeld@alum.mit.edu



John M. Grunsfeld is an astronaut and scientist with extensive experience as a leader in space and science missions, and national space policy. He has served as a NASA astronaut, the Associate Administrator for Science, and Chief Scientist at NASA Headquarters in Washington, D.C. His responsibilities included a \$5.6B portfolio of Earth Science, Astrophysics, Planetary Science, Heliophysics, the James Webb Space Telescope, and the NOAA weather satellite program. Previously he served as the Deputy Director of the Space Telescope Science Institute in Baltimore, managing the science program for the Hubble Space Telescope and the forthcoming James Webb Space Telescope. Grunsfeld's scientific research is in the emerging field of exoplanet studies with specific interest in future astronomical instrumentation, and the search for life beyond Earth. Grunsfeld is also an avid explorer, enjoying mountaineering, sailing, and flying small aircraft.

Grunsfeld joined the NASA Astronaut Corps in 1992. He is veteran of five space shuttle flights, (STS-67, STS-81, STS-103, STS-109, and STS-125) of which three flights were to the Hubble Space Telescope. He performed eight spacewalks to service and upgrade the Hubble observatory. He has logged more than 58 days in space on his shuttle missions, including 58 hours and 30 minutes of spacewalk time. In 2004-2005, he served as the commander and science officer on the backup crew for Expedition 13 to the International Space Station.

Dr. Grunsfeld graduated from the Massachusetts Institute of Technology in 1980 with a bachelor's degree in physics. He earned a master's degree and, in 1988, a doctorate in physics from the University of Chicago. From Chicago, he joined the faculty of the California Institute of Technology as a Senior Research Fellow in Physics, Mathematics and Astronomy. After his astronaut career he was appointed a Professor of Physics at the Johns Hopkins University in 2010.

His experience and skill in leading NASA science, developing plans and architectures for future programs, systems engineering skills, as a STEM education pathfinder, extensive experience in human spaceflight, and international affairs, make him unique in the world (and off) as a national leader and strategist.

Grunsfeld grew up in the Chicago area, and now lives in Colorado. He is most well known as the Hubble Repairman and for calling in to the NPR radio show "Car-Talk" from space.