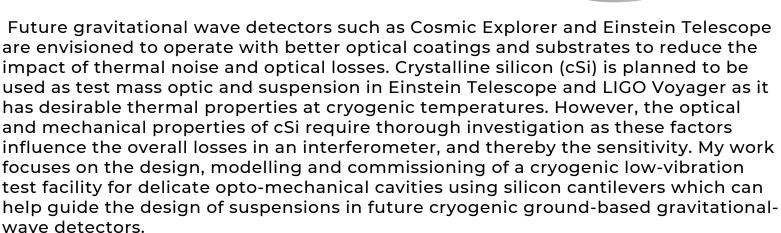
## CECISEMINAR

CENTER FOR EXPERIMENTAL COSMOLOGY & INSTRUMENTATION

## TECHNOLOGIES FOR NEXT-GENERATION GRAVITATIONAL WAVE DETECTORS





Cosmic Explorer is designed to be a 40km laser interferometer building on LIGO A+ technologies. To mitigate coating thermal noise in A+ and beyond, new designs of optical coatings (such as Ti:Ge) need to be rigorously tested. The air annealing scatterometer at Cal State Fullerton is equipped to characterize optical coatings up to 850C. Annealing these samples using a suitable temperature ramp can help determine the onset of scatter and crystallization which is crucial to determining the optimal recipe for low coating noise. In collaboration with Caltech and MIT, these samples undergo various calibrations and measurements across different experiments to determine the overall scatter and coating thermal noise.



WEDNESDAY APRIL 30TH | READING ROOM | STARTING AT 3PM

