

Thursday, February 2nd, 2023

Refreshments at 3:15pm in PSF 186

Colloquium from 3:30 PM – 4:30 PM in PSF 101

Traversable Wormholes: From Science Fiction to Science

Professor Ben Freivogel

University of Amsterdam



Abstract:

In the past several years, traversable wormholes have moved from the realm of science fiction to science. I will describe results and open questions regarding what types of traversable wormholes can exist in our universe. I will also discuss bounds on negative energy in quantum field theory, which are a crucial ingredient in the wormhole results, but are also of independent interest.

Biography:

Ben Freivogel's research focuses on areas where quantum gravity may be observationally testable, from black holes to cosmology to traversable wormholes. He received his PhD from Stanford University in 2005 under the supervision of Leonard Susskind, and worked as a postdoc at UC Berkeley and at MIT before joining the University of Amsterdam in 2012. He is a member of the QuRIOS collaboration on quantum gravity and its observational signatures.

Host: Prof. Cindy Keeler

View our Spring 2023 Physics Colloquium schedule at <https://physics.asu.edu/colloquia>