

Nifty Fifty Speakers for the 6th USA Science & Engineering Festival 2018/2019 School Year

Kyler Abernathy - Let this renowned biologist from National Geographic introduce you to the Crittercam -- the miniature high-tech camera that is giving researchers amazing looks into the private lives of wild animals!

Aaron Alford, Ph.D. - Discover how this noted research scientist and Director of Research and Evaluation for the National Network of Public Health Institutes (NNPHI) turned his childhood love of "finding critters in the woods" into a mission in paleontology to recover and identify marine mammals from our distant past and donate these specimens to K-12 schools as teaching aids.

Jatin Ambegaonkar, Ph.D. - This George Mason University researcher in Exercise and Sport Science is noted for his work in the emerging field of Dance Medicine, helping dancers and performing artists improve their performance and reduce injury risk.

Ruben Baler, Ph.D. - In his role as health Scientist at the National Institute on Drug Abuse, part of the National Institutes of Health, he's using brain imaging to teach us about drug addiction.

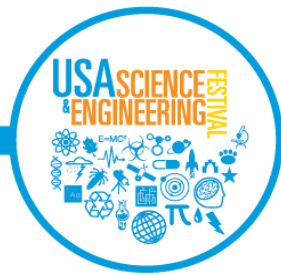
Joshua Bell, Ph.D. - Fascination awaits you as this noted Smithsonian anthropologist takes audiences inside the mysteries of Papua New Guinea's ancestral past, plus Smithsonian's effort to save the 6,000 endangered languages spoken by the world's indigenous people!

Andrea K. Bell-Vlasov, Ph.D. This chemist at the U.S. Food and Drug Administration (FDA) helped approve the world's first artificial pancreas two years ago. She continues her leadership as an FDA Scientific Reviewer in ensuring that clinical devices used by people living with Diabetes are safe and effective.

Erik Berkenpas - This engineer for the National Geographic Society travels to some of the most remote regions of the world testing and using the unique imaging tools he designs to help us better understand our physical world – ranging from the mysteries of the sea to volcanoes and caves!

Susan Bontems - Just ask the students that this professor of Chemistry has taught and you'll be told of her unique way of connecting with learners to help make the principles of science come alive. Hear and experience her exciting teaching techniques!

Damon Bradley, Ph.D. - As a research engineer at NASA, he helps develop some of the most complex instrument signal processing systems used in space exploration. He also has a special passion for using his background to inspire young students in science literacy and STEM innovation.



Reginald Brothers, Ph.D. - From serving as Under Secretary for Science and Technology at the U.S. Department of Homeland Security (DHS), to his current leadership post at the distinguished Chertoff Group in Washington, D.C., this expert has helped shape technological development across public and private sectors.

Alison Cernich, Ph.D. - As Director of the National Center for Medical Rehabilitation Research (NCMRR), Dr. Cernich oversees a varied portfolio of research projects, training programs, and rehabilitation research infrastructure network sites aimed at improving the care of individuals with physical disability who require medical rehabilitation.

Velma Deleveaux, Ph.D. - With a passion for using engineering to solve complex problems and to inspire women and minorities in STEM, this leader is making a difference at Booz Allen, the leading management consulting firm.

Michelle Dunn, Ph.D. - Funding is the lifeblood of scientific research, and this CTO and co-founder of the data science firm called Data Collaboratory has built a groundbreaking tool that guides researchers to the most appropriate funding opportunities!

Aprille Joy Ericsson, Ph.D. - The achievements of this trailblazing aerospace engineer at NASA Goddard Space Center include being the first African American female there to earn a Ph.D. in Engineering, and spearheading the design of multi-million dollar satellites. Learn of her mission to inspire other minorities in STEM!

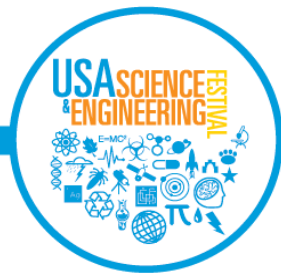
Paul Fleisher - From parasites and bad weather to the Big Bang, discover how the books of this noted science author and educator are inspiring young students across the country about the mystery of science.

Claire Fraser, Ph.D. - Her pioneering discoveries in microbiology led to the emergence of a new field of study -- microbial genomics. Now discover how she, as Director of the Institute For Genome Sciences at the University of Maryland, is continuing her groundbreaking work in this frontier to impact human health.

Jennifer Golbeck - Ph.D. - What does our online interaction with Facebook and other social media say about us? And how can we better safeguard our privacy when using them? Get answers from this fascinating University of Maryland computer scientist who is nationally-known for her expertise in online behavior!

Rebecca Goldin, Ph.D. - This noted mathematician at George Mason University has advice for students: Math is powerful. Math is key to developing successful skills in life, including decision-making, and it also offers value to people seeking creativity and beauty.

Jordan Goodman - Ph.D. - Let this renowned particle astrophysicist from the University of Maryland give you an unforgettable look into two of his fascinating research projects -- one located high in the mountains of New Mexico, and the other deep below the daunting ice of the South Pole Station. Both efforts are intended to better understand the high-energy cosmic rays which hit the Earth!



Matthew Hansen, Ph.D. - As one of the world's foremost experts on deforestation, this remote sensing scientist was the first to produce global, high-resolution maps of where trees are growing and disappearing worldwide, enabling the problem of deforestation to be better monitored and studied.

Matthew Hartings - Ph.D. - Let this noted chemist with a yen for everything culinary reveal the secrets to delicious cooking from an uncommon perspective: chemistry! Discover why his "Chemistry of Cooking" course at American University is not only wildly popular among students for explaining chemistry in exciting ways, but how they also come away from his class with amazing secrets for making the perfect ice cream, macaroni and cheese and other dishes!

Brad Henning - He is an electrical engineer with National Geographic's Exploration Technology group and has traveled the world deploying technology for conservation and exploration.

Robert Hufnagel, M.D., Ph.D. - As clinical fellow at the Ophthalmic Genetics and Visual Function Branch of the National Eye Institute, he is conducting cutting edge clinical and laboratory research of gene expression, molecular genetics, cell biology, and molecular interactions important to the eye for the prevention, diagnosis, and treatment of diseases affecting the eye and the visual system.

Corinna "Cori" Lathan, Ph.D. - This innovator trained in both neuroscience and aeronautics at MIT. Now learn how she, as Founder and CEO of the R&D firm AnthroTronix, is spearheading technology designed to help detect the early signs of Alzheimer's and brain injury almost as quickly as taking blood pressure!

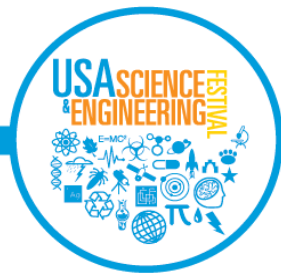
Sean Lawton, Ph.D. - This noted mathematician at George Mason University is not only conducting groundbreaking research that has applications in such frontiers as 3D printing and virtual reality, but is also on a mission through his wildly popular outreach activities to excite K-12 students about the power of mathematics. NOTE - This Nifty Fifty speaker will offer multiple, hour long, classroom-size activities rather than a large group talk.

Mario Livio Ph.D. - Delve into the mysterious world of Black Holes, super novas and dark energy with this world-renowned physicist from the Space Telescope Institute!

Dan Madrzykowski, Ph.D. - Fire scientist Dan Madrzykowski has conducted fire investigation related studies in a wide range of areas including fire fighter line of duty deaths, the post-earthquake fires in Kobe, Japan, oil field fires in Kuwait, and the Cook County Administration Building fire in Chicago.

Joel Martin, Ph.D. - This noted biomechanist at George Mason University is using innovative techniques in biomechanics, kinesiology and motor control to improve human performance in exercise, health/fitness and sports performance.

M. Coleman Miller, Ph.D. - Hear this renowned astronomer from the University of Maryland as he describes in fascinating detail the key role black holes and neutron stars play in the development of galaxies. His key studies are also indicating that research may soon enable us to see stars eaten by black holes and detect variations in space-time caused by these mysterious entities.



Steve Smalley - Learn why this project engineer with Northrop Grumman says, “In a country driven by technology, we need more inventors and engineers!”

Raymond St. Leger, Ph.D. - By studying the pathogenic fungus of insects, this noted entomologist at the University of Maryland, could be paving the way for producing insect-resistant farm crops and toxin-boosted fungi that control mosquitoes

Ellen Stofan, Ph.D. - Her father was a rocket scientist in the early days of the U.S. space program, and today she is making her mark on this frontier as well - first as a groundbreaking planetary geologist studying the terrains of Mars, Venus and Saturn' Moon, and as the former Chief Scientist at NASA. Discover this fascinating leader in space exploration and the future she foresees for NASA and spaceflight!

Raman Sundrum, Ph.D. - This celebrated particle physicist (famous for his collaboration in the groundbreaking Randall-Sundrum models in physics) is providing insight into some of the most mysterious realms of his field, including warped space and parallel universes! Be there as he takes you into these worlds and shows what science is revealing.

Alan Turchik - Learn how this young engineer at National Geographic uses his ingenuity to give us the stunning remote images in science exploration that we have come to expect from NG!

Jacqueline Yancy, Ph.D. - In her position as Senior Regulatory Health Project Manager at the U.S Food and Drug Administration, this medical microbiologist oversees regulations that help ensure the quality and safety of new products and drugs for children.

Learn more about the Nifty Fifty program at:

<http://usasciencefestival.org/explore/school-programs/nifty-fifty/speakers/>