

1125-18-1736 **Kenichi Shimizu*** (kshimizu@shibaura-it.ac.jp), 307 Fukasaku, Minuma-ku, Saitama-shi, Saitama, 337-8570, Japan. *Integral theory in finite tensor categories.*

Integrals for Hopf algebras play an important role in the study of Hopf algebras. In this talk, I will introduce the notion of an integral and a cointegral of a finite tensor category, and then show that several results on finite-dimensional Hopf algebras, such as Maschke's theorem, can be formulated and extended to finite tensor categories by using integrals and cointegrals. I will also give a short review of the character theory internal to finite tensor categories, and explain the roles of integrals and cointegrals in the theory. (Received September 19, 2016)