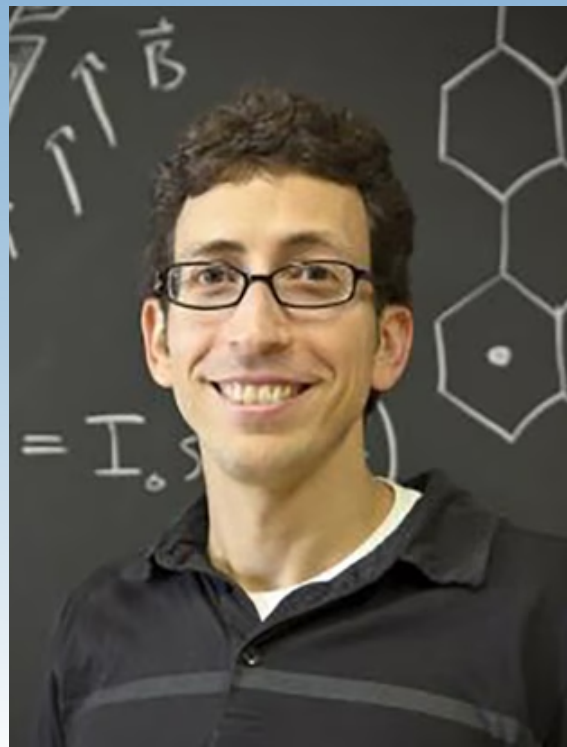


Colloquium

Thursday, April 2nd, 2026 at 4 p.m.
Physics & Astronomy Building (PAB) 1-434

**Jason
Alicea
(Caltech)**



Measurement-altered Quantum Matter

In the study of quantum matter, measurements have traditionally been viewed as a means of learning about a system. Measurements can, nevertheless, play a more active role—generating novel quantum phenomena that may be difficult or impossible to realize in measurement-free settings. As an interesting example, I will discuss how measurements can dramatically alter universal properties of quantum systems tuned to a phase transition. I will also highlight a path to experimental realization in analog quantum simulators based on Rydberg atom arrays. Finally, I will describe how these ideas inform optimization of quantum teleportation protocols against imperfections—establishing a long-term quantum science application of ‘measurement-altered quantum criticality’.

Hosted by Seth Putterman