1163-57-483 **Rhea Palak Bakshi*** (rhea_palak@gwu.edu). *Counterexamples in Kauffman bracket skein modules of 3-manifolds.*

Skein modules were introduced by Józef H. Przytycki as generalisations of the Jones and HOMFLYPT polynomial link invariants in S^3 to arbitrary 3-manifolds. The Kauffman bracket skein module (KBSM) is the most extensively studied of all. However, computing the KBSM of a 3-manifold is known to be notoriously hard, especially over the polynomial ring $\mathbb{Z}[A^{\pm 1}]$. With the goal of finding a definite structure of the KBSM over this ring, several conjectures and theorems were stated over the years for KBSMs. We show that some of these conjectures, and even theorems, are not true. In this talk I will discuss my counterexample to Julien Marché's generalisation of Witten's conjecture. I also show that the theorem stated by Przytycki about the KBSM of the connected sum of two handlebodies does not hold. (Received September 08, 2020)