1158-18-224   **Kent Vashaw*** (`kvasha1@lsu.edu`) and **Milen Yakimov**. *Prime spectra of abelian 2-categories and categorification of Richardson varieties.*

Balmer's tensor triangular geometry provides a powerful tool for studying symmetric tensor-triangulated categories. We will describe a generalization of this theory to the context of abelian 2-categories, and discuss the application of this theory to algebraic categorification. The Serre prime spectrum of a 2-category is linked to the set of Serre primes of its Grothendieck ring. We construct a categorification of the quantized coordinate rings of Richardson varieties for symmetric Kac-Moody groups, by constructing Serre completely prime ideals of monoidal categories of modules of KLR algebras and taking Serre quotients with respect to them. These Serre completely prime ideals are constructed by analysis of the canonical bases of quantum groups and the compatibility of these bases with the quantized Richardson varieties. This is joint work with Milen Yakimov. (Received March 02, 2020)