

Department of Mathematics

The Chinese University of Hong Kong

數學系

香港中文大學

Phone: (852) 3943 7988 • Fax: (852) 2603 5154 • Email: dept@math.cuhk.edu.hk (Math. Dept.) Room 220, Lady Shaw Building, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong

Seminar

Quiver Representation and Alexander Type Invariant of Knots

Mr. Ivan Chi Long So Michigan State University

<u>Abstract</u>

In a recent paper by Bazier-Matte and Schiffler, they discovered an unexpected connection between quiver representation and Alexander polynomial of knots. Roughly speaking, under some specific restrictions, the F-polynomial of the quiver representation agrees with the Alexander polynomial. We are curious on whether such connection is also available for the knot Floer homology, which is the categorification of Alexander polynomial constructed by Ozsvath-Szabo and independently by Rasmussen.

In my first talk, I will talk about the necessary background for path algebra and quiver representation in their formulation. In the second talk, I will talk about Bazier-Matte-Schiffler's and some evidences towards the possibility of generalization.

Date: 31 May 2023 (Wednesday) &

2 June 2023 (Friday)

Time: 11:00am – 12:30am (Hong Kong Time)

Venue: Room 222, LSB