1138-46-218   **Yunxiang Ren*** (`yren12@utk.edu`), 227 Ayres Hall, 1403 Circle Drive, Department of Mathematics, Knoxville, TN 37996. *A new skein theory for One-way Yang-Baxter planar algebras.*

In this talk, we will introduce One-Way Yang-Baxter subfactor planar algebras which are a continuation of the classification program of subfactor planar algebras via skein theory started by Bisch and Jones. We will focus on discussing the subgroup subfactor $S_2 \times S_3 \subset S_5$ which is naturally related to Petersen graph and the rank 3 permutation group. We showed that this planar algebra is generated by its 2-box space and provide a new skein theory for this planar algebra. Moreover, we will show that each member of the family of subfactors $\{S_2 \times S_n \subset S_{n+2} : n \geq 3\}$ is also generated by its 2-box space and satisfies the similar type of skein theory in a uniform way. (Received February 09, 2018)