1172-57-147 **Rhea Palak Bakshi*** (rhea.palak@gmail.com). *On the structure of Kauffman bracket skein modules.*

Skein modules were introduced by Józef H. Przytycki as generalisations of the Jones and HOMFLYPT polynomial link invariants in the 3-sphere 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 ring of Laurent polynomials. 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 briefly discuss a counterexample to Marche's generalisation of Witten's conjecture. I will show that a theorem stated by Przytycki in 1999 about the KBSM of the connected sum of two handlebodies does not hold. I will also discuss the exact structure of the KBSM of the connected sum of two solid tori. (Received August 24, 2021)