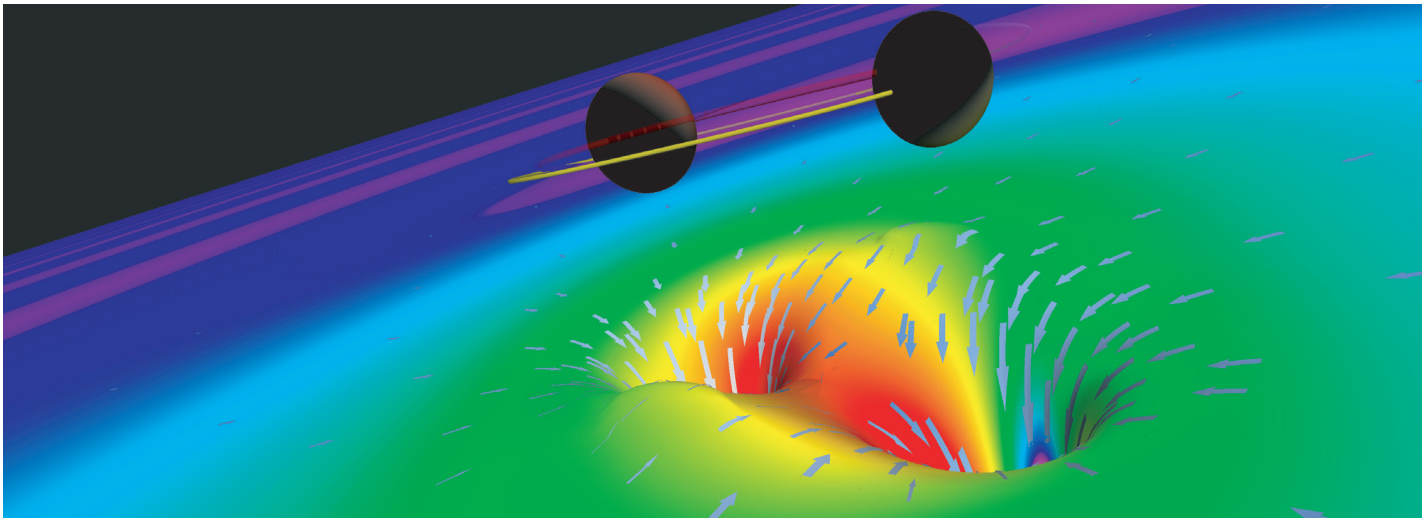
SLAC COLLOQUIUM SERIES

Advanced LIGO:
Discussion of the technology which has made the detection of gravitational waves a weekly event

Brian Lantz
Stanford University
Senior Research Scientist

Abstract:
"How is that even possible?" In 2015 the twin detectors of the Advanced Laser Interferometer Gravitational-wave Observatory (LIGO) made the first measurement of the stretching of space-time caused by a passing gravitational wave. The peak strain along the 4 km long arms was only about 1 part in 10^{21} - a remarkable measurement which has opened the door to a new way to listen to the universe. In this talk I'll give an overview of how the interferometers work and describe a few of the key technologies which make this new type of observation not only possible, but actually a regular occurrence.



October 7, 2019, Kavli Auditorium, refreshments start at 3:15 and colloquium at 3:30 pm