1125-46-1090 **Yunxiang Ren*** (yunxiang.ren@vanderbilt.edu), 1104 18th Ave S, Apt 9, Nashville, TN 37212. *From skein theory to presentation for Thompson group.*

Jones introduced unitary representations of Thompson group F starting from a given subfactor planar algebra, and all unoriented links arise as matrix coefficients of these representations. Moreover, all oriented links arise as matrix coefficients of a subgroup $\vec{F}$ which is the stabilizer of a certain vector. Later Golan and Sapir determined the subgroup $\vec{F}$ and showed many interesting properties. In this paper, we investigate into a large class of groups which arises as subgroups of Thompson group F and reveal the relation between the skein theory of the subfactor planar algebra and the presentation of subgroup related to the corresponding unitary representation. Specifically, we answer a question by Jones about the 3-colorable subgroup. (Received September 14, 2016)