***SMCAS General Meeting and Presentation on February 1, 2019***

# Dr. Aaron Roodman

***Professor, Particle Physics and Astrophysics, SLAC National Accelerator Laboratory***

# Fastest Eye on the Sky:
# The Large Synoptic Survey Telescope (LSST)

*Friday, February 1, 2019, College of San Mateo, Building 36*
*SMCAS General meeting at 7:00 p.m. ISC Room, room 110*
*Presentation at 8:00 p.m. Planetarium*
*Free and open to the public, free parking (recommend lots 5 or 6)*

What is the Universe made of? In modern cosmology only 4% of the universe is deeply understood, while the other 96%, Dark Energy and Dark Matter, remains a mystery. The Large Synoptic Survey Telescope (LSST), currently under construction at Cerro Pachón (a mountaintop in northern Chilé), will observe billions of galaxies, billions of stars in our own Milky Way galaxy, as well as millions of objects closer to home in the solar system. Every night over a ten-year survey, LSST will observe much of the night sky, so that every portion of the sky will be imaged nearly a thousand times. In this talk, Dr. Roodman will describe the LSST telescope and its remarkable set of observations, and how LSST will be able to "see" the dark portion of the universe in unprecedented detail.

Dr. Roodman obtained his Ph. D. from the University of Chicago in 1991. He spent the next two decades in experimental elementary particle physics, seeking to understand the asymmetry between matter and antimatter in the present-day universe. Dr. Roodman is now in observational cosmology, where he studies Dark Energy using images of galaxy clusters and weak gravitational lensing from the ongoing Dark Energy Survey and the future LSST instruments. Dr. Roodman is the system scientist responsible for the integration and testing of the 3200-megapixel LSST camera at SLAC. He is a professor in SLAC's Particle Physics and Astrophysics faculty and serves as its Department Chair. He is also a member of the Kavli Institute for Particle Astrophysics & Cosmology and previously served three years as its deputy director. He is a Fellow of the American Physical Society.