1172-18-180   **Kevin Coulembier**, **Pavel Etingof*** (`etingof@math.mit.edu`) and **Victor Ostrik**. *Frobenius exact symmetric tensor categories.*

I will report on a joint work with K. Coulembier and V. Ostrik. We show that a symmetric tensor category in characteristic $p > 0$ admits a fiber functor to the Verlinde category (semisimplification of $\mathrm{Rep}(\mathbf{Z}/p)$) if and only if it has moderate growth and its Frobenius functor (an analog of the classical Frobenius in the representation theory of algebraic group) is exact. For example, for $p = 2$ and 3 this implies that any such category is (super)-Tannakian. We also give a characterization of super-Tannakian categories for $p > 3$. This generalizes Deligne's theorem that any symmetric tensor category over $\mathbf{C}$ of moderate growth is super-Tannakian to characteristic p. At the end I'll discuss applications of this result to modular representation theory. (Received August 26, 2021)