College of Science Lecture Series to spotlight science’s 'surprise twists'

Published on UA@Work (https://uaatwork.arizona.edu)

University Communications
January 2024

Embracing the unexpected can create opportunities that lead to new explorations, new knowledge and new discoveries. That idea is at the center of the 19th annual College of Science Lecture Series, which will take on the theme of “Surprise Twists That Transformed Science.”

Over the course of four weeks, four presenters will use that lens in talks covering black holes, tree-ring research, planetary science and sustainable plastics.

“The College of Science Lecture Series brings together a large and diverse audience to share some of the University's current, cutting-edge research in a way that makes it fun and accessible to the public,” said Carmala Garzione, dean of the College of Science. “Science helps us solve fundamental problems and allows us to explore new solutions to the grand challenges of our time. The lecture series discussions will hopefully help people understand how science works, including the unexpected and thrilling twists and turns that can arise from the scientific discovery process.”

Among this year's speakers is Charlotte Pearson, associate professor in the Laboratory of Tree-Ring Research, who will discuss some surprises that have emerged from decades of research in the field of dendrochronology, which was established at the University.

"For me, the unexpected twists are some of the best things about science," Pearson said. "Sure, sometimes things don't go the way you expect them to and that can be demoralizing, but it can teach you things as well. And, occasionally, some unexpected twist reveals something new and exciting that you could never have imagined."

The talks will take place on Feb. 7, 14, 21 and 28 at 7 p.m. at Centennial Hall and be livestreamed and posted on the College of Science YouTube channel. The lectures are free and open to the public, but attendees are asked to register.

Videos from previous years' lectures are posted on the YouTube channel and available on the College of Science Lecture Series website.

The full schedule for the lecture series is below.

Feb. 7 – Surprised by Gravity: Black Holes and Their Shocking Implications
Sam Gralla, Associate Professor, Department of Physics

For most of history, humans conceptualized the cosmos as calm and orderly. When the first cracks in this viewpoint emerged in the early 20th century, nobody could imagine the wild extremes that would be discovered over the next 100 years. Gralla will tell the story of black holes: bizarre objects that are barely conceivable but populate our universe in untold numbers.

Feb. 14 – Put a Ring On It: Dating Trees, Volcanoes and the Sun
Charlotte Pearson, Associate Professor, Laboratory of Tree-Ring Research

When tree-ring scientists 'put a ring on it' they apply an exact calendar date to a band of tree growth. This band can be unpacked and used as a dated time-capsule through history where we can explore past events and make future predictions. Explore the inside of a tree with Charlotte Pearson of the Laboratory of Tree-Ring Research and discover the surprising twists that emerged from the development of tree-ring science at the University of Arizona.

Feb. 21 – Strange New Worlds: Steamy Planets, Crystal Clouds and the Seeds of Life
Sarah Moran, Postdoctoral Research Associate, Lunar and Planetary Laboratory

Since the discovery of extrasolar planets in the 1990s, scientists have learned that the eight worlds of our solar system are just a few drops in a vast ocean of thousands of planets. Moran will discuss some of the strangest worlds in the galaxy and the bizarre materials that make up their atmospheres.

Feb. 28 – From Fossil Fuels Refining to Sustainable Plastics: A Surprising New Chemistry Twist
Jeff Pyun, Professor, Department of Chemistry and Biochemistry

Will we ever change the way we make plastics? While plastics are ubiquitous in everyday life, nearly a century has passed with the same processes and materials, which are now accumulating and polluting the world around us. Pyun will detail his recent invention using alternative waste feed stocks from the petroleum refining industry to create a new class of advanced plastics.
Source URL: https://uaatwork.arizona.edu/top/college-science-lecture-series-spotlight-sciences-surprise-twists

Links