Teacher Enrichment Program
December 2021

Computer Science Education Week!
December 6-12

STEM

To Infinity & Beyond: The Implications of Civilian Space Travel

Tuesday, December 14, 2021
5:00 – 6:00 pm, ET

The most powerful telescope ever built will soon uncover the mysteries of the universe. What's next in space travel and exploration? How is a colony on the Moon built? Educators, students and community members are welcome to join us on an exploration of how STEM topics and skills intersect with our lives.

Register

Learn more about the speakers

RSI & USABO Deadlines

The Center for Excellence in Education offers two STEM programs at no cost to high-performing high school students: the Research Science Institute (RSI) & United States Biolympiad (USABO).

Research Science Institute (RSI)

The application for RSI is open! More information about the application here!

United States Biolympiad (USABO)

The USABO is the nation's largest biology education and testing program. Explore the world of Biology through the USABO. School Registration closes at the end of this week!

For more information about programs and how to register or apply, visit program websites (RSI & USABO).

STEM News

Science

New study shows the potential of DNA-based data-structures systems

Engineers have created new dynamic DNA data structures able to store and recall information in an ordered way from DNA molecules. They also analyzed how these structures can be interfaced with external nucleic acid computing circuits.

Technology

Quantum computers getting connected

Research into superfast quantum computers is now well advanced, but it is not yet possible to connect the individual processors. An international research team has now shown a way to scale quantum computers using nanophotonic silicon carbide structures to solve the problems.

Engineering

Invention lets people pay for purchases with a high-five

Innovative fabric enables digital communication between wearers, nearby devices.

Mathematics

How statistics can aid in the fight against misinformation

Mathematicians created a statistical model that can be used to detect misinformation in social posts. The model is inexpensive and avoids the problem of black boxes that occur in machine learning.

A Lesson to Learn

It's Computer Science Education Week!

Computer Science Education Week

Inspire all K-12 students to learn Computer Science and celebrate the contributions of students, teachers and partners to the field.

Hour of Code

See how computer science meets language arts, math, and more in our curriculum!

CS Unplugged—Classic

Teach Computer Science through engaging games and puzzles that use cards, string, crayons and lots of running around.

Computer Science Games

Free coding games for beginners.

Computer Science for All Teachers

A virtual community of practice, welcoming all teachers from PreK through high school who are interested in teaching computer science.

Dynamic Data Science

Teach the same logics skills needed for coding through Data Science.

Try Engineering

Student & Teachers resources, virtual events & more by IEEE

Code with Google

Activities to enhance curriculum, resources for students, virtual events, scholarships and more!

Celebrate Computer Science!

Evelyn Boyd Granville

1945 Smith College Yearbook/Smith College Archives

Evelyn Boyd Granville, Ph.D. was born in Washington, D.C., on May 1, 1924. Dr. Granville attended the segregated Dunbar High School in Washington D.C., and graduated as valedictorian.

Inspired by her high school teachers and with the encouragement of her family and teachers, Dr. Granville enrolled at Smith College, graduating summa cum laude in 1945. Dr. Granville majored in mathematics and physics, but was also fascinated by astronomy. In the summers, she returned to Washington to work at the National Bureau of Standards.

After graduating from Smith, she attended Yale, completing a double master's degree in Mathematics and Physics in only one year, and began working toward a doctorate. Dr. Granville's doctoral work concentrated on functional analysis, and her dissertation was titled On Laguerre Series in the Complex Domain. She was the second black woman to receive a Ph.D. in Mathematics in 1949.

From 1950 - 1952, Dr. Granville was an associate professor of mathematics at Fisk University and then worked for the Diamond Ordnance Fuze Laboratories as an applied mathematician for four years. In 1956, she started working for IBM on the Project Vanguard and Project Mercury space programs, analyzing orbits and developing computer procedures. Her job included making "real-time" calculations during satellite launchings. "That was exciting, as I look back, to be a part of the space programs--a very small part--at the very beginning of U.S. involvement," said Dr. Granville reflecting on the work.

After moving to Los Angeles in 19660, she worked for the U.S. Space Technology Laboratories which became the North American Aviation Space and Information Systems Division in 1962. Dr. Granville worked on various projects for the Apollo program, including celestial mechanics, trajectory computation, and "digital computer techniques".

In 1967, she took a position at California State University, Los Angeles as a full professor of mathematics. After retiring from CSULA in 1984 she taught at Texas College in Tyler, Texas for four years, and then in 1990 joined the faculty of the University of Texas at Tyler as the Sam A. Lindsey Professor of mathematics. There she developed elementary school math enrichment programs.

When asked to summarize her major accomplishments, Dr. Granville said, "First of all, showing that women can do mathematics." Then she added, "Being an African American woman, letting people know that we have brains too."

For more information:

Undark, Mathematically Gifted & Black, & Scientific American