Representation and Number Theory Seminar

Traces and Drinfeld Centers of Graded Finite Hecke Categories

by

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Abstract

Graded finite Hecke categories, also known as the homotopy categories of Soergel bimodules, play an important role in categorified link invariants as they are the main ingredient in one of the constructions of the Khovanov—Rozansky triply graded link homology. Their categorical traces, initially studied by Gorsky—Hogancamp—Wedrich, are the natural homes for the derived annular Khovanov—Rozansky link invariants and are closely related to the conjecture of Gorsky—Negut—Rasmussen. I will describe a geometric method to study their categorical traces and Drinfel'd centers, relating them to the categories of (graded) character sheaves, objects that are already extensively studied in geometric representation theory. One of the main ingredients is the new theory of graded sheaves introduced by Penghui Li and the speaker, which will be recalled in the talk. This is joint work with Penghui Li.

Date	:	**28 March 2023 (Tuesday)**
Time	:	**4:00pm – 5:00pm (Hong Kong Time)**
Venue	:	**Room 502A, Academic Building I, CUHK**

All are Welcome