Science & Society Distinguished Public Talks

Co-sponsored by the UNM Chapter of Sigma Xi, The Scientific Research Honor Society, the Albuquerque Section of the Institute of Electrical & Electronic Engineers (IEEE) and its Life Members Affinity Group, Sigma Xi (the Scientific Research Honor Society), the UNM Department of Physics & Astronomy and Interdisciplinary Science

Presents

Gravitational Waves: The Discovery that won the 2017 Nobel prize in Physics



By

Lynn Cominsky

February 15, 2024 5:30 PM

UNM Dept. of Physics, Astronomy, & Interdisciplinary Research, 210 Yale Blvd NE Rm 1100 And ZOOM

https://unm.zoom.us/j/96829090016 Password SigmaXi

Free and open to the public Meet & Greet with refreshments at 5PM

Lynn Cominsky is a Professor of Physics and Astronomy at Sonoma State University (SSU), where she has been on the faculty for over 35 years. She is an author on over 225 research papers in refereed journals, and is the founder and director of SSU's EdEon STEM Learning (formerly known as the Education and Public Outreach Group), which develops educational materials for NASA, NSF and the US Department of Education. In 1993, Prof. Cominsky was named SSU's Outstanding Professor, and the California Professor of the Year by the Council for the Advancement and Support of Education. She is a Fellow of the American Physical Society, and a Fellow of the American Association for the Advancement of Science. Current projects include NASA's Neurodiversity Network (N3), which aims to develop resources and internships for teens on the autism spectrum and the development of an integrated ninth-grade CSTEM curriculum, branded as Learning by Making (LbyM), that has been funded by US Department of Education for the past decade.

.**Abstract:** In 1915, Albert Einstein published his General Theory of Relativity. In this theory, gravity is not a force, but a property of space and time in the presence of massive objects. A century later, on September 14, 2015, the Laser Interferometer Gravitational-wave Observatory (LIGO) received the first confirmed gravitational wave signals. Now known as GW150914, the event represents the coalescence of two distant black holes that were previously in mutual orbit. LIGO's exciting discovery provides direct evidence of what is arguably the last major unconfirmed prediction of Einstein's Theory and has launched the new field of gravitational-wave astronomy. Prof. Lynn Cominsky from Sonoma State University will



present an introduction to LIGO, gravitational waves and black holes. She will also discuss the gravitational wave detection results reported from LIGO and Virgo.