



FLORIDA STATE
UNIVERSITY

*Department of Physics
Florida State University
Tallahassee, Florida 32306-4350*

20 September 2021

Dear Parents, Teachers, Administrators, and Friends,

Saturday Morning Physics introduces students and community members to current topics in physical science, presented by scientists active in research. We seek to educate, entertain, and inspire. We offer this program free to the participants; it is funded by Florida State University. Over the years, thousands of students of all ages have enjoyed Saturday Morning Physics, learning and benefiting from the opportunity to interact directly with working scientists.

Please help us by distributing information about this year's program. The first presentation will be Saturday, October 9. All presentations will be delivered over Zoom, the registration link is available on the website <https://physics.fsu.edu/saturday-morning-physics>. Please encourage students to attend! The Physics Department will provide attendance records for teachers who want to consider Saturday Morning Physics for extra credit.

The schedule (below) is available online at <http://physics.fsu.edu/saturday-morning-physics> and may easily be found by searching for "FSU Saturday Morning Physics." Sessions start at 9:30 and run until about 11:15 am.

10/9/2021	Astronomy in a Universe Filled with Light and Dark Matter Explore the Universe from sub-atomic particles to black holes to clusters of galaxies, testing the extremes of natural laws.	Dr. Kevin Huffenberger Dr. David Collins
10/16/2021	Particle Physics: What Matter Is and How We Know Learn of the discoveries that informed our understanding of the fundamental forces of nature, and what the future may hold!	Dr. Rachel Yohay Dr. Kohsaku Tobioka
10/23/2021	The National MagLab and Strange Superconductors Learn about magnet research and future applications in our society.	Dr. Laura Greene
10/30/2021	Physics of Waves Catch the wave with these spectacular demonstrations of the physics of waves.	Dr. Sean Dobbs Dr. Hanwei Gao
11/6/2021	Forging Elements in Exploding Stars and in the Lab Discover how exploding stars made us all, and how we study nuclear processes here on Earth.	Dr. Mark Spieker
11/13/2021	Spacetime and Black Holes In 1915, Albert Einstein completed his theory of General Relativity, one of the most enduring and transformational theories of all of physics. His theory is based upon a few simple observations and statements. First, motions are relative; second, the speed of light is constant; third, the acceleration you feel in a rocket is equivalent to gravity's acceleration on Earth. While simple, these statements profoundly changed our understanding of the Universe. Space and time are not constants of reality; rather they are relative and intimately connected. Gravity is not a force but the warping of spacetime, which in turn leads to the prediction of black holes and gravitational waves. In this presentation, we will explore how these simple, yet profound statements lead to these predictions. We will also learn how Einstein's theory of General Relativity has endured more than a century of experiments, making it one of the most successful theories of human history.	Dr. Jeremiah Murphy

Feel free to contact me (cbeekman@fsu.edu) if you have further questions.

Sincerely,

Christianne Beekman
Associate Professor, Florida State University, Department of Physics