



GEOMETRY, TOPOLOGY, AND PHYSICS SEMINAR

A deformation invariant of 2D SQFTs

Theo Johnson-Freyd
Perimeter Institute

Friday, January 24, 2020, 4:00 p.m.
Room 6635 South Hall

Abstract: The elliptic genus is a powerful deformation invariant of 2D SQFTs: if it is nonzero, then it protects the SQFT from admitting a deformation to one with spontaneous supersymmetry breaking. I will describe a “secondary” invariant, defined in terms of mock modularity, that goes beyond the elliptic genus, protecting SQFTs with vanishing elliptic genus. The existence of this invariant supports the hypothesis that the space of minimally supersymmetric 2D SQFTs provides a geometric model for universal elliptic cohomology. Based on joint works with D. Gaiotto and E. Witten.

Information about future meetings of this seminar can be found at
<http://web.math.ucsb.edu/~drm/GTPseminar/>