



San Mateo County Astronomical Society



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SMCAS General Meeting and Presentation on Friday December 7, 2018

Dr Brian Lantz

Senior Research Scientist, LIGO, Stanford

Seeking Gravitational Waves: The Tao of LIGO

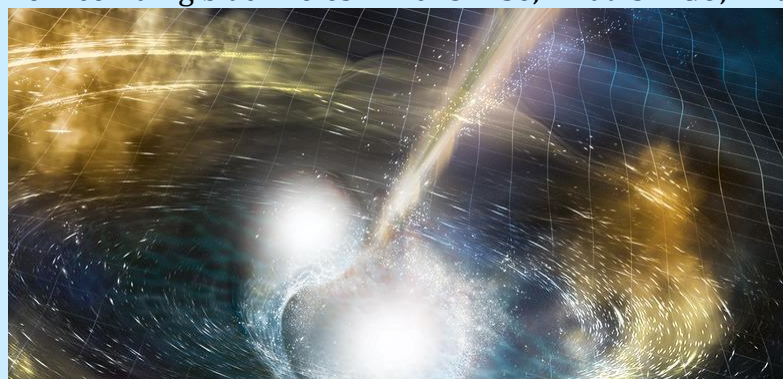
Friday, December 7, 2018 , [College of San Mateo, Building 36](#)

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 (lots 5 or 6).

Gravitational waves (ripples in space and time) were first predicted by Einstein, who thought they were too weak to detect (and didn't believe in black holes). However, the Laser Interferometer Gravitational-Wave Observatory (LIGO) made the stunning first detection of Gravitational Waves from colliding black holes in 2015. So, what is LIGO, what is the science behind it and the



challenges in making it, how does it work, how will it evolve and what new discoveries we may encounter with the next generation of gravitational wave detectors? In this talk, Dr Lantz will address these questions from the viewpoint of someone intimately involved in the design and construction of key elements of LIGO.

Brian is the Lead scientist for Seismic Isolation System in the the Advanced Laser Interferometer Gravitational-wave Observatory (LIGO), and leader of the working group to develop seismic isolation and suspensionsystems for the next generation of gravitational-wave detectors. He received his PhD in Physics from the Massachusetts Institute of Technology in 1998.

