

Tuesday, November 30<sup>th</sup> @ 4pm  
Physics & Astronomy Building (PAB) 4-740

## “On Topological Boundary Conditions in 2+1d”

Shu-Heng Shao (Stony Brook University)

**Abstract:** A 2+1-dimensional topological quantum field theory (TQFT) may or may not admit topological (gapped) boundary conditions. In this talk, we consider obstructions to the existence of a topological boundary condition from the "higher" central charges, which have been introduced recently in the math literature. In terms of these new obstructions, we identify necessary and sufficient conditions for the existence of a topological boundary in the case of bosonic, Abelian TQFTs, providing an alternative to the identification of a Lagrangian subgroup. Our proof relies on general aspects of gauging generalized global symmetries.