1172-20-332   **Daniel Copeland*** (`daniel.copeland@gmail.com`). *On the semisimplicity of braid group representations in braided tensor categories.* Preliminary report.

In a braided tensor category, certain morphism spaces come equipped with a representation of the braid group. These representations are not fully understood, even for familiar categories coming from quantum groups. In this talk we discuss the following basic question: if a ($\mathbb{C}$-linear) braided tensor category is semisimple, then are the corresponding braid group representations also semisimple? We present some evidence in support of a "yes" answer. We discuss some applications a "yes" answer may have to the classification of braided tensor categories with fusion rules of Lie type, following the ideas of Hans Wenzl and collaborators. (Received August 31, 2021)