

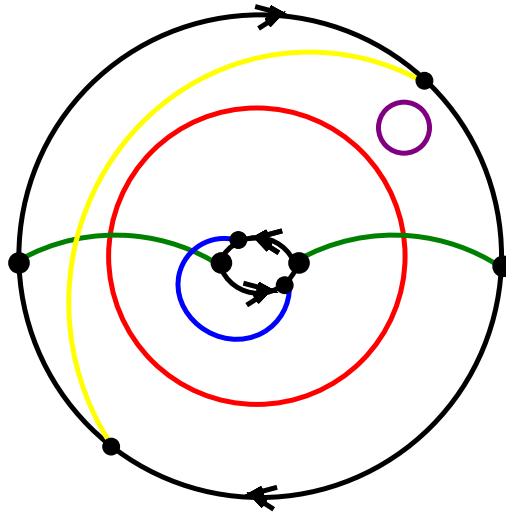
Student Research Talks (StReeTs)

George Mason University

Gram Determinants Motivated By Knot Theory

Rhea Palak Bakshi

George Washington University



Abstract

The study of Gram determinants in knot theory dates back to Lickorish when he used Gram matrices arising from the Temperley-Lieb algebra and constructed the Witten-Reshetikhin-Turaev invariant of 3-manifolds combinatorially. In this talk, I will first discuss Gram determinants of type A and Gram determinants of type B . A closed formula for the latter was given by Chen and Przytycki which answered a question posed by the late combinatorialist Rodica Simion about the relationship between matrices of chromatic joins and Gram type matrices. Finally, I will describe our work on the Gram determinant of generalized type A and the Gram determinant of type Mb . This is joint work with Dionne Ibarra, Sujoy Mukherjee and Józef H. Przytycki.

Date: Friday, October 25, 2019

Time: 2:30pm–3:20pm

Place: Exploratory Hall 4106

Pizza and soda will be served at the presentation.

For further information or for special accommodations (including dietary restrictions), please contact Tracey Oellerich or Cigole Thomas via email at toelleri@gmu.edu or cthoma40@gmu.edu by Thursday.