1165-18-190 **Anup Poudel*** (anup-poudel@uiowa.edu) and **Sachin J Valera** (sachin.valera@uib.no).

Skein-Theoretic Methods for Unitary Fusion Categories.

Given a fusion rule $q \otimes q \cong 1 \oplus \bigoplus i = 1^k x_i$ in a unitary fusion category C, we extract information using skein-theoretic methods and a rotation operator. For instance, one can classify all associated framed link invariants when $k = 1, 2$ and C is ribbon. We consider an action of the rotation operator on a "canonical basis". Assuming self-duality of the summands x_i, we will explore some properties of certain $6j$-symbols using skein theory. We also explore some features of quantum invariants coming from q antisymmetrically self-dual. This is a joint work with Sachin J. Valera. (Received January 18, 2021)