

USA Science & Engineering Festival Announces Nifty Fifty Program –

Top Scientists Will Tell Their Stories in DC-Area Schools

Contact:

Larry Bock, Festival Executive Director, biobock@mac.com, 760-846-3473

Aimee Stern, Stern Communications, aimee@sterncommdc.com, 202-744-5004

Washington, D.C. In a massive effort to ignite a passion for science and engineering in middle and high school students, the [USA Science & Engineering Festival](#) will send more than fifty top scientists and engineers into local schools this October 10-24, 2010. The hope is that meeting scientists and engineers who love what they do, will help students embrace these disciplines and consider careers in them.

[The Nifty Fifty](#), as they are called, were carefully chosen from hundreds of applicants for their differing fields, talents, divergent backgrounds and ages, and ability to convey the importance of science to our nation's future.

Supported by festival host Lockheed Martin and sponsor Life Technologies Foundation, the scientists and engineers include high technology entrepreneurs and financiers, policy makers, actors, journalists, educators, researchers, explorers, video game developers, spies, alien hunters, astronauts and brain surgeons.

Here are some of the stories they'll be sharing:

- **Conversations among bacteria.** Do bacteria really talk to each other? What do they say? MacArthur "Genius" [Bonnie Bassler](#) of Princeton University will tackle the importance of communication at the most basic level.
- **How a migrant worker became a top brain surgeon.** [Alfredo Quinones Hinojosa](#) of Johns Hopkins will discuss his journey and work removing the most complicated and life-threatening tumors.

- **How 3D interactive games are used by [Lockheed Martin](#) to train the military for combat.** [David Smith](#), Lockheed Martin's chief innovation office, and a pioneer of 3D gaming, will discuss advances in the field since the launch of his first groundbreaking game 25 years ago. He'll explain how games are used in entertainment, training and military defenses. [Richard Boyd](#), the head of Lockheed Martin's Virtual World Labs, will show how the military uses 3D technology to prepare pilots for the dangers of war.
- **How an auto accident led to a career at [Life Technologies](#).** While recovering from an auto accident at age 12, [Chris Linthwaite](#) 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 leading biotechnology company.
- How bionic body parts and the Guitar Hero video game can save lives. [Robert Armiger](#) of Johns Hopkins University will talk about helping rebuild the lives of veterans injured on the battlefields of Iraq and Afghanistan with bionic body parts.
- The physics of NASCAR. Diandra Leslie-Pelecky through research supported by the National Science Foundation will address questions such as: What is it like to drive a couple hundred miles per hour and how do race cars go at such high speeds?
- **The politics of scientific research and discovery.** [Francis S. Collins](#) director of the National Institutes of Health discusses discoveries made by the Human Genome Project. [Alan I. Leshner](#) CEO of AAAS talks about influencing science policy in the nation's Capital and [Anthony Fauci](#), director of the National Institute for Allergy and Infectious Diseases, will talk about research to develop a vaccine for HIV/AIDS.

- **The invention of the Big Bang Machine.** How atoms are smashed, the workings of particle physics and the birth of the universe, explained by [Herman B. White](#) of Fermi National Accelerator Lab, [Larry Gladney](#) from the University of Pennsylvania and Sylvester [James Gates](#) from the University of Maryland, collectively referred to as the Cosmic Trio.
- **From abstract math formulas to how they affect real life.** [Mario Livio](#), astrophysicist and bestselling author, will discuss how math can help unlock the secrets of the universe and help some relate better to God.
- **How an engineer that helped create tougher toilet paper** became the manager of U.S. Education at the corporation which invented the first microprocessor. [Carlos Contreras](#) of Intel Corporation tells his story.
- **The chemistry of Thanksgiving dinner.** Connecting chemistry to her students' own experiences has helped [Diane Bunce](#) of Catholic University engage and excite her students about the field of chemistry.
- **The physics of superheroes.** [James Kakalios](#) of the University of Minnesota will talk about the physics behind development of unique characters for movies such as "The "Watchmen" and others.

The Nifty Fifty Scientists were selected from entries submitted by more than 100 professional science & engineering societies, including The National Academy of Engineering, AAAS, the American Chemical Society, IEEE and American Woman in Science; 100 universities and colleges such as Harvard, MIT, Princeton, University of California at Berkeley, Johns Hopkins and the U.S. Naval Academy; 50 federal agencies and laboratories including the National Science Foundation, NASA, the Department of Energy, the Air Force Office of Scientific Research and the Lawrence Livermore National Laboratory; 75 informal science outreach organizations including the Smithsonian Museums, the United States Botanic

Gardens and the Marian Koshland Science Museum of the National Academies; and more than 25 corporations, many of which are Festival sponsors.

The USA Science & Engineering Festival is hosted by [Lockheed Martin](#) and [sponsors](#) include [Life Technologies Foundation](#), K&L Gates, Clean Technology and Sustainability Industries Organization (CTSI), Larry and Diane Bock, ResMed Foundation, Farrell Family Foundation, Alexandria Real Estate Equities, Northrop Grumman Corporation, Agilent Technologies, Amgen, Celgene Corporation, Cisco, The Dow Chemical Company, National Institutes of Health, Illumina, The Kavli Foundation, Intel Corporation, You Can Do the Rubik's Cube, Vertex Pharmaceuticals Inc., Genentech Inc., MedImmune, Sandia National Laboratories, Project Lead The Way (PLTW), Baxter International, Celestron, NuVasive Inc., FEI Company, Case Western Reserve University, Biogen Idec Foundation, **LifeStraw**[®], Microsoft Corporation, Draper Laboratory, Silicon Valley Bank, Bechtel Corporation, SpaceX, the National Radio Astronomy Observatory, Research in Motion and the Thirty Meter Telescope Project.

Current [media partners](#) include [Discovery Communications](#), *Popular Science and Science Illustrated*, *New Scientist*, EE Times Group, SCIENTIFIC AMERICAN, *POPULAR MECHANICS*, ScienceBlogs, *Technology Review* published by the Massachusetts Institute of Technology, The Epoch Times, "WAMU 88.5 - American University Radio," C&EN, the newsmagazine of the chemical & related sciences, *Forbes Wolfe Emerging Tech Report*, Career Communications Group, Engineering.com, the Northern Virginia Technology Council, Career Communications Group, FAMILY Magazine, Sigma Xi, SciVee, Inc., SchoolTube, LLC.

About the USA Science & Engineering Festival

The first USA Science & Engineering Festival from 10/10-10/24, 2010 creates a new model for celebrating science in the nation's capital. Two weeks of science events across VA, MD and D.C. include 50 of the area's top scientists visiting local middle and high schools, brown bag lunches for high school students with Nobel Laureates, science open houses, events such as the science of wine and chocolate, a [Kavli Science Video Contest](#), a [You CAN Do the Rubik's Cube](#) contest, and a [Sustainable Dreamhouse contest](#).. A two-day Science Expo on the National Mall

will feature more than 500 science and engineering organizations, and most of science's best and brightest. www.usasciencefestival.org

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