

1047-55-3

Jacob Lurie*, Massachusetts Institute of Technology. *On the classification of topological field theories.*

In 1980's, Atiyah introduced a mathematical definition for the notion of a topological quantum field theory (TQFT). In this lecture, I will review Atiyah's definition and explain the motivation for considering the more elaborate notion of an extended TQFT. I will then explain the Baez-Dolan cobordism hypothesis, which provides a very conceptual classification of extended TQFTs.. (Received May 27, 2008)