



Past Speakers for the USA Science & Engineering Festival X-STEM Symposium and Nifty Fifty Program

Alicia Abella, Ph.D. – This research scientist at AT&T is on the cutting edge of ushering in some of the most advanced technology designed to help us communicate faster and more efficiently with each other. But she is also noted for her other achievements: helping to motivate and mentor the next generation of female and minority researchers! (Nifty Fifty 2012)

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! (Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

Marc Abrahams – "Laugh now, think later!" is the credo of this nationally-known science funnyman who not only holds a degree in mathematics from Harvard but is editor-founder of science humor magazine Annals of Improbable Research, and founder-MC of the annual IgNobel Prize Ceremony! (X-STEM 2014)

Colin Adams, Ph.D. – Let this noted mathematician take you deep inside the age-old mystery of knots to shed light on some of the most contemporary problems in math and science! (X-STEM 2014)

Nadine Afari – Under the leadership of HTE@USC, discover from this expert at the University of Southern California how a new era of interdisciplinary teamwork is bringing together experts and innovators in fields ranging from science and medicine to art and business to solve challenging problems in healthcare! (Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

Aaron Alford, Ph.D. – Discover how this noted research scientist and co-founder of Paleo Quest 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. (X-STEM 2014, Nifty Fifty 2016/2017)

Alisa Allen – She serves as a vital consultant to the energy industry on matters ranging from petroleum coke to clean fuel issues. Where is the industry heading, and what are the challenges? Discover first-hand from this expert with the Texas-based firm, Jacobs Consultancy. (Nifty Fifty 2014/2015)

Alejandro Sánchez Alvarado, Ph.D. – Discover how this researcher is using the planarian -- a flatworm with remarkable regenerative powers -- to study better ways in which physicians can

repair human tissue, organs and body parts that cannot be naturally replaced when damaged by trauma or disease! (Nifty Fifty 2013/2014)

Paul Anastas, Ph.D. – He’s known as the “Father of Green Chemistry.” Learn of the tireless and groundbreaking efforts of this leading chemist to create a more sustainable society. (Nifty Fifty 2010, Nifty Fifty 2012, X-STEM 2014)

Loren Anderson, Ph.D. – Delve into the mysteries of massive stars and Galactic HII regions in our galaxy -- two of the most least-studied realms of astrophysics -- with this high-profile physicist from West Virginia University! Learn how he, armed recently with a notable grant from NASA, is providing fascinating insights into these mysteries for the first time in this field. (Nifty Fifty 2014/2015)

Jack Andraka – This 15 year-old high school freshman from Baltimore has set the medical science community abuzz by developing an innovative diagnostic test that detects pancreatic cancer more accurately, quicker and cheaper than existing tests. Discover how he did it! (X-STEM 2014, Nifty Fifty 2014/2015, Nifty Fifty 2015/2016)

Natalie Angier – She won a Pulitzer Prize for her lucid, fascinating science writing, and now discover what drives her in her prolific journalistic career to improve science literacy through her work. (Nifty Fifty 2012)

Len Annetta, Ph.D. – He’s a pioneer in designing and introducing interactive computer games into the classroom to help excite and motivate kids in math and science. Hear from him what’s on the horizon in this new genre of classroom learning! (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2014/2015)

Anousheh Ansari – On September 18, 2006, she captured headlines around the world as the first female private space explorer, and also earned a place in history as the fourth private explorer to visit space and the first astronaut of Iranian descent. Discover how this serial entrepreneur is now helping to drive commercialization of the space industry, and as chairman of Prodea Systems (a company she co-founded) she is focusing on bringing the power of the internet to consumers worldwide, simplifying their digital living experience. (Nifty Fifty 2012, X-STEM 2014)

Miquel Antoine, Ph.D. – Learn how this Johns Hopkins chemist is using the burgeoning field of mass spectrometry to help develop a more rapid method of identifying unknown microbes that could be released during acts of bioterrorism. (Nifty Fifty 2012, Nifty Fifty 2013/2014)

Sinan Aral, Ph.D. – How strong are your social networks? Discover from this social scientist why this question is critical these days – from the relationships we foster via email to face-to-face communication – in our fast-paced information age. (Nifty Fifty 2012)

Robert Armiger, Ph.D. – Creating the world’s most advanced bionic arm is indeed a daunting task, but learn how this biomedical engineer at Johns Hopkins University is doing just that, and in the process, helping to improve the quality of life for numerous amputees. (Nifty Fifty 2010, Nifty Fifty 2012)

Andrew Augustin - Let your imagination go as this award-winning creator of such games as Super Ubie Land, Team Notion and characters for The Sims 3 Pets, takes you inside the fascinating high-tech world of game designing! (X-STEM 2017)

Tina Bahadori, Ph.D. – Get inside the job of this leading chemical safety scientist from the U.S. Environmental Protection Agency (EPA) as she and her researchers explore more effective ways to assess, predict and prevent our exposure to harmful chemicals – from the food we eat to the buildings in which we live and work! (Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

Celeste Baine – Find out why this biomedical engineer and noted director of the Engineering Education Service Center says that there has never been a better time than now to promote engineering and other STEM fields among today's students. Hear about the prominent role she is playing in this endeavor! (Nifty Fifty 2012, Nifty Fifty 2013/2014)

Ruben Baler – Learn from this prominent researcher at the National Institute on Drug Abuse -- What is Brain Imaging and what can it teach us about Drug Addiction? (Nifty Fifty 2016/2017)

Shubham Banerjee - This 13-year-old student set the tech world abuzz in 2014 with his invention of a viable, low-cost Braille printer --built from LEGOs! Learn how this inspired him to launch his own startup firm, attracting seed money from the likes of Intel and others! (X-STEM 2016)

Patricia Bath, M.D. - Growing up in Harlem, she had the undying dream to become a physician. Learn how she not only fulfilled that dream, but also made medical history as the inventor of the surgical procedure and device that revolutionized how cataracts are removed! (X-STEM 2016)

Deborah Bass, Ph.D. – The next Mars Rover mission scheduled for 2020 by NASA's Jet Propulsion Laboratory will be one of the most comprehensive explorations to date of the Red Planet, including answering key questions about the potential of life on Mars. Learn from the mission's Deputy Science Lead how she and her colleagues at JPL are gearing up for the challenges of this historic rover expedition! (Nifty Fifty 2015/2016)

Bonnie Bassler, Ph.D. – Learn how this renowned Princeton University microbiologist is breaking the secret code of bacteria –opening the door to discovering how microbes communicate and interact with each other! (Nifty Fifty 2010)

Dayna Baumeister, Ph.D. – She's a pioneer in the emerging field of biomimicry, serving as noted educator, entrepreneur, researcher, and design consultant in helping others explore and use nature as a viable model to solve some of the most complex problems facing science and engineering. Learn how her work is impacting science exploration on a global scale -- from Fortune 500 companies in the U.S. to STEM institutions in such countries as Spain, South Africa and Turkey. (Nifty Fifty 2014/2015)

Eben Bayer – Learn from this young innovator how bubble wrap and Styrofoam are about to become obsolete if he has anything to do with it. He's created a new eco-friendly material made from mushrooms that is replacing traditional product packaging. (Nifty Fifty 2012, Nifty Fifty 2013/2014)

Bruce Bayly, Ph.D. – He's a noted professor of Mathematics at the University of Arizona, but he's equally known these days for taking science and math on the road to excite thousands via the Physics Factory and the Arizona Mathematics Roadshow which he founded. Catch his unforgettable interactive performances! (X-STEM 2014)

Stayce Beck, Ph.D., M.P.H. - At the Food and Drug Administration (FDA) she is responsible for assuring the safety and quality of medical devices used by millions of people with diabetes. Learn first-hand of the rigorous process that these and other life-saving products go through at the FDA before and after they reach the consumer market! (Nifty Fifty 2016/2017)

Angela Belcher, Ph.D. – Learn why developing powerful biodegradable electric car batteries and computers that won't crash due to spilled liquids on the keyboard are more than just pipe dreams in the lab of this scientist! (Nifty Fifty 2012, X-STEM 2014)

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 communities! (Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

Jeffrey Bennett, Ph.D. – His achievements in science and astronomy include helping to develop the highly-acclaimed Voyage Scale Model Solar System exhibit on the National Mall in Washington, DC, and creating and writing the popular children's series "Science Adventures with Max the Dog." Learn how this educator is inspiring students and teachers alike in the wonders of science and space exploration! (Nifty Fifty 2012, X-STEM 2014, Nifty Fifty 2015/2016)

David Berman, M.D., Ph.D. - Learn from the renowned physician-scientist and executive at MedImmune what the latest in immuno-oncology research is revealing in the fight against cancer! (X-STEM 2016)

Andrew Berry, Ph.D. – Hear how this noted Harvard evolutionary biologist traverses isolated regions of the world in the name of Darwinian science to study rare species of bats, butterflies, rats and aphids in order to identify at the molecular level key events in our recent evolutionary past. (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

Frederic Bertley, Ph.D. – In his career, he helped develop an HIV vaccine at Harvard and led life-saving health improvements in Haiti and The Sudan. Now discover how he is using that same spirit to ignite science discovery excitement at the renowned Franklin Institute! (Nifty Fifty 2014/2015, X-STEM 2015)

Melina Gerosa Bellows – She's known as "The Change Agent" at National Geographic where she's engineered dramatic turnarounds to NG's Books, Kids and Family divisions. Discover from this high-powered executive and author what makes National Geographic children's publications such as *NG Kids* and *NG Books*, so wildly popular worldwide! (X-STEM 2014)

Matthew Bobrowsky, Ph.D. – Hear of the groundbreaking discoveries in astronomy that this leading astrophysicist at the University of Maryland is making using the Hubble Space Telescope, and of the exciting science outreach with students and teachers he conducts! (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2014/2015, X-STEM 2016)

David Bolinsky – Take a journey inside the mind of this noted biological sciences animator and the making of his highly-acclaimed science film, *The Inner Life of the Cell*". In addition, get to know the award-winning work of his company, XVIVO Scientific Animation, which provides compelling visual productions in a wide range of industries -- from pharmaceutical and biotech to education and broadcasting. (Nifty Fifty 2012, X-STEM 2014, Nifty Fifty 2014/2015)

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! (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2014/2015, Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

Seth Borenstein – As a science writer for the Associated Press, he covers everything from global warming to Space Shuttle launches with clarity and verve. Hear what a day in the life is like for this busy, well-known journalist! (Nifty Fifty 2010)

Penelope Boston, Ph.D. – This world-renowned geologist-microbiologist has made a career out of exploring the mysterious microbial life that thrive in caves. Discover why she says: "Deep inside caves, there's a biology that is like no other on Earth!" (Nifty Fifty 2013/2014)

Richard Boyd – Welcome to the virtual world of this computer gaming pioneer whose 3-D visualization techniques are being used for everything from Hollywood movies to helping train pilots! Learn why he thinks computer gaming's next frontier is creating virtual K-12 classrooms to help motivate kids in math and science! (Nifty Fifty 2010, Nifty Fifty 2012)

Kobie Boykins – He grew up as a self-admitted "space geek," enthralled by Star Trek and longing to build interstellar space vehicles that explore the mysteries of the universe. Learn how this dynamic young mechanical engineer (a former collegiate hockey and basketball player with a penchant for motorcycle racing) is far from geeky as he lives out his dream at NASA's Jet Propulsion Laboratory designing key components of the Curiosity Mars Rover! (Nifty Fifty 2014/2015)

Terence Boylan – He's known not only as an accomplished singer-songwriter in the music world, but also as one of the "Rocket Boys of the NIH" who continue to spark personal commitments in medical and science research. Hear his amazing story! (Nifty Fifty 2012, Nifty Fifty 2013/2014)

Kipp Bradford – If you ever wondered about the power and direction of the Maker Movement, you only have to look at the young career of this biomedical engineer and inventor. In the past decade he has founded or co-founded 3 key high tech startup companies in the fields of medical devices, transportation and consumer products. Discover what drives him, and why he believes Makers are poised to solve some of the globe's most pressing challenges in high technology! (Nifty Fifty 2013/2014, X-STEM 2016)

Cynthia Breazeal, Ph.D. – Discover how this leading social roboticist is creating intelligent humanoid robots that will change our world -- aiding humans in a host of situations from education and physical performance to family communication and health. (Nifty Fifty 2012)

David Brin, Ph.D. – The subject matter of this world-renowned author, researcher and speaker ranges from science and space aliens to pop culture and the future of Google Glasses. Learn what his work, including his many bestselling books, are telling us about the technological revolution that is changing our lives! (Nifty Fifty 2014/2015)

John Brophy, Ph.D. – As a propulsion technology expert for the renowned Jet Propulsion Laboratory (JPL), this engineer has worked on some of the nation's most ambitious space exploration projects. Learn about his current project -- the Asteroid Initiative which is using a robotic spacecraft to capture a small near-Earth asteroid and redirect it safely to a stable orbit in the Earth-moon system! (Nifty Fifty 2014/2015)

Reginald Brothers, Ph.D. – At a time when the nation stands ready to respond swiftly and effectively to military and security threats around the world at moment's notice, his position as Deputy Assistant Secretary of Defense for Research at the U.S. Department of Defense is critical in assuring that we have the necessary science and technological innovation to accomplish the mission! (Nifty Fifty 2013/2014, Nifty Fifty 2015/2016, X-STEM 2015)

Eric Brown, Ph.D. - This prominent microbiologist at the Food and Drug Administration is especially known for revolutionizing how the FDA identifies and tracks microorganisms that cause foodborne diseases. Get ready as he takes you inside how dangerous foodborne pathogen strains such as Salmonella and E. coli are detected, and how his work ensures safety of the food we eat. (X-STEM 2017)

Rick Brown – Early in his teaching career this educator discovered that students learn science best not by reading about it, but actually *doing it* through exciting hands-on venues. Learn how this approach led him to establish Science Edventures, a wildly creative and effective science outreach program that immerses kids in STEM-based projects, inspiring them to think like scientists while working with school curriculum to teach them important scientific principles and fundamentals! (Nifty Fifty 2013/2014)

Blake Bullock – Learn from this exciting, plain-speaking astronomer from Northrop Grumman how the James Webb Space Telescope -- the next-generation telescope being developed to replace Hubble -- will stand to not only impact our understanding of the universe, but help to further establish America as a technological leader. (X-STEM 2014)

Diane Bunce, Ph.D. – Her research at Catholic University of America deals with ways to improve the way teachers teach, and students learn, chemistry. Hear how her work is helping to demystify and humanize science for all! (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014)

Harold Burgess – Dealing with information overload? Learn how our brains determine what we can ignore and how fish offer clues on the human brain from this top researcher at the National Institute of Child Health and Human Development, National Institutes of Health. (Nifty Fifty 2016/2017)

Thomas Burke, Ph.D., MPH – How environmentally healthy is our nation? Discover firsthand from the researcher who serves as the Science Advisor for the U.S. Environmental Agency (EPA) as he takes you inside the latest advances in the battle against air and water pollution, workplace toxins and other environmental health issues. (Nifty Fifty 2015/2016)

Chuck Cadle, Ed.D. – Although STEM education holds the key to many of the high-tech skills needed for survival in the 21st century, not enough of our students are mastering these talents, portending serious problems for our country, says this noted educator and CEO of Destination Imagination. Discover how his non-profit institution, through a challenging array of outreach programs, is working on the front lines with schools to turn around the crisis in STEM proficiency. (Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

Robert Carey – He's the U.S. Defense Department's Principal Chief Information Officer. Learn how this key official at the Pentagon is leading the effort to consolidate and standardize America's Defense information technology and strengthen its cyber security! (Nifty Fifty 2013/2014)

Alyssa Carson - This 13-year-old and her dream to become the first person on Mars, will both amaze and inspire you! Learn how she is preparing and how her quest is capturing national attention! (X-STEM 20150)

Alison Carr-Chellman, Ph.D. – Why are boys tuning out and dropping out of school at alarming rates in America today? This is just one of the pressing questions that this noted researcher and advocate in education is exploring as she works to bring about meaningful change in the way K-12 education is delivered. (Nifty Fifty 2012, Nifty Fifty 2013/2014)

Davin Carr-Chellman, Ph.D. – What is the impact of Facebook, video games, texting and other internet technologies on the social and educational development of today's students? This leading educator and researcher takes you inside these implications and what we can do to help young people become more astute technological consumers! (Nifty Fifty 2013/2014)

Shane Caswell, Ph.D. – Head trauma represents one of the most serious concerns in such high-contact youth and scholastic sports as football, soccer, lacrosse and rugby. Discover how this nationally-recognized researcher in Sports Medicine at George Mason University is making award-winning inroads into preventing, diagnosing and managing concussions and other head injuries in the rough-and-tumble sports of K-12 athletics! (Nifty Fifty 2014/2015, Nifty Fifty 2015/2016)

Alison Cernich - 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. (Nifty Fifty 2016/2017)

Tim Chartier, Ph.D. – This mathematician at Davidson College is widely known for his expertise in numerical linear algebra, but learn also how he is wowing students and the public nationwide in mathematics via his talent in mime and other captivating demonstrations. Discover how math principles can be used in everyday life -- ranging from predicting the next Academy Award winners to creating a near-perfect NCAA March Madness Bracket in college basketball! (Nifty Fifty 2014/2015)

Parag Chordia, Ph.D. – As director of Georgia Tech University's Music Intelligence Lab, he was a pioneer in establishing the link between music exposure and creativity, and students' performance in math and science. Discover how he is now using his research expertise to develop high-tech computer apps that help everyone create their own music! (X-STEM 2014)

Andrew Clark, Ph.D. – He designed some of the most sophisticated deep-sea exploration vehicles. Now discover how he, as president of Harris Maritime Communication Services, is bringing ocean technology to some of the world's most underserved areas. (Nifty Fifty 2014/2015)

Kathryn Clark, Ph.D. – The critical role she played as NASA Chief Scientist after the tragic accident of the Space Shuttle Challenger in 2003 led to the successful resumption of the shuttle program in 2005. Learn how her current involvement as a science educator and outreach innovator is inspiring countless learners in STEM! (Nifty Fifty 2013/2014)

Mary Cleave, Ph.D. – She's ranked with Sally Ride and others for her pioneering achievements in space flight as a NASA Shuttle astronaut and scientist. Discover how the two Shuttle missions of this environmental engineer reinvigorated her efforts to protect the Earth and its atmosphere! (Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2014/2015, Nifty Fifty 2016/2017)

Kim Cobb, Ph.D. – This prominent climatologist will regale you with stories about her forays into remote areas of the tropical Pacific to better understand how climate changes of the past may impact global warming patterns of the future. (Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2014/2015)

Anne Cohen, Ph.D. – She's a scientist at the Woods Hole Oceanographic Institution who is hard at work save the world's coral reefs from growing global acidity. Learn about this leading biogeochemist's research on climate change and its impact on life in the ocean. (X-STEM 2016)

Baratunde "Bara" Cola, Ph.D. – This professor of Mechanical Engineering and former college football star was recently honored by President Obama as one of the nation's promising young innovators for his groundbreaking work in the emerging scientific field of exploiting energy transport processes at the nanoscale. Discover why he feels nano-engineered energy technology is the next exciting frontier! (Nifty Fifty 2013/2014, X-STEM 2015)

Francis Collins, Ph.D. – He's known for his landmark discoveries in genetics and for leading the Human Genome Project to completion. Now discover the challenges he faces as he heads the prestigious National Institutes of Health! (Nifty Fifty 2010, Nifty Fifty 2012, X-STEM 2014)

Nancy Conrad – Learn how her Conrad Foundation (named for her late husband Apollo astronaut Pete Conrad) is making a dramatic impact in inspiring young students to use science, engineering and entrepreneurship to find viable solutions to some of the most daunting challenges facing us today -- from bioscience and renewable energy to aerospace engineering! (X-STEM 2014)

Carlos Contreras – He arrived in the U.S. with his family at age 12 seeking a better life. Today this engineer-turned-financial-expert heads U.S. Education initiatives for Intel Corporation where he develops programs to assure that students have the necessary math and science skills to be successful in a global economy. Learn what it will take for tomorrow's young innovators to thrive in this competitive environment! (Nifty Fifty 2010, Nifty Fifty 2013/2014)

Elizabeth Cottrell, Ph.D. – Take a journey to the center of the Earth as this noted Smithsonian geologist explores with you her latest findings on volcanoes, the Earth's core and mantle, and other aspects of our planet's evolution! (Nifty Fifty 2012, Nifty Fifty 2013/2014)

Kyle Cranmer, Ph.D – Let this renowned physicist take you deep inside his work at the Large Hadron Collider (the world’s most powerful particle accelerator) in search of the Higgs Boson --the sub-atomic particle thought to be a building block of the universe! (Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

Emily Cross - This 11th-grader -- as the winning presenter at Sigma Xi’s prestigious Student Research Conference in 2016 and a first-place special award winner at the Intel International Science and Engineering Fair in 2015 -- is already forging a remarkable future in science. Discover what keep her inspired and focused on her scientific pursuits! (X-STEM 2017)

April Croxton, Ph.D. – Hear the savvy advice that this NOAA marine biologist has for young students who aspire to enter the field of science. Her words of wisdom certainly worked for her on the road to career success. (Nifty Fifty 2012, Nifty Fifty 2013/2014)

Linda Cureton – As the former Chief Information Officer at NASA, she was the space agency's go-to person on a wide range of challenges related to Information Technology in the space age – from information storage to social media and cyber security! Discover what it's like to keep NASA and its scientists and employees on the cutting edge of IT. (Nifty Fifty 2013/2014)

Franklin Damann, Ph.D. – Learn how this curator at the National Museum of Health and Medicine is using his skills as an anthropologist to breathe life into medical and anatomical artifacts of the past, thereby giving us a fascinating look into eras of scientific history! (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2014/2015)

Ritankar Das – Graduating from UC Berkeley in just 3 years with a double science major, discover how this amazing 19-year-old scientist and current Ph.D. student launched a global effort at age 16 to motivate disadvantaged youths in STEM, now reaching 75 million people! (X-STEM 2015)

Sarah Das, Ph.D. – Let this renowned climatologist from Woods Hole Oceanographic Institution take you inside her groundbreaking research in frigid Greenland where she is gaining remarkable insights into the mysteries of glacier melting and climate change! (Nifty Fifty 2015/2016)

Satyan Devadoss, Ph.D. – Prepare to be captivated as this leading mathematics professor from Williams College demonstrates how he blends concepts of algebra and geometry with art to make lofty principles of math come alive for students! (X-STEM 2015)

Tyler DeWitt – Talk about thinking outside the box! This high school teacher and Ph.D. student in Microbiology at MIT is quickly emerging as a leading innovator in science education -- inspiring many with his fresh approaches to classroom instruction and curricula in science, technology, engineering and math. (Nifty Fifty 2013/2014, Nifty Fifty 2014/2015, Nifty Fifty 2015/2016, X-STEM 2015)

Crystal Dilworth – Discover how this recent Caltech doctoral grad (who is also a professional choreographer and former dancer who trained at the famous Ailey School in NYC) is on a personal mission to break down long-held stereotypes of scientists as geeks and nerds. Her work is giving courage to many young STEM learners to shun such stereotypes while teaching them how to effectively combine their passion for science with other personal interests in non-science areas. (Nifty Fifty 2013/2014, Nifty Fifty 2014/2015, X-STEM 2015)

Danielle Dixon, Ph.D. – Coral reefs, often called the “rainforests of the sea,” are seriously declining worldwide. Prepare to be inspired as you learn what this noted biologist from Georgia Tech is doing to shed light on one of the most important ecological challenges today! (Nifty Fifty 2014/2015)

Laurance Doyle, Ph.D. – This astrophysicist at the famed SETI Institute began theorizing about the habitability of planets around other stars long before the discovery of the first planet beyond our solar system. Learn how he is now using his expertise to analyze astronomical data to search for mysterious extrasolar planets in the nether regions of space! (Nifty Fifty 2014/2015)

Kirk Dreier – Discover how this leading naturalist and botanist – in an age of iPods, cable TV, Facebook, Twitter and other distractions for kids – uses the power of hands-on biology to get students outdoors to explore nature for pleasure and knowledge! (Nifty Fifty 2010, Nifty Fifty 2013/2014)

Alvin Drew – This United States Air Force officer and former combat pilot is one of the last NASA astronauts to perform a spacewalk as part of the Shuttle Discovery's mission to the International Space Station. Learn how in space, he started the “Storytime in Space” reading program for children! (X-STEM 2014)

Ben Dubin-Thaler, Ph.D. – You’ve never realized how much scientific discovery is available on a bus, but you’ll become a believer when this innovative biophysicist introduces you to his BioBus, the amazing mobile science lab that is wowing kids throughout New York City! (Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2014/2015)

Doug Duncan, Ph.D. – As director of the prestigious Fiske Planetarium at the University of Colorado, he’s one of the most high-profile astronomers and science communicators in the country. Discover what drives this innovator as he strives to bring the wonders of astronomy to students and the public in exciting ways -- from the mystery of total eclipses to the spectacle of the Northern Lights! (Nifty Fifty 2015/2016)

Maj. Gen. Sharon K.G. Dunbar – She serves in the dual capacity as Commander of the Air Force District of Washington (AFDW) and the 320th Air Expeditionary Wing, headquartered in Andrews, MD. Discover the key role high technology plays in her duties which include training and equipping combat forces for aerospace expeditionary endeavors! (X-STEM 2014)

Sylvia Earle, Ph.D. – This legendary oceanographer has been dubbed “Her Deepness” by the *New York Times*, and a “Hero for the Planet” by *Time* magazine – and for good reason. Discover how her tireless, groundbreaking, and often courageous work deep below the sea is raising consciousness worldwide to save the planet's most precious resource – the ocean! (X-STEM 2014)

Bob Ekman – This former computer software engineer for IBM and Lockheed Martin is now motivating kids in robotics and rocketry through innovative science outreach programs in Maryland. Learn from him as he demonstrates his secrets for engaging young learners! (Nifty Fifty 2010, Nifty Fifty 2012)

Jennifer Elisseef, Ph.D. – Each year the low availability of donor tissue for transplantation grows more acute. Discover how this renowned tissue engineering scientist at Johns Hopkins is helping

medicine address the crisis by exploring ways to grow human tissue -- such as skin, bones and corneas -- in the laboratory! (Nifty Fifty 2014/2015)

Karen Elkins, Ph.D. – This noted infectious disease immunologist at the FDA is helping to lead the way in designing better vaccines to combat Mycobacterium tuberculosis and other resistant, disease-causing bacteria impacting us on a global scale! (Nifty Fifty 2014/2015, Nifty Fifty 2015/2016)

Erica Ellingson, Ph.D. – In her research exploring the origins of the universe, this prominent astrophysicist at the University of Colorado-Boulder works in the mysterious realms of dark energy and galaxy clusters. Learn what her groundbreaking work is revealing, and of the exciting outreach programs she has initiated to inspire tomorrow's minority trailblazers in astrophysics! (Nifty Fifty 2015/2016)

Christopher Emdin, Ph.D. – This hip, exciting professor in the Department of Mathematics, Science and Technology at Columbia University has gained national attention for his genius in connecting kids in science through the rhythm and beat of urban hip-hop! Discover STEM in a new way through the magic of writing science raps and engaging in science rap battles! (X-STEM 2016)

Sarah Eno, Ph.D. - A noted physicist at the University of Maryland, she is part of an elite group of explorers worldwide involved in the famous Large Hadron Collider (LHC) particle accelerator project at CERN on the French-Swiss border. Discover first-hand what this undertaking is telling us about how the universe started and what it is made of! (Nifty Fifty 2016/2017)

Aprille Ericsson, Ph.D. – This innovative aerospace engineer is at the cutting-edge of some of the most ambitious endeavors at NASA's Goddard Space Flight Center. Learn from her what the future of space flight holds, and how students can prepare for such challenging careers! (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2014/2015, X-STEM 2015, Nifty Fifty 2016/2017)

Marcus Eriksen - From his captivating seagoing expeditions to his empowering world-renowned 5 Gyres Institute, discover how this noted researcher is calling attention to the problem of plastic pollution plaguing our world's oceans. (X-STEM 2017)

Daniel Evans, Ph.D. – Let this eminent astrophysicist from the Harvard-Smithsonian Astrophysical Observatory take you inside his research as he hunts the nether regions of space for elusive super-massive black holes! Learn the latest insights that science is revealing about black holes and their profound influence on cosmological evolution. (Nifty Fifty 2014/2015)

Ruthe Farmer – This leader at the National Center for Women and Information Technology (NCWIT) was recently honored by the White House for her work to increase female participation in technology and engineering. Learn how she also launched technological initiatives with such powerhouses as Intel, Lego Robotics and FIRST Robotics to heighten motivation in STEM (science, technology, engineering and mathematics). (Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

Falon Fatemi - At age 19, she became the youngest employee at Google where she was responsible for strategizing the company's entrance into such markets as Europe and Africa. Now as founder

and CEO of her company, Node, she is redefining the way web information is organized, resulting in greater tailored and personalization of this information for users. (X-STEM 2017)

Anthony Fauci, M.D. – Learn how this high profile physician-scientist, as Director of the National Institute of Allergy and Infectious Disease, serves as a key advisor to the White House and other arms of the government on a wide range of health issues from the global AIDS epidemic to bioterrorism. (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014, X-STEM 2015, Nifty Fifty 2016/2017)

Bobak Ferdowsi – You'll remember him as the young NASA flight director who sported the cool mohawk hairdo in JPL's mission control center as the rover Curiosity made its historic descent onto Mars. Now meet this inspiring systems engineer as he tells how his "mohawk experience" catapulted him into the national spotlight, and about the many exciting careers that await young students in space science! (Nifty Fifty 2013/2014, Nifty Fifty 2015/2016, X-STEM 2017)

Mary Fernandez, Ph.D. – Learn how this noted AT&T computer scientist is developing text messaging technology that will enable first responders to more effectively contact, locate and potentially save victims of disasters and catastrophes! (Nifty Fifty 2012)

Chris Fischer – Get ready for an unforgettable experience with this Expedition Leader and Founding Chairman of OCEARCH as he takes you deep inside the world of the Great White shark using OCEARCH's amazing Global Shark Tracker! (X-STEM 2016)

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. (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

Marilyn Fogel, Ph.D. – Her fieldwork in geosciences has taken her to the far-flung corners of the globe, including the Bermuda Triangle and the cold Mars-like landscapes of Norway. Discover how the work of this Carnegie Institution scientist is shedding new light on how the planet began. (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014)

Sarah Fortune, M.D. – Learn how the novel research approach of this physician-scientist is helping to zero in on one of modern day medicine's most daunting questions: why the bacterium that causes tuberculosis is often resistant to antibiotics and the body's immune system. (Nifty Fifty 2012)

James Fowler, Ph.D. – Let this leading political scientist and medical geneticist take you inside a world where biological science converges with contemporary political and social network behavior! (Nifty Fifty 2013/2014)

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. (Nifty Fifty 2016/2017)

Njema Frazier, Ph.D. – This savvy nuclear physicist has the responsibility of helping to assure that the nation's nuclear weaponry stockpiles are safe and at the ready to protect the U.S. against

nuclear attack. Learn how her job entails not only physics but knowledge of a host of other disciplines including engineering, metallurgy and computer science! (Nifty Fifty 2012, Nifty Fifty 2013/2014)

Stephen Frick – The career achievements of this former Navy fighter pilot and NASA astronaut include commanding the Space Shuttle Atlantis. Discover how his love of spaceflight is now taking on new dimensions in his current post at Lockheed Martin Space Systems! (X-STEM 2016)

Susan Marie Frontczak – Re-live the life and times of Nobel Prize-winning scientist Marie Curie through the dramatic presentation of “MANYA: A Living History of Marie Curie” as this exciting storyteller portrays the famous researcher who discovered radium and radioactivity. (Nifty Fifty 2010)

Greg Gage, Ph.D. – Before earning his Ph.D. in Neuroscience, this noted brain scientist was an electrical engineer who loved tinkering with all things electric. Discover how he's molded this passion into "Backyard Brains" -- an exciting service in education which provides everyone from kids to grad students in science with cool neuroscience experiment kits and tools to help them better understand the electrophysiology workings of the brain and nervous system! (X-STEM 2014, X-STEM 2015, X-STEM 2016)

David Gallo, Ph.D. – Find out what life is like deep below the ocean as this renowned oceanographer (who co-led the Titanic exploration) reveals the wonders of his fascinating undersea journeys. (Nifty Fifty 2012, X-STEM 2014)

Richard Garriott – Hear the exciting story of this computer video game pioneer who accomplished his lifelong dream of space travel in 2008 when he became the sixth private citizen to journey into Earth's orbit. (Nifty Fifty 2012)

Lori Beth Garver – She became interested in space while working for former Senator John Glenn and served as the lead civil space policy advisor for Obama's 2008 presidential campaign before being appointed to her current post of Deputy Administrator of NASA. Learn from this leading space policy expert about the future direction of NASA as it charts a new course in both the governmental and commercial sectors! (Nifty Fifty 2012)

Sylvester James Gates, Ph.D. – Learn how the desire to pursue physics began at eight years old for this renowned scientist, leading him later to groundbreaking research in such cutting-edge areas as superstring theory, supersymmetry and supergravity. (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014)

Timothy Gay, Ph.D. – Are your students intimidated by the study of physics? Let this noted professor and research physicist at the University of Nebraska clarify key concepts of this discipline in exciting ways -- from Newton's Law to air resistance and atoms -- by using the game of football as a model! A former college football player himself, he has used this approach successfully in his classroom, at Nebraska Cornhuskers football games, and even on an NBC TV reality show with rocker Tommy Lee! (Nifty Fifty 2015/2016)

Adam Gazzaley, M.D., Ph.D. – What impact is mobile technology (with its frequent distractions, disruptions and multi-tasking) having on our brain's ability in memory, learning and

attention? Explore with this renowned neuroscientist the latest findings on what research is revealing! (Nifty Fifty 2013/2014)

John Gedmark – Learn from this engineer and former executive director of the Commercial Spaceflight Federation how private companies are destined to assume NASA's role of building, launching and operating future space exploration craft. (Nifty Fifty 2012, Nifty Fifty 2013/2014)

Morton Ann Gernsbacher, Ph.D. – Discover how this leading cognitive neuroscientist went against prevailing theories in science to demonstrate that speech difficulty in some autistic children stems from motor planning deficits, not from intellectual limitations or social impairment in such children! (Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

William Gilly, Ph.D. – Get ready for an undersea adventure as this prominent marine biologist takes you inside his research of giant squid – the voracious, fast-moving sea predator that is having serious ecological impact on other sea life in the Pacific. (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014, X-STEM 2015)

Roscoe Giles, Ph.D. – This high-profile theoretical physicist at Boston University has made a career of using sophisticated parallel computers to solve some of the most daunting problems in physics and materials science. But learn why he is also nationally recognized for another pursuit: working in dynamic ways to increase the number of women and minorities in computational science and other STEM areas! (Nifty Fifty 2014/2015)

Larry Gladney, Ph.D. – This renowned physicist is widely known for research that delves deep into the mysteries of the cosmos, including the origin of the universe. Hear about the pivotal moment in his childhood that turned his interest to physics while growing up on the rough side of East St. Louis, IL. (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

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! (Nifty Fifty 2015/2016, X-STEM 2017)

Rebecca Goldin, Ph.D. – We all know how powerful statistics can be, but also how they can be manipulated and misinterpreted. Discover how this noted mathematician at George Mason University is keeping a watchful eye on how the news media is using stats in their stories about science, health education and other fields. In the process, she is also educating the public how to be more critical science news consumers. (Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2014/2015)

Jeff Goldstein, Ph.D. – What's really involved in the art of engaging students in science and other areas of STEM? Discover from this noted astrophysicist and science educator the secrets that make him one of the most successful motivators in STEM in the nation! (Nifty Fifty 2012, X-STEM 2014, Nifty Fifty 2015/2016)

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!
(Nifty Fifty 2015/2016)

Theodore Gray – Explore the cutting edge of technology with this innovator! He developed the leading computational software Wolfram|Alpha, in addition to being a columnist for *Popular Science* magazine, and the creator of amazing periodic table of elements seen on *MythBusters*, *Hanna Montana*, and elsewhere! (X-STEM 2014)

Jordan Green, Ph.D. – Cancer is one key research area where there is great need for improved therapeutics. Discover from this leading biomedical engineering scientist at Johns Hopkins University how he is using the latest techniques in the emerging field of nanobiotechnology to create smarter drug and gene therapies to treat a wide range of cancers -- and save lives! (Nifty Fifty 2014/2015, Nifty Fifty 2015/2016, X-STEM 2017)

Carol Greider, Ph.D. - This prominent molecular biologist at Johns Hopkins won the Nobel Prize in 2009 for her discovery of the key chromosomal enzyme, telomerase. Learn about this pioneering researcher's challenging road to her breakthrough discovery. (X-STEM 2016)

Helen Greiner - Growing up in London, England, she was a childhood science whiz, later developing a fascination for science fiction, R2D2 and robotics. Discover how these passions led to her creating the company iRobot (a global leader in mobile robots), and most recently CyPhy Works, the amazing entrepreneurial start-up that is leading the way in developing futuristic flying robots (known as Unmanned Aerial Vehicles) for commercial, civil, and military defense applications! (X-STEM 2016)

Saul Griffith, Ph.D. – This noted inventor and entrepreneur focuses on creating practical things we all can use – from low-cost eyeglasses and cartoons that teach kids science, to a kite that tows boats, and new ways to generate power. You'll be blown away by what he's thinking of next! (X-STEM 2014)

John Mace Grunsfeld, Ph.D. – Learn first-hand from this five-time Space Shuttle crew member what goes on at liftoff and in other critical areas of a Shuttle mission! (Nifty Fifty 2012, X-STEM 2014)

Paul Guèye, Ph.D. – As a student growing up in Dakar, Senegal, he was known as “Mr. Questions” because of his inquisitive nature. Learn how this noted physicist is now using his keen curiosity to delve deep into some of the most daunting questions in the study of how atoms function. (Nifty Fifty 2010)

Benjamin Gulak – He designed his revolutionary Uno III electric vehicle as a senior in high school (a creation that was named among the top 10 inventions by *Popular Science*), but discover what exactly drives the imagination of this 22-year-old inventor and entrepreneur! (Nifty Fifty 2012, Nifty Fifty 2013/2014, X-STEM 2015)

Alberto Gutierrez, Ph.D. – Welcome to the era of Personalized Medicine -- an emerging age of medical science in which drugs and other treatments are tailored to your individual genetic make up. Meet and hear the FDA scientist and administrator who is at the forefront of approving and regulating the technology of this exciting frontier, and negotiating the challenges that it presents in the future! (Nifty Fifty 2014/2015)

Joy Hakim – In our challenging Information Age, what are the best ways to engage students in the excitement of science? Discover from this prolific science narrative story writer how such stories not only fascinate young readers, but also yield impressive learning results! (Nifty Fifty 2012)

Marnie Halpern, Ph.D. – With a passion for research, this biologist at the Carnegie Institution for Science in Baltimore, is making amazing inroads into the study of the brain and nervous system by studying the tiny zebrafish. (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014)

Margaret Hamburg, M.D. – Since being appointed Commissioner of the Food and Drug Administration (FDA) by President Obama in 2009, this innovative medical researcher and public policy expert is charting new courses in protecting public health in a wide range of FDA initiatives – from the foods we eat to the medicines we take. Learn how her reforms impact us all! (Nifty Fifty 2013/2014)

Heidi Hammel, Ph.D. – Let this leading planetary astronomer and Hubble Telescope scientist take you deep inside the mysteries of planets, including her favorite celestial bodies – Uranus and Neptune (two of the farthest planets from Earth). Learn also how she is helping to build the next big space telescope after Hubble! (Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

Christy Hansen - As a NASA manager her accomplishments are many, including serving as a certified astronaut EVA (extra-vehicular activity) instructor, and working on programs involving the International Space Station, Space Shuttle and the Hubble space telescope. Her present work includes managing airborne science missions that study Earth's systems all over the planet. Now hang on as she takes you inside one of her most challenging and exciting NASA assignments: the ambitious IceBridge Project set in Antarctica! (X-STEM 2017)

Patrick T. Harker, Ph.D. - the 11th president and chief executive officer of the Federal Reserve Bank of Philadelphia. In this role, President Harker participates on the Federal Open Market Committee, which formulates the nation's monetary policy. (X-STEM 2017)

Bernard Harris, M.D. – This physician served as a NASA astronaut from 1990 to 1996, including flying aboard STS-55 (*Spacelab D-2*), *Columbia*, and as Payload Commander on STS-63 in 1995 (in which he became the first African American to walk in space). Learn of his perspective on the future of space flight, and of his career transition to Chief Executive Officer and Managing Partner of Vesalius Ventures, Inc., a venture capital firm focused on early-stage companies in medical informatics and technology. (X-STEM 2014)

Dot Harris – Known for her reputation as a trailblazer in the energy industry, this engineer-entrepreneur was recently appointed by President Obama as Director of the U.S. Department of Energy's Office of Economic Impact and Diversity. Discover through this post how she is helping to prepare and empower women and minorities for the challenging STEM workforce of tomorrow! (Nifty Fifty 2013/2014)

George Hart, Ph.D. – He's not only a noted mathematician but also a recognized sculptor and visual artist. Learn how he is wowing K-12 and adult audiences across the country by combining these disciplines to demonstrate the "beauty" of mathematics based on his stunning works of geometric-inspired sculpture and other 3D constructions! (Nifty Fifty 2014/2015, X-STEM 2016)

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. (Nifty Fifty 2014/2015, Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

Cindy Hasselbring – This veteran high school teacher of mathematics recently completed her second appointment as an Albert Einstein Distinguished Educator Fellow at the National Science Foundation in Washington where she helped shape national education policy in STEM (science, technology, engineering and mathematics). She now serves as Digital/STEM Learning Officer for the Maryland State Department of Education. Gain first-hand insight from her into where STEM is heading in our nation’s schools! (Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

Nan Hauser, Ph.D. – Hear how the work of this passionate scientist-conservationist in the remote tropical region of the Cook Islands is leading to promising inroads to study and save the endangered humpback whale! (Nifty Fifty 2012, X-STEM 2014)

Robert Hazen, Ph.D. – Go back 4.5 billion years ago with this world-renowned geophysicist as he recreates and describes (based on his acclaimed research) how the Earth’s surface evolved into what we know it as today. His findings will astound you! (Nifty Fifty 2013/2014)

Jill Heinerth - One of the few women in the world to rise to prominence in the fields of underwater exploration and cave diving, this adventurer will take you deep beneath the surface of some of the most dangerous and fascinating watery locations on the planet! (X-STEM 2017)

Martin Hendry, Ph.D. – You’ll never look at black holes, exploding stars and the Big Bang in same way again after this world-renowned astrophysicist from the University of Glasgow takes you deep inside LIGO’s recent groundbreaking discovery of gravitational waves in the universe! (X-STEM 2016)

Homer Hicken – The Hollywood film, *October Sky*, was based on his highly acclaimed book, *Rocket Boys*, and his skill as an aeronautical engineer for NASA was vital in building spacecraft and training astronauts to work in space. Discover how his life’s journey through engineering and writing have yielded fascinating results! (Nifty Fifty 2012)

Charles Higgins, Ph.D. – Imagine a robot with the sight and motion detection ability of a moth or dragonfly. Welcome to the world of insect-inspired robotics with this noted electrical engineer and neuro-researcher! Learn more about this emerging field and where it is taking robotics in the future! (Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2014/2015, Nifty Fifty 2015/2016)

Darren Higgins, Ph.D. – You’ll marvel at this young Harvard microbiologist, who is already known for developing a viable vaccine for the deadly bacteria, *Listeria*, and co-founding the amazing startup Genocera Biosciences! (Nifty Fifty 2015/2016)

Stephanie Hill - Want to impact people’s lives? Discover from this prominent engineer and executive at Lockheed Martin the many ways you can change the world through engineering and other STEM fields, and why more women and minorities are needed in these careers! (X-STEM 2017)

Supriya Hobbs – Although just fresh out of college, this young engineer is making headlines as CEO and Co-founder of Miss Possible, an exciting new line of dolls and apps just launched to inspire young girls in engineering, based on some of the most noted women innovators in STEM! (Nifty Fifty 2015/2016)

John Holdren, Ph.D. – What is it like to serve as the Science Advisor to the President of the United States? Gain perspective from this noted aeronautics and plasma physics researcher who works as the senior advisor to President Obama on science and technology! (X-STEM 2014)

Jason Holt – You've undoubtedly seen or heard of the exciting groundbreaking creations developed by this engineer and serial entrepreneur at Google X -- unforgettable immersive experiences such as Google's Liquid Galaxy, and Street View. Now meet this innovator and learn the story behind his creations! (Nifty Fifty 2015/2016)

Tristan Hübsch, Ph.D. – Hang on as this noted physicist and mathematician from Howard University takes you on a journey through three of the most exciting and challenging realms of physics: the string theory, high-energy particle physics, and supersymmetry! (Nifty Fifty 2014/2015, Nifty Fifty 2015/2016)

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. (Nifty Fifty 2016/2017)

Tenaya Hurst – As founder of the company Rogue Making, she's one of the leading evangelists in the Maker Movement. Her unforgettable workshops in the art and science of creating wearable tech devices will show you why the Maker Movement is among the hottest pursuits in STEM! (X-STEM 2016)

Nizar Ibrahim, Ph.D. – He's one of the fastest rising paleontologists on the international scene today. Let him take you inside his most noted achievements, including the discovery of one of the largest dinosaur bones ever unearthed in North Africa! (X-STEM 2016)

Barrington Irving – He made history in 2007 by becoming the youngest person to pilot a plane solo around the world (and the first African American to accomplish this feat). Now discover how he is further inspiring kids in aeronautical science by developing the first-ever flying classroom through his non-profit organization, Experience Aviation! (X-STEM 2014)

Shon Isenhour – He's a high-tech troubleshooter, an engineer who collaborates across a wide spectrum of industries --from pharmaceutical to petrochemical -- to investigate and find solutions to how manufacturing companies can produce their products more efficiently. Hear him as he immerses you into the growing field of Reliability Engineering! (Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

Irwin Jacobs, Ph.D. – Meet this mild-mannered former MIT engineering professor who co-founded the telecommunications giant Qualcomm. Learn how its technology (born from his single idea) is

used on cell phones worldwide and is revolutionizing the next generation of digital devices! (X-STEM 2015)

Erich Jarvis, Ph.D. – Using innovative research techniques that often defy convention, this leading neurobiologist is demonstrating what the songbird can reveal about the evolution of human language and learned behavior! (Nifty Fifty 2013/2014)

Gregory H. Johnson - This aeronautical engineer was an astronaut on two Space Shuttle missions and served as a decorated Air Force combat pilot. Discover today how he, as President and Executive Director for the Center for the Advancement of Science in Space (CASIS), is identifying innovative ways to apply scientific results from the International Space Station to benefit life on Earth! (X-STEM 2017)

James H. Johnson, Jr., Ph.D. – As one of the U.S. Environmental Protection Agency’s top scientists, he is at the forefront of using the latest in science and engineering technology to protect human health and the environment from potential hazards. Discover from this expert the practical things we all can do each day to become better protectors and stewards of the planet! (Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

Kirk Johnson, Ph.D. – Let the renowned director of the Smithsonian National Museum of Natural History unveil the scientific wonders of this landmark museum, and what it takes to be a world-class paleontologist! (Nifty Fifty 2015/2016)

Veronica Johnson – This popular on-air meteorologist at NBC4 in Washington, DC said she would've been a storm chaser across the Great Plains if she had not settled on a career in TV weathercasting. Get ready as she takes you deep inside the mysteries of thunderstorms, tornadoes, hurricanes and other cataclysmic meteorologic occurrences of Mother Nature! (X-STEM 2016)

Thomas D. Jones, Ph.D. – What's it like to liftoff on a Shuttle mission bound for the International Space Station with 6 million pounds of thrust beneath you? Hang on for the ride of your life as this noted planetary scientist and former NASA astronaut takes you deep inside his 11-year career as a leading space explorer! (X-STEM 2014)

Stella Kafka, Ph.D. – Explore the lofty heights of space with this noted astronomer from the Carnegie Institution of Washington as she takes you into her research examining how space weather around stars affects extra-solar planetary worlds! (Nifty Fifty 2010)

James Kakalios, Ph.D. – What can we learn about physics from super heroes such as Spiderman the Flash? Plenty, says this noted researcher and author of “The Physics of Superheroes”. Discover what he means! (Nifty Fifty 2010, Nifty Fifty 2012, X-STEM 2014)

Dean Kamen – He’s sometimes called a modern-day Edison for the sheer number and impact of his inventions -- which range from the Segway human transporter and revolutionary robotic prosthetic arm to the iBOT battery-powered wheelchair. But in addition to his creations, get to know the man who founded FIRST, the amazing outreach movement which is inspiring kids in robotics and other STEM areas like never before! (X-STEM 2015)

Rebecca Kamen – The boundaries between science and art are not as blurred as you might think. Discover why as this noted artist-sculptor and Emeritus Professor from Northern Virginia Community College takes you inside her renowned collection of science-inspired works! (Nifty Fifty 2013/2014, Nifty Fifty 2014/2015, Nifty Fifty 2015/2016)

Michael Kassner, Ph.D.—Learn about the ambitious outreach plans in STEM that the Office of Naval Research is employing to meet the challenge of attracting tomorrow’s innovators in science and engineering. (Nifty Fifty 2012)

Dacher Keltner, Ph.D. – What are the origins of our emotions -- feelings such as happiness, love and compassion? Gain exciting insight as this renowned social psychologist from UC Berkeley takes you deep inside the biological and evolutionary roots of the key emotions that help define us as humans, and how they impact social interaction! (Nifty Fifty 2015/2016)

Kevin J. Kinsella – This powerhouse on the venture capital start-up scene will show you the power of thinking big in launching promising businesses in life sciences and technology! He should know: he’s started more than 100 such enterprises, including Zynga – the makers of the phenomenal video game *FarmVille*. He is also known for using his business acumen in producing the Tony Award-winning Broadway musical, *Jersey Boys* (and for co-producing the Grammy Award-winning Original Cast Recording of that production). (X-STEM 2014)

Rebecca Klemm, Ph.D. – Those stuffy, boring mathematical concepts and principles will literally take on an exciting life of their own under the skillful direction of this former mathematics educator. Young learners will jump for joy when they interact with Dr. Klemm (aka The Numbers Lady) and the fun, engaging troupe of animated numerical characters in her program, NumbersAlive! (Nifty Fifty 2013/2014, Nifty Fifty 2014/2015)

Heather Knight – Delve into the futuristic world of social robotics with this innovative graduate student who is developing robots that perform stand-up comedy, home companionship and other social interaction! (Nifty Fifty 2012)

Nancy Knowlton, Ph.D. – The world’s coral reefs are disappearing at an alarming rate. Learn from this renowned Smithsonian biologist and coral expert why she is very concerned – and why this critical ecological situation should concern you as well. (Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2014/2015, Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

Donna Kocak – Let this noted engineer at Harris Government Communication Systems take you deep to discover how marine technology is revolutionizing the study of the ocean floor! (Nifty Fifty 2015/2016)

Jim Kohlhaas – What are the challenges we face in increasing our energy efficiency around the world? Hear the intriguing answers from the Vice President, Commercial Solutions at The SI Organization, Inc. as he describes the role engineering is playing in harnessing such technology. (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014)

Roberto Kolter, Ph.D. – Explore with Dr. Kolter the world of biofilms, a promising area of microbiology which investigates how bacteria and other microbes live and function in their microscopic communities. (Nifty Fifty 2012, Nifty Fifty 2013/2014)

Karen Kosiba, Ph.D. – Hear first-hand from this modern-day storm chaser what it was like to participate in VORTEX2, the largest-ever research project to explore what causes devastating tornadoes. (Nifty Fifty 2012, X-STEM 2014)

McKena Kovar – Don't miss this young engineer from Oceaneering International as she takes you inside her challenging job of designing tools that repair equipment in subsea oilfields located more than 10,000 feet below the surface! (Nifty Fifty 2015/2016)

Seema Kumar – How can America attract and maintain more innovators? Explore the question with this prominent science communicator who currently serves as Vice President of Innovation, Global Health and Policy Communication at Johnson & Johnson. Her thought-provoking solutions will inspire you! (X-STEM 2015)

Easton LaChappelle – Meet this 18-year-old inventor who developed a futuristic and affordable neural-controlled prosthetic arm that stands to change the lives of numerous amputees. Plus, discover how he created his robotic invention almost solely through 3D printing! (X-STEM 2015)

Robert Lang, Ph.D. – Discover from this renowned physicist and origami expert what the centuries-old art of origami can reveal about the mysteries of mathematics and science! (X-STEM 2015)

Corinna "Cori" Lathan, Ph.D. – Inspired by the physical challenges astronauts must overcome while in orbit, this human-performance engineer founded her own company called AnthroTronix, which today is designing some of the globe's most advanced human-inspired assistive technologies. Discover how her robotics and computer-based products are assisting everyone from children with disabilities to military soldiers! (Nifty Fifty 2015/2016)

Conrad Lautenbacher, Jr., Ph.D. – Providing a platform for scientific accuracy and discussion on the timely issue of climate change --is it possible? Let this retired Navy Vice Admiral tell you how he did it with nations around the globe during his tenure as Administrator of NOAA! (Nifty Fifty 2014/2015)

Erin Lavik, Ph.D. – Advancing the development of artificial blood platelets, and furthering the treatment of traumatic brain injury and glaucoma are just some of vital research endeavors of this biomedical engineer. Hear her amazing story! (Nifty Fifty 2012)

Sean Lawton - 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. (Nifty Fifty 2016/2017)

Diandra Leslie-Pelecky Ph.D. – Buckle up as this noted physicist (who penned the book The Physics of NASCAR) takes you on full-throttle journey through the science of race car driving and other aspects of speed! (Nifty Fifty 2013/2014)

Joel Leonard – Maintenance technician jobs such as mechanic, welder and air conditioning technician often carry the stigma of being menial 'grease monkey' jobs. But learn how this self-described "Maintenance Evangelist" is changing that image by motivating young people to pursue these well-paying, vital positions in high technology! (Nifty Fifty 2012, Nifty Fifty 2013/2014)

Alan Leshner, Ph.D. – He serves as Chief Executive Officer of the American Association for the Advancement of Science (AAAS) and Executive Publisher of the renowned Science magazine. Discover the challenges he faces in helping to bridge the gap between science and the general public. (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014)

Charles Limb, M.D. – In his quest to discover how the brain creates and perceives music, learn what this surgeon-researcher and musician is learning from jazz and hip-hop artists. (Nifty Fifty 2012)

Albert Yu-Min Lin - Discover this exciting, innovative young scientist and his ambitious new company called Planet3 aimed at presenting the entire Earth as a live digital learning laboratory platform in your classroom! (X-STEM 2017)

Geoffrey Ling, M.D., Ph.D. – Discover how this renowned specialist in brain and spinal cord injury is revolutionizing the development of highly functional prosthetic limbs for returning wounded soldiers and others through his work at the Defense Advanced Research Projects Agency (DARPA). (Nifty Fifty 2012, Nifty Fifty 2013/2014, X-STEM 2016)

Chris Linthwaite – While recovering from an auto accident at age 12, this high-profile executive of biotechnology giant Life Technologies became fascinated by how bones break and repair themselves. Today, he helps develop life-saving drugs and therapies at this global company with customers in more than 160 countries. (Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

Hod Lipson, Ph.D. – Find out from this noted engineer what his biologically-inspired robots can tell us about our own evolution as humans. (Nifty Fifty 2012, X-STEM 2014)

Mario Livio, Ph.D. – Delve into the mysterious world of Black Holes, super novae and dark energy with this world-renowned physicist from the Space Telescope Institute! (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

Beau Lotto, Ph.D. – Discover from this iconoclast in neuro-research and science education how a group of primary school students in his science learning venture achieved the unbelievable task of having their research project results published in an internationally-recognized peer-reviewed science journal! (Nifty Fifty 2012)

Daisy Pistey-Lyhne – Learn how this educator with the Alliance for Climate Education makes science stick in the minds of high school students through the use of hip-hop music, animation and humor! (Nifty Fifty 2010)

Gary Machlis, Ph.D. – Our National Parks, with their natural beauty, are steeped in science. Hear from the Park Service's first Science Advisor, how he is turning these national treasures into places of scientific discovery. (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014)

Sanjay Macwan – This AT&T Technology and Innovation exec is taking the company's spirit of innovation to the next level through a collaborative effort with venture capitalists and startup companies in technology. Hear why he is making news! (Nifty Fifty 2012)

Ann Makosinski - The story of this amazing 18-year-old student will inspire you! At the age of 15, she gained international attention for her invention of the Hollow Flashlight -- a flashlight that runs off the heat of the human hand. Discover what this innovation may mean for future energy-saving technologies! (X-STEM 2016)

Kosta Makrodimitris, Ph.D. – Learn how this truly multi-disciplinarian scientist is using his skills in chemistry, public health, bioinformatics, computational science and other areas to assure the safety and efficiency of new drugs and medical devices! (Nifty Fifty 2012)

Stan Maloy, Ph.D. – Get the latest insights into the world of microbiologists and their tools of science with Dr. Maloy, and learn why these scientists are known as front-line defenders in the expanding battle against germs and bacteria. (Nifty Fifty 2012, Nifty Fifty 2013/2014)

Erika Matunis, Ph.D. – Let this noted cell biologist at Johns Hopkins Medical School take you inside her groundbreaking research: how stem cells renew and differentiate, and what this means to shedding new light on how cells divide during reproduction! (Nifty Fifty 2015/2016)

Camsie McAdams – Can you motivate K-12 students successfully in math through rap music, creative writing and brownies? Well this STEM Director for DC Public Schools is! Hear her exciting story. (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

Alan McCormack, Ph.D. – Discover how this veteran educator and president of the National Science Teachers Association is using magic presentations based on the Harry Potter phenomenon to ignite students' excitement in science! Nifty Fifty 2012 , (X-STEM 2014)

Maura McLaughlin, Ph.D. – Learn how the pioneering work of this noted astrophysicist in studying pulsars and gravitational waves is helping to change the way science views the universe and the laws that govern it. (Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

James McLurkin, Ph.D. – This dynamic young robotics innovator, who was named one of Time magazine's top 5 engineers, is known for developing the promising new genre of robotics called "ant robots" based on inspiration from his ant farm. Discover how these ant robots are providing exciting insights into artificial intelligence and the connection between engineering and biology! (X-STEM 2015)

Marcia McNutt, Ph.D. – From serving as Director of the U.S. Geological Survey government agency to her current post as Editor-in-Chief of the prestigious journal Science (two posts in which she became the first woman to be appointed), this prominent geophysicist is known for her groundbreaking achievements. Learn how as editor of Science she is using her vast expertise to influence the direction of how science discovery is communicated in a wide range of research frontiers! (Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2014/2015)

Jessica Meir, Ph.D. – Since childhood, she dreamed of becoming an astronaut. Now discover how that dream has become a reality for this marine biologist and recent graduate of NASA’s rigorous astronaut training program, and how she could possibly be selected to be among the first humans to travel to Mars! (X-STEM 2016)

Spyridon (Spiros) Michalakis, Ph.D. - Explore the future of physics with this amazing quantum physicist from Caltech University who served as scientific advisor for the Hollywood movie, Ant-Man. (X-STEM 2016)

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 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. (Nifty Fifty 2014/2015, Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

Stephen Mitroff, Ph.D. – The emerging frontier of visual cognition is being applied in myriad ways -- from potential life-saving situations in medicine and airport security, to enhancing training of high-performing athletes. Discover from this noted cognitive scientist what his groundbreaking research in this field is revealing, including about the perils of texting while driving, and how video gaming is being used by medicine, security and other professions to sharpen visual accuracy during on-the-job search tasks. (Nifty Fifty 2015/2016)

Catherine Mohr, M.D. – She began her career developing alternative-energy vehicles and high-altitude aircraft, but discover why she is known today for a different high-tech pursuit: creating the next generation of surgical robots and robotic procedures! (Nifty Fifty 2012, X-STEM 2014)

Erika Montague, Ph.D. – This noted oceanographer at OceanGate, Inc. has plumbed the depths of the sea in the latest submersible vehicles and even served as a member of James Cameron’s Deepsea Challenge team, but learn what fascinates her most about the world beneath the ocean! (Nifty Fifty 2014/2015)

Ruben Morales – Learn how this Triton International engineer and former Naval submariner is tackling some of the most challenging subsea markets today, including Energy, Defense and Underwater Vehicles! (Nifty Fifty 2015/2016)

Angela Leimkuhler Moran, Ph.D. – When this noted professor of Materials Engineering at the U.S. Naval Academy is not teaching midshipmen, she is deeply involved with her award-winning outreach programs to inspire K-12 students in STEM. Learn the secrets of how she is motivating the innovative leaders of tomorrow! (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2014/2015, Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

Corrie Moreau, Ph.D. - This prominent evolutionary biologist at Chicago’s renowned Field Museum of Natural History transformed her childhood love of ants into a research focus that is shedding fascinating light on the evolution and diversification of these creatures! (X-STEM 2017)

Frank Morgan, Ph.D. – This professor of Mathematics at Williams College carries lofty credentials -- including being known for proving math’s famous “Double Bubble” conjecture. But discover first-

hand how he is equally passionate about motivating young students in mathematics in exciting ways through his award-winning teaching and outreach techniques! (X-STEM 2015)

S. Brent Morris, Ph.D. – He wrote his Ph.D. dissertation on the mathematics of card shuffling, now discover how he is exciting and motivating kids in the concepts of math and computer science through card tricks! (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014)

Kam Ng, Ph.D. – Learn first-hand of his plans and challenges in carrying out the Navy’s ambitious initiatives in STEM to help attract the next generation of young innovators. (Nifty Fifty 2012)

Matthew Nordan – Scientific discovery today is intimately tied to business savvy. Learn why from this noted entrepreneur who trained in scientific research and who co-founded Lux Research in 2004 and now serves as vice president at the capital investment firm Venrock. (Nifty Fifty 2010, Nifty Fifty 2013/2014)

Mark Norell, Ph.D. – This scientist, Curator at New York’s famous American Museum of Natural History, is one of the world’s foremost paleontologists. Get ready for adventure as he shares the excitement of uncovering historic specimens of meat-eating dinosaurs from Mongolia’s Gobi Desert and other remote locations of the world! (Nifty Fifty 2014/2015)

Kenneth Olden, Ph.D. – Our environment is possibly more important than genetics in determining our health, says this prominent environmental scientist. As a director with the U.S. Environmental Protection Agency (EPA), he is leading an effort to combine science with active community engagement in empowering citizens to take more control of environmental factors that impact human health. (Nifty Fifty 2013/2014, Nifty Fifty 2014/2015)

Kathie Olsen, Ph.D. – She's a neuroscientist who went on to serve as Chief Scientist for NASA, and as the Deputy Director and Chief Operating Officer of the National Science Foundation (NSF). And now, heading her own science and technology consulting firm known as ScienceWorks, she'll give you timely insight into how scientific expertise is used to make a lasting impact in science policy. (Nifty Fifty 2012, Nifty Fifty 2013/2014)

Tolulope “Tolu” Olugboji, Ph.D. – Growing up in his native country of Nigeria, this University of Maryland geoscientist excelled at using the computer to solve daunting problems in math and physics. Get ready for hands-on excitement as he demonstrates how his high-tech computer models are today studying seismic activity deep beneath the Earth’s surface! (Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

Charles Orgbon III - He founded the youth-run environmental organization called Greening Forward as a website at age 12. Now discover how this University of Georgia student has transformed the organization into a dynamic global network of young environmental changemakers who are impacting a wide range of issues -- from water conservation to waste recycling. (X-STEM 2017)

Michael Orrison, Ph.D. – Although he is known nationally for his research into the lofty frontiers of mathematical theory, this math professor at Harvey Mudd University is equally respected by students for his ability to connect mathematics in exciting ways to such everyday topics as art, history and music. Discover why his “Mathematics of Voting” course is consistently one of the most popular among his learners! (Nifty Fifty 2014/2015)

Jason Osborne – Hang on as this co-founder of the exciting natural science exploration organization known as Paleo Quest takes you deep underwater in search of new species of sharks, whales and other marine mammals from our ancient past! (X-STEM 2014, X-STEM 2015)

Jennifer Ouellette – Intimidated by science and math as a student, she has since risen to become one of the nation's most noted science writers and authors. Discover her unique and intriguing writing style of communicating that science is indeed *everywhere!* (Nifty Fifty 2014/2015)

Karen Panetta, Ph.D. – Learn how this engineering professor and her nationally-acclaimed outreach program called “Nerd Girls” is changing the way many K-12 female students look at engineering and its many career opportunities. (Nifty Fifty 2012, Nifty Fifty 2013/2014)

Elizabeth Parry – Learn from this noted expert in inquiry-based classroom techniques how to wow students through motivating experiences in science and engineering that they're sure to remember! (Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

Dana Perkins, Ph.D. – Learn how she made the transition from a bench scientist in microbiology to a key government policymaker on bioterrorism and biosecurity at the U.S. Department of Health and Human Services! (Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

Mark Perks, Ph.D. – This educator at the University of Maryland has taught chemistry from central Pennsylvania to West Africa. Learn how these different experiences have contributed to his unique style of making the wonder and complexities of chemistry come alive for students! (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

Jon Perry - Discover how this artist - who has created animated videos for such giants as NASA and the NSF -- is now exciting viewers worldwide with his animated works in his new website venture called Stated Clearly. You won't believe how intriguing he makes genetics and evolution! (X-STEM 2016)

Emanuel F. “Chip” Petricoin III, Ph.D. – He's one of the world's leading experts in the emerging biotech field of proteomics. Learn how this frontier is building upon the success of the Human Genome Project to open up new vistas in the early detection and treatment of cancer! (Nifty Fifty 2014/2015, Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

Darryll Pines, Ph.D. – Learn from this “can do” engineer and Dean of the prestigious Clark School of Engineering at the University of Maryland what America must do to maintain its global leadership in engineering. In addition, discover how many visionary approaches that he has led and implemented are already bearing fruit in attracting and retaining engineering students. (Nifty Fifty 2015/2016)

Briana Pobiner, Ph.D. – Let this noted paleoanthropologist and science educator from the Smithsonian take you on an unforgettable journey into our evolutionary past as she explores the lives of our ancestors and how they influenced our penchant for meat-eating and other dietary habits! (Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

Jeff Potter – This computer software engineer's wildly popular book, *Cooking For*

Geeks -- deemed by the *Washington Post* as one of the most useful books on understanding cooking -- is a must-read for anyone interested in the science of culinary arts. Discover how this self-described geek combines his passion for science and cooking to educate students and the public about the joys of satisfying the palate! (Nifty Fifty 2014/2015)

Ciara Proctor -- Solving technological problems and overcoming personal challenges are characteristics that are making this recent computer science grad one of the country's rising young women in computing to watch in the future! Achievements in her burgeoning career already include winning the prestigious Aspirations in Computing Award given by the National Center for Women In Information Technology (NCWIT), and serving as a software developer for Chicago's noted IMC Financial Markets -- one of the world's most active proprietary trading firms. (Nifty Fifty 2015/2016)

Steven Projan, Ph.D. -- This top scientist at MedImmune is helping to discover and develop a new generation of antibiotics and vaccines to battle the growing spread of resistant bacteria around the world -- and save countless lives in the process! (X-STEM 2015)

Michele Weslander Quaid -- She's one of the top innovators in technology, and also among the nation's most passionate STEM advocates. Discover how in her position as Chief Innovation Evangelist at Google she is inspiring countless young learners with her motto: "Students are never too young to change the world!" (X-STEM 2015)

Alfredo Quiñones-Hinojosa, M.D. -- This eminent neurosurgeon and researcher at Johns Hopkins School of Medicine says: "My hands used to pick weeds as an immigrant in this country. Now they perform brain surgery." Hear his amazing story! (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014)

Margaret Race, Ph.D. -- How can scientists best avoid introducing harmful microbes from other planets to Earth during space exploration? Discover how this astrobiologist at the SETI Institute is at the forefront of answering such questions in the emerging field of Planetary Protection! (Nifty Fifty 2013/2014)

Ainissa Ramirez, Ph.D. -- Learn how this noted materials scientist, through her groundbreaking research in 'smart' metals and solders, is helping to revolutionize the way alloys are used in everything from cell phones to life-saving medical devices. (Nifty Fifty 2012, Nifty Fifty 2013/2014)

Carol Reiley -- Learn how this savvy Ph.D. student in computer science is at the forefront of ushering in a new frontier of technology: teleoperated robotics which is enabling sophisticated humanoid machines to help perform everything from surgery and space exploration to disaster rescue! (Nifty Fifty 2012, Nifty Fifty 2013/2014, X-STEM 2015)

Bob Reiss -- This world-traveled journalist and author will tell you why the current ice melt climate conditions in the Arctic represent both challenges and pitfalls for America! (X-STEM 2014)

Karen Rennich -- Why are bee populations in the U.S. declining at an alarming rate, and what can be done about it? Learn how the work of this engineer/beekeeper, as Executive Director of the Bee Informed Partnership, is revealing fascinating insights! (Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

Melissa Rhoads – The ability to capture, manage and analyze huge and complex sets of data is a tremendous challenge by any means, but discover how this data analytics strategist at Lockheed Martin is helping to lead the effort to harness big data to improve cyber security, disease detection, energy management and other fields! (X-STEM 2014)

Laura Richman, DVM, PhD – This noted veterinarian scientist and molecular virologist launched her career 18 years ago by identifying a mysterious, fatal virus that was killing elephants. Learn today how she is saving human lives by developing high-tech medicines through her work in translational science at biotech leader MedImmune. (X-STEM 2014)

Clay Robinson, Ph.D. – Dig deep and get your hands dirty in the science of soil with this renowned environmental scientist, better known by K-12 students in his outreach endeavors as “Dr. Dirt.” Discover -- through his exciting and classic hands-on experiments and games, why he says: “Soil is not just dirt -- Soil is life!” (X-STEM 2015)

Griffin Rodgers, M.D. – Discover how this physician – as director of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) -- is leading the fight against some of the most serious illnesses affecting public health today. (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

Wendy A. Rogers, Ph.D. – Recent statistics reveal what most of us already knew: We as a population are living longer, and the generations after us will stand to live longer yet. Explore with this leading researcher how her lab is studying technologies, including assistive robotics, to help older individuals maintain their independent lives, and to age successfully. (X-STEM 2014)

James Rohr, Ph.D. – What can engineers learn from dolphins and other fish about how to design better surface and underwater vessels? A lot, says this noted engineering physicist for SPAWAR. Discover how he is using such principles in ship design for the U.S. Navy! (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014)

Steve Rolston, Ph.D. – This physicist in 1999 led the research group that created the first ultracold plasmas (gases of ionized atoms) that today are helping scientists better understand plasma found in white dwarf stars and interiors of planets. Discover the groundbreaking work in quantum physics he is now spearheading as co-director of the noted Joint Quantum Institute! (Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

Chantelle Rose – She has been selected as among the first 7 K-12 teachers to participate in the Teachers in Space program’s suborbital flights in the next 2-3 years. Learn how this accomplished science educator is preparing to bring the excitement of this adventure back to her students! (Nifty Fifty 2012)

Robie Samanta Roy, Ph.D. – How is America doing in maintaining its competitive edge in technology, including attracting the best and the brightest in STEM? This noted Lockheed Martin exec provides timely -- and surprising -- insight! (X-STEM 2015)

Kenneth Scheel – This noted game developer invented such toys as the famous wood construction gizmo called KEVA Contraptions, and the exciting FlingSock toy. Get inside the mind of this prolific

creator as he demonstrates how his inventions are used as resources by young learners and engineers alike in problem-solving, design conception and STEM pursuits! (X-STEM 2014)

Edward Scheinerman, Ph.D. – This mathematician at Johns Hopkins University is known for his advances in graph theory, but also discover how his innovations as Vice Dean of the university's school of engineering are helping to change the way creative-thinking engineers of tomorrow are trained! (Nifty Fifty 2014/2015)

David Schenone – Discover how this innovative leader at NIKE, Inc. is using the emerging science field of biomimicry to help Nike create some of the lightest and fastest sports footwear on the planet! (X-STEM 2014)

Richard Schlegel, M.D., Ph.D. – Meet the scientist who developed the vaccine for the human papillomavirus (HPV), and learn how this vaccine is working to reduce the incidence of HPV, the cause of nearly all cases of cervical cancer in women worldwide! (Nifty Fifty 2014/2015)

Nick Schneider, Ph.D. – Let this high-profile astrophysicist from the University of Colorado Boulder take you inside one of his latest projects -- NASA's historic MAVEN Mission to Mars, which was launched last year and is due to arrive at the Red Planet in the Fall of 2014. Learn how he led the design of the MAVEN robotic explorer's sophisticated Imaging UltraViolet Spectrograph technology to study Martian upper atmosphere for the first time! (Nifty Fifty 2014/2015)

Matthew P. Scott, Ph.D. - This renowned developmental biologist and president of the esteemed Carnegie Institution for Science will fascinate you as he takes you inside his speakers' topic: Why Do You Look Like Your Parents? The Story of Genes That Control How You Grew, and the History of Life. (Nifty Fifty 2016/2017)

Joseph Schwarcz, Ph.D. – Meet Dr. Joe! Learn how this professor of chemistry from Canada's McGill University uses his multi-faceted skills as a chemical scientist, magician, food expert and motivational speaker in communicating science to kids in fascinating ways! (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2016/2017)

Louie Schwartzberg – This cinematographer is world-renowned for using his skill in high-speed cameras to uncover fascinating aspects of nature's hidden beauty – wonders not normally detected by the human eye! (X-STEM 2015)

Katherine Serrano – Hear from this biomedical engineer why she advises young science students to learn a foreign language and to participate in research opportunities with mentors while in college - two extra steps that will make them more competitive in the challenging fields of technology. (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014), Nifty Fifty 2014/2015, Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

Carlo Sequin, Ph.D. – Learn from this renowned electrical engineering and computer scientist how he uses the latest in 3D and computational research to create stunning works of sculpture and geometric abstract art! (X-STEM 2014)

Kimberly Flagg Sellers, Ph.D. – Let this trailblazing statistician and mathematician demonstrate how the power of Statistics is making a difference globally in a wide range of areas -- from helping

scientists track incidence of disease and population trends to understanding the stock market and migratory patterns of whales, birds and other wildlife! (Nifty Fifty 2013/2014, Nifty Fifty 2015/2016, X-STEM 2015)

Padmanabhan (Padhu) Seshaiyer, Ph.D. – This professor of Mathematical Sciences is on a personal mission to change the often-negative perception young students have about math. Discover the motivating techniques he uses to turn math haters into math lovers! (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2015/2016, X-STEM 2015, Nifty Fifty 2016/2017)

Anat Shahar, Ph.D. - Get ready to explore the Earth's mysterious origins with this pioneering geologist from the Carnegie Institution for Science. She gained scientific acclaim in 2016 for recreating in the laboratory the approximate intense pressures that existed at Earth's core when the planet was formed! (Nifty Fifty 2016/2017)

Arthur Shapiro, Ph.D. – Delve into the fascinating world of the science of visual illusions with this internationally-known cognitive neuro-scientist from American University. Discover what his work is teaching us about how optical illusions can trick the eye and brain in the perception of reality, and how this research is being applied in the real world -- ranging from devising more effective diagnostic methods for eye conditions, to explaining why a curve ball is so hard to hit! (Nifty Fifty 2012, Nifty Fifty 2015/2016, X-STEM 2017)

Beth Shapiro, Ph.D. – Delve into the past with this distinguished evolutionary biologist as she takes you inside the emerging field of ancient DNA where scientists are discovering fascinating information about our past from the genes of extinct animals. (Nifty Fifty 2013/2014)

J. Marshall Shepherd, Ph.D. – When such notables as NASA, Congress and the Department of Defense need insight into mysterious climate and weather systems, they turn to this meteorology research scientist. Let him share his expertise with you on weather phenomena ranging from hurricanes and thunderstorms to climate systems studied via satellite, radar and high-tech computer models! (Nifty Fifty 2013/2014)

Michael Shermer, Ph.D. – Why do humans tend to believe myths, conspiracies and the like? This noted author and publisher of *Skeptical Magazine* says the human tendency to believe strange things -- from alien abductions to dowsing rods -- boils down to two of the brain's most basic, hard-wired survival skills. Learn what they are, and how they get us into trouble! (X-STEM 2014)

Micah Sherr, Ph.D. - From combating computer hacking to securing our e-voting and military defense systems, learn from this prominent Georgetown University researcher of the challenges he and other computer scientists face in keeping the world of cyber space safer. (Nifty Fifty 2016/2017)

Kenneth Shields - Learn how this STEM exec is engaging America in the exciting, groundbreaking innovations of the International Space Station (ISS) through his work with entrepreneurs, scientists and K-12 schools alike! (Nifty Fifty 2016/2017)

Sabrina Sholts, Ph.D. - Learn how this noted Smithsonian anthropologist (who became hooked on a career in this field after her first anthropology class in high school) is using the study of bones to

shed light on the connections between human and environmental health from the distant past to present day. (Nifty Fifty 2016/2017)

Sarah Shomstein, Ph.D. – In an age of information overload -- characterized by ringing cell phones, the internet, 24/7 news channels and multi-tasking -- our brains are challenged like never before to process information for efficient decision-making. Learn from this cognitive neuroscientist what her research is revealing about how the brain makes decisions, and how our brain is helping us respond and adapt to life in the information age! (Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

Seth Shostak, Ph.D. – Are we the only intelligent life form in the galaxy? Explore this and other controversial questions in astronomy with this senior astronomer from the renowned SETI Institute in Mountain View, CA! (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

Siddhartha Sikdar, Ph.D. – Pain. The word itself makes us cringe. But for this noted bioengineer, learn how pain is a major focus of research as his lab at George Mason University uses the power of biophysics to develop new diagnostic ultrasound techniques to treat and diagnose chronic pain -- an affliction that impacts millions of Americans each year and costs the nation over \$300 billion in lost productivity annually. (Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

Seymour Simon – He's been dubbed by the *New York Times* as the best author of science books for children. Discover the secret behind his prolific 30-year career how with consistency he produces books that engage and excite young readers in an astonishing range of science topics. (Nifty Fifty 2012, X-STEM 2014)

Emiliana Simon-Thomas, Ph.D. – Can the expression and practice of gratitude in our daily lives actually enhance our health and the well-being of those with whom we interact? Learn from the science director of UC Berkeley's groundbreaking Greater Good Science Center how the emerging science of gratitude is shedding light on the amazing benefits of happiness and thanksgiving. Discover also how Emiliana will co-instruct an unprecedented free 8-week online class -- open to learners worldwide -- in the "Science of Happiness", which stands to be the world's largest online course! (Nifty Fifty 2014/2015)

Hayat Sindi, Ph.D. – Striving to overcome cultural and gender barriers in her native country, discover how this prominent researcher and entrepreneur came to co-found a biotech company that is changing the face of how developing countries diagnose disease. (Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2014/2015)

Steve Smalley – Learn why this project engineer with Northrop Grumman says, "In a country driven by technology, we need more inventors and engineers!" (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2014/2015, Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

Mary Snitch – She calls it "that moment of sparks and lightning" – that special moment when a student decides on his or her career direction. Learn how this director at Lockheed Martin's Washington Operations is helping students find that moment through the STEM outreach endeavors she is involved with. (Nifty Fifty 2010, Nifty Fifty 2012)

Darlene Solomon, Ph.D. – This senior executive and technology officer for Agilent Technologies takes you inside futuristic innovations on the horizon to show how biology is changing everything. You'll learn how biology and engineering are coming together to address challenges such as feeding the world, healing disease, protecting the environment and making energy renewable. (X-STEM 2014)

Susan Solomon – Discover how this successful attorney and health care advocate became inspired to establish the New York Stem Cell Foundation in her apartment and nurture this organization to where it is one of the world's leading non-profit entities in stem cell research today! (Nifty Fifty 2015/2016)

Anne Spence, Ph.D. – This leading engineer at the University of Baltimore says that the best skill an engineer can have is an inquisitive mind for problem-solving. Discover how she is using this approach in outreach programs to inspire and motivate more females to the field. (Nifty Fifty 2010, Nifty Fifty 2012)

Marc Spiegel – He travels the U.S. and the world as a storyteller and actor to wow kids and other audiences about the life and scientific accomplishments of Albert Einstein. Experience the excitement of the man who gave us $E=mc^2$ in Spiegel's dramatic storytelling production, "Einstein Alive!" (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014)

Richard Spinrad, Ph.D. – As Chief Scientist of the prestigious National Oceanic and Atmospheric Administration (NOAA), he has one of the most diversely challenging -- and exciting -- jobs today in science. Discover why! (Nifty Fifty 2014/2015, Nifty Fifty 2015/2016)

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's Moon, and now as the recently-appointed Chief Scientist at NASA. Discover this fascinating leader in space exploration and the future she foresees for NASA and spaceflight! (X-STEM 2014, Nifty Fifty 2014/2015, Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

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. (Nifty Fifty 2015/2016)

Laura Taalman, Ph.D. – Learn why this creative professor of Mathematics at James Madison University --with her interest in Sudoku puzzles, 3D printing and knot theory -- is considered one of the most effective math educators in higher education and STEM outreach today! (Nifty Fifty 2014/2015)

James Tanton, Ph.D. – Discover from this noted research mathematician and math educator (who founded the wildly popular Thinking Mathematics website and book series) how to add zing, curiosity and excitement to classroom mathematics in unforgettable ways! (Nifty Fifty 2013/2014)

Richard Tapia, Ph.D. - This renowned mathematician at Rice University was awarded the National Medal of Science in 2011 for his pioneering work in optimization theory, but discover how he is

equally celebrated for his innovative endeavors to inspire minorities and females in STEM! (X-STEM 2016)

Johanna Teske, Ph.D. - Delve into the exciting world of this noted astronomer from the Carnegie Institution for Science as she explores giant and small planets of the solar system, twin and host stars and other planetary bodies using some of the most powerful telescopes in astronomy! (Nifty Fifty 2016/2017)

Don Thomas, Ph.D. – He’s been an astronaut on four different Space Shuttle missions, but discover why this engineer says his most rewarding job is the one he has now – motivating the next generation of young scientists as director of Towson University’s Hackerman Academy of Mathematics and Science! (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014)

Vanessa Thompson – Although just 15 years old, this innovator is already making her mark both nationally and internationally in a grassroots effort to make math and science more engaging for young students. Experience how her StorybookMath.org website, which has been honored for excellence by the U.S. Congress, is helping math concepts come alive for young learners through exciting, original video stories and storybook characters! (X-STEM 2015)

Kathryn Thornton, Ph.D. – As a NASA astronaut, she logged 975 hours in space, including more than 16 million miles in orbit, and became the second American woman to walk in space in 1992. Discover her perspectives on the future directions of American space exploration and insight into her current work as a professor with the School of Engineering and Applied Science at the University of Virginia. (X-STEM 2014)

Robert Tjian, Ph.D. – Learn from this preeminent molecular biologist what is happening across a broad spectrum in the exciting world of life sciences research. He should know: Dr. Tjian is the president of the powerful Howard Hughes Medical Institute (HHMI), one of the world's largest private funders of biomedical research! (X-STEM 2014)

Dr. Roger Tourangeau, Ph.D. – Discover from this leading survey methodology expert why in this data-driven world the role of polls, surveys and statisticians will always be in demand! (Nifty Fifty 2012)

Valerie Torres, Ph.D. – She's known as a "bridge builder" at AT&T, developing innovations that connect customers to some of the most advanced telecommunications technology available. Learn how this computer scientist is helping to keep AT&T on the cutting edge, and the challenges she overcame as a child to reach career success! (Nifty Fifty 2012)

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! (Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

Stephan Turnipseed – Find out from this noted K-12 education advocate and president of LEGO Education how interactive, hands-on experiences in the classroom not only enhance creativity, learning and discovery at early ages, but also bolster children's capacity to persevere through failure! Discover why he says hands-on learning is key to training kids for success in STEM and other areas of the 21st century workplace. (Nifty Fifty 2013/2014)

Kitt Vanderwater – “Follow your passion with boldness and determination!” says this talented young Google software engineer. Discover the personal story behind her message as she inspires young girls and others to overcome challenges on the way to STEM careers! (Nifty Fifty 2014/2015)

Dennis vanEngelsdorp, Ph.D – Hear the latest from this highly acclaimed bee researcher what science is uncovering about the mysterious death and disappearance of the world’s honey bee population, and what impact this phenomenon is having on the globe’s ecosystem. (Nifty Fifty 2012, Nifty Fifty 2013/2014, Nifty Fifty 2014/2015, Nifty Fifty 2015/2016)

Maj. Gen. Jacqueline D. Van Ovost – From serving as an Air Force command pilot, to her current position as Vice Director of the Joint Staff at the Pentagon, this military leader knows the key role that STEM plays in keeping the nation defense-ready. Discover how she is using her STEM background -- including her degrees in Aeronautical and Mechanical Engineering -- to maintain America's national security! (X-STEM 2016)

J. Craig Venter, Ph.D. – The scientist who led the first sequencing of the human genome not only has plenty to say about the future of DNA research discovery, but also about how to really excite today's students about science (since he was once a bored science student himself)! Don't miss his insight! (X-STEM 2014)

Dan Vergano—As a science reporter for USA TODAY, he covers some of the most fascinating and controversial topics, but learn why the most rewarding part of his job is making complex science information both clear and accurate for the general public. (Nifty Fifty 2010)

Charles Vest, Ph.D. – Learn from this former president of MIT where the field of engineering is going and how young students can best prepare (based on a personal philosophy he’s followed throughout his career. (Nifty Fifty 2012, Nifty Fifty 2013/2014)

Lydia Villa-Komaroff, Ph.D. – Don’t miss the opportunity to hear this amazing trailblazer who in 1975 became the third Mexican-American woman to earn a science Ph.D. in the U.S. and later the scientist behind a landmark discovery in diabetes! (X-STEM 2016)

Nora Volkow, M.D. – Why are youngsters in their teen years more vulnerable to drug addiction? The answer lies in a critical stage of brain development, says this pioneering research psychiatrist and Director of the National Institute on Drug Abuse at the NIH. Discover how adolescents can mitigate the risk! (X-STEM 2016)

Sara Volz – This next-generation scientist made national news – at just 17 years old - when she won the coveted \$100,000 prize in the 2013 Intel Science Talent Search for inventing a method to boost the natural oil content of algae for alternative fuel development. Learn how she conducted her groundbreaking research from an elaborate laboratory constructed in her bedroom! (Nifty Fifty 2013/2014, X-STEM 2016)

Erika Wagner, Ph.D. – Learn how this dynamic engineer with Blue Origin is helping to lead the way in opening commercial space flight to the public on multiple levels! (X-STEM 2016)

Danni Washington - This rising marine biologist and science communicator has transformed her childhood passion for the sea into exciting outreach endeavors that inspire kids and adults alike about the wonders of the ocean. Also don't miss her dynamic new STEM educational TV series, *Xploration Nature Knows Best*, which aired last fall on FOX Networks! Full Season 1 Episodes can now be viewed on Hulu. (X-STEM 2017)

Thorsen Wehr – When he was just a high school junior, he was elected to the prestigious Sigma Xi Scientific Research Society for his groundbreaking work in nonlinear sound waves. Learn how his current research as a computer science student at the University of Washington makes him a top innovator to watch for the future! (X-STEM 2016)

Peter Weijmarshausen – Discover how this innovator, as CEO of Shapeways -- a New York-based start-up he co-founded, is pioneering the new high-tech field of 3D printing. Learn how his advances in this frontier are enabling products to be manufactured quicker and less expensively not only by large companies but by average entrepreneurs as well! (X-STEM 2014)

Alycia Weinberger, Ph.D. – Go on the hunt for extrasolar planets with this noted research astronomer. Learn how her groundbreaking work at the Carnegie Institution is shedding light on how planets are formed via young stars and their disks! (Nifty Fifty 2015/2016, Nifty Fifty 2016/2017)

Dan Werthimer, Ph.D. – Are we the only intelligent life in the universe? Gain fascinating insights into such long-debated questions from this noted astronomer at the SETI (Search for Extraterrestrial Intelligence) Institute as he reveals SETI's latest research findings! (Nifty Fifty 2014/2015)

James West, Ph.D. – This acoustical scientist is world-known for his invention of the foil electret microphone. Learn how he turned his childhood fascination with electricity into a career as a world-class innovator in acoustics! (X-STEM 2014)

Paul West, Ph.D. – This innovator in the field of Atomic Force Microscopy is ushering in a new class of ultra-powerful microscopes, helping to give researchers stunning views of matter like never before! (X-STEM 2014)

Aaron White, Ph.D. – Learn how the brain changes during childhood and adolescence and how the choices we make – including alcohol and drugs - impact our brain development from this Senior Scientific Advisor to the Director at the National Institute on Alcohol Abuse and Alcoholism (NIAAA) at the National Institutes of Health. (Nifty Fifty 2016/2017)

Herman White, Ph.D. – He smashes atoms for a living. Discover why you'll never take for granted quarks, protons and electrons again after hearing this prominent quantum physicist from the Fermi National Laboratory! (Nifty Fifty 2010, Nifty Fifty 2012, Nifty Fifty 2013/2014)

George Whitesides – As CEO of Virgin Galactic, he is heading the company's goal to expand commercial space travel from an experience open only to the privileged few to the average citizen. Learn how this veteran of the space industry is well on the way to accomplishing this auspicious mission, and what he envisions for the future of space travel! (Nifty Fifty 2012)

Glen Whitney, Ph.D. – Hate math? Learn how this mathematician gave up a lucrative career as a hedge fund algorithm manager to establish the nation's first-ever interactive math museum for kids called the Math Factory! (Nifty Fifty 2010, Nifty Fifty 2012, X-STEM 2014)

Edith Widder, Ph.D. – Hold on to your seats as this noted marine scientist takes you deep below the ocean to experience the spectacular lights of bioluminescence emanating from sea life! (Nifty Fifty 2012)

Cassidy Williams – Even before graduating recently from Iowa State University with a Bachelor's degree in Computer Science, she was already being noticed, for various reasons, as an emerging innovator in her field -- ranging from her reputation as a winning hackathon competitor to her persuasive computer science presentations at the United Nations and the White House. Discover how she is using her impressive talents to inspire other young women in computational science -- a field in which few women venture. (Nifty Fifty 2014/2015)

Zdenka Willis – The research findings from this NOAA ocean scientist are eye-opening, including the discovery of common drugs now being found in marine life off our shores. Discover what this portends for the health of our oceans, and what can be done! (Nifty Fifty 2015/2016)

Scott Willoughby – What's involved in the massive undertaking to develop the next-generation space telescope to replace Hubble? Find out from this noted engineer who is heading Northrop Grumman's ambitious plans to introduce the James Webb Telescope by the end of the decade to capture images of the Big Bang as they appeared more than 13.7 billion years ago! (X-STEM 2014)

Noah Wilson-Rich, Ph.D. - This prominent biologist and founder of the Best Bees Company takes you inside the fascinating world of honeybees, demonstrating why we should all be concerned about their endangered plight and what can be done to save them. (X-STEM 2017)

Peter Winkler, Ph.D. – Welcome to the world of this leading mathematician where the mystery of mathematics, computation and numbers are explained through the wizardry of puzzles! (X-STEM 2014)

Steve Wolf – The work of this well-known Hollywood film stunt performer and special effects coordinator has appeared in such movies as *The Firm*, *The Last Boy Scout*, and *Cast Away*. Now, fasten your seat belts as Steve (founder of Science in the Movies, and president of Special FX International) takes you deep inside the wonders of physics and chemistry via the magic of stunt demonstrations -- from amazing pyrotechnics to unbelievable vehicular crashes! (Nifty Fifty 2012, X-STEM 2014)

Jeremy Wolfe Ph.D. – Discover from this noted psychologist how our brain and eyes work together in amazing ways to perform the myriad visual search tasks we conduct each day. And learn how his lab is working with radiologists, airport security screeners and the military in improving their vigilance and accuracy in the potentially life-saving visual tasks they conduct! (Nifty Fifty 2013/2014)

Josh Wolfe – Learn how this entrepreneur is helping to propel future technological advances in biotechnology through the world of venture capital investment! (Nifty Fifty 2010, Nifty Fifty 2013/2014, X-STEM 2015)

Richard Wrangham, Ph.D. – Discover from this renowned Harvard University primatologist, who studied as a grad student under the famous Jane Goodall, how his groundbreaking research in Uganda with chimpanzees is shedding light on key evolutionary traits which make us human, including aggression and our need for social systems! (Nifty Fifty 2014/2015)

Josh Wurman, Ph.D. – Discover first-hand from this original storm chaser what it's like to track and study deadly tornadoes across the Kansas landscape and stare down wicked hurricanes off the Gulf of Mexico! (Nifty Fifty 2012, X-STEM 2014)

David Zahren – This science educator in Prince George's County, MD is widely known among students and teachers as the host, writer and producer of such science academic competitions as the *Science Bowl*, *It's Academic*, and *Give Science a Hand*, and as the weekend weatherman for Washington DC's WJLA-ABC 7/News Channel 8. Discover how he keeps students science-motivated through these venues! (Nifty Fifty 2013/2014, Nifty Fifty 2015/2016)

Carl Zimmer – He's rated as one of the most talented science writers in the nation. Explore with him the mysteries of evolution and neuroscience as he takes you on a fascinating journey through his work, ranging from *The Tangled Bank*, and *Parasite Rex*, to *Soul Made Flesh*. (Nifty Fifty 2012, Nifty Fifty 2013/2014)

Marlene Zuk, Ph.D. – This noted evolutionary biologist and author will take you deep inside the mystery of insects, the lifestyle of cavemen and other evolutionary fascinations! (X-STEM 2014)

Andrew Zwicker, Ph.D. – Hear why this physicist feels that the study of plasmas gets “no respect” in science education, and what he's doing to change that. (Nifty Fifty 2012, Nifty Fifty 2013/2014, X-STEM 2015)

Antonia Zaferiou – What do mechanical engineering and dancing have in common? This mechanical engineer (and dancer) -- from the Division of Sports Medicine at Rush University -- would be happy to enlighten you about how she combines the principles of physics, biomechanics, and biology in an unforgettable presentation! (Nifty Fifty 2014/2015, X-STEM 2017)

Andrea Ziomek, Festo Corporation – Delve into the amazing world of bio-inspired innovation with this global leader as it demonstrates how it's changing the world of manufacturing with technology inspired by the penguin, jellyfish and other wonders of nature! (X-STEM 2016)