Astronomy Open Night, Friday, December 4, 2020
Virtual; 7:30PM
For more information: http://www.astro.sunysb.edu/openight/opennite.html

Anja von der Linden

The Vera C. Rubin Observatory’s Legacy Survey of Space and Time (LSST)

The Vera C. Rubin Observatory is currently under construction on Cerro Pachon in Chile. Its 8.4m telescope will feature the largest digital camera ever built, consisting of 189 4k x 4k CCDs, for a total of 3.2 Gigapixels. With its large field of view, Rubin can map the entire night sky once every 3 nights. Its goal is to conduct the Legacy Survey of Space and Time (LSST), a 10-year survey of the southern sky. As a 10-year ‘movie’ of the sky, LSST will revolutionize the search of transient events at optical wavelengths, leading to the discovery of countless asteroids, supernovae, active galactic nuclei and more. At the same time, it will build up the largest deep image of the sky, allowing precision mapping of the matter distribution in the Universe. With this design, LSST will address four key science areas: understanding Dark Matter and Dark Energy; mapping small objects in the Solar System, including Near-Earth Asteroids; studying the transient optical sky; and mapping the structure of the Milky Way galaxy.

Anja von der Linden is an observational cosmologist in the Physics and Astronomy Department at Stony Brook. Her main research focus are clusters of galaxies, their gravitational lensing signal, and their use as probes of cosmology. She received her PhD in Astrophysics from the Max Planck Institute for Astrophysics in Munich, Germany, and was a Tycho Brahe fellow at Stanford University, California, and the Dark Cosmology Centre in Copenhagen, Denmark, before joining the Stony Brook faculty in 2015.

To register follow this link: https://docs.google.com/forms/d/e/1FAIpQLSfYlufW8wV9NZQELSHec9008anWu4qdcVxVj94zE5bhV2MVQ/viewform?fbzx=1339757450909710837

Physics Open Night, Friday, December 11, 2020
Virtual; 7:30PM
For more information: http://www.physics.sunysb.edu/Physics/WorldsOfPhysics/2020-21/

Ken A. Dill

The origin of life: did it come from natural physical processes?
A major question of science and religions has been how life arose on earth. Many scientists hold that biology arose from physical and chemical processes acting on simple molecules on the early earth. But if so, how do we explain the complexity, even of the simplest life, like a bacterial cell? Or, the incredible improbability of today’s DNA or protein molecules? Or, biology’s persistence: this show has been running non-stop for 3 billion years. We’ll look at conceptions and misconceptions about probabilities and complexity, about the role of the Second Law of Thermodynamics, and about how small-step random processes can sometimes lead to big surprising persistent innovations.

Ken Dill is a Distinguished Professor in the Physics and Chemistry Departments and Director of the Laufer Center for Physical and Quantitative Biology at Stony Brook University. He works at the interface between statistical physics and the biology of cells and molecules. He is a member of the National Academy of Sciences and the American Academy of Arts and Sciences. He is past president of the US Biophysical Society and was awarded the 2019 American Physical Society’s Max Delbruck Prize in Biological Physics in 2019.

To register follow this link: https://docs.google.com/forms/d/e/1FAIpQLSdB3OhDrByUDqcc-h187iXa7QhDh-scDUVYO6ZcVudjMP1mg/viewform

Please note that all lectures for Fall 2020 will be delivered on ZOOM. Please click on the respective links below the Open Night Event for more information on how to join or register.

TEACHER IN SERVICE CREDITS

NYS teachers who wish to receive CTLE credit for any of these lectures must register WITHIN ONE WEEK here:

https://docs.google.com/forms/d/e/1FAIpQLSdAufjveLIXG-3T1ehnX0AvnAPwVMvx53NoHjyzshlwiyYA/viewform

You must register for each lecture you attend. The Graduate School will send a CTLE certificate about six weeks after each lecture.