1147-16-707   **Luca Candelori*** (`candelori@wayne.edu`). *Modular representations of modular tensor categories.* Preliminary report.

Any modular tensor category canonically gives a projective 'Weil' representation of the modular group which generalizes the Weil representation of a finite quadratic module. In this talk we first discuss some properties of this representation, including recent integrality results obtained in joint work with Siu-Hung Richard Ng and Yilong Wang. We also define a twisted tensor product on the fusion algebra of the modular tensor category and we discuss the problem of interpreting the Weil representation in terms of intertwining operators for isomorphic representations of the twister tensor product algebra. The goal of this construction is to ultimately give an interpretation of the Weil representation of a modular tensor category in terms of 'transformation laws' of vector bundles of generalized theta functions over the moduli stack of elliptic curves. (Received January 28, 2019)