

Title: Torus spectra and entanglement entropy in (2+1)-dimensional conformal field theories

Date: Jan 23, 2018 10:30 AM

URL: <http://pirsa.org/18010087>

Abstract: <p>Finite-size spectra and entanglement both characterize nonlocal physics of quantum systems, and are universal properties of a CFT. I discuss the energy spectrum of the Wilson-Fisher CFT on the torus in the ϵ and $1/N$ expansions. I also consider a class of deconfined quantum critical points where the torus spectrum contains signatures of proximate Z_2 topological order. Finally, I compute the entanglement entropy of the Wilson-Fisher and Gross-Neveu CFTs in the large N limit, where an exact mapping to free field entanglement is obtained. Comparison is made with numerics.</p>

PI

**PERIMETER
INSTITUTE**