Title: Twisted K-homology and group-valued moment maps

Abstract: Let $G$ be a compact, simple, simply connected Lie group. The Freed-Hopkins-Teleman theorem identifies the twisted equivariant K-homology of $G$ at level $k + h$ with the fusion ring $R_k(G)$. After a review of this result, I will explain how to quantize $G$-valued moment maps as push-forwards in twisted K-homology. The resulting elements of $R_k(G)$ may be computed either by localization or by a quantization commutes with reduction principle. Applications include the Verlinde formulas for the moduli space of flat $G$-bundles. (Based on joint work with Anton Alekseev.)