

TOPOLOGY SEMINAR

Guest Speaker: Brian Williams
University of Edinburgh



Date: Tuesday, February 1, 2022

Time: 2:30 PM

Location: Zoom

Zoom Link: notredame.zoom.us/j/97262637721

Lecture Title:

Batalin-Vilkovisky quantization from supersymmetric twists

Abstract

Twists of supersymmetric QFTs give rich examples of topological field theories connected to mathematics including the 2d A/B models of mirror symmetry and the theory of Donaldson—Thomas invariants. In this talk, I will show how twists of supersymmetric quantum mechanics with a Kahler target exhibits a model for BV quantization. Using this, I will give a proposal for the Hilbert space of states in terms of the cohomology of a certain perverse sheaf. I'll mention a few examples including the ordinary A-model and the categorified DT invariants of a CY 3-fold. This is based on joint work with Pavel Safronov.