KAPUSTIN—WITTEN TQFT ON 3-MANIFOLDS AND DERIVED SKEIN MODULES

Pavel Safronov
University of Edinburgh

Apr 7, 2021, 4-5pm
Zoom link:
https://bostonu.zoom.us/j/95346529200?pwd=SzFGbXpGbN6V1pFaWREU9XcmsrZz09
Please email Yu-Shen Lin (yslin0221@gmail.com) for password

Abstract: Kapustin and Witten have proposed that there is a 4-dimensional TQFT underlying the geometric Langlands program and have described it as a topological twist of the 4-dimensional maximally supersymmetric Yang—Mills theory. In this talk I will discuss some mathematically-rigorous ways to define the space of states for 3-manifolds, relating it to skein modules and complexified instanton Floer homology of Abouzaid—Manolescu. I will also comment on the possible extension of the geometric Langlands duality to 3-manifolds. This is based on work in progress with D. Jordan and S. Gunningham.

See http://math.bu.edu/research/geom/seminar.html or contact Yu-Shen Lin (yslin@bu.edu) or Siu-Cheong Lau (lau@math.bu.edu) for more information.