Swarnava Mukhopadhyay\* (swarnava@umd.edu), University of Maryland, College Park, MD 20742, and Richard Wentworth (raw@math.umd.edu), University of Maryland, College Park, MD 20742. Hecke Transforms and a Hitchin type connection for twisted Spin bundles.

In this talk, we will discuss Hecke type transformations on the space of non-abelian theta functions for the moduli stack of Clifford bundles with fixed norm over a smooth curve (also known as twisted Spin bundles). In particular, I will explain the proof of a Verlinde type formula, conjectured by Oxbury-Wilson, for twisted spin bundles. We will also construct a Hitchin connection for these non-abelian theta functions and give a flat basis when the level is one. If time permits, we will discuss applications of these basis elements to strange duality. This is a joint work with Richard Wentworth. (Received January 18, 2016)