Topology Seminar

Angélica Osorno

of MIT will be speaking on

An Infinite Loop Space Structure for K-theory of Bimonoidal Categories

on April 13 at 4:30 in
MIT Room 2-131

In recent work of Baas-Dundas-Richter-Rognes, the authors introduce the notion of the K-theory of a bimonoidal category R, and show that it is equivalent to the algebraic K-theory space of the ring spectrum HR. In this thesis we show that $K(R)$ is the group completion of the classifying space of the 2-category Mod_R of modules over R, and show that Mod_R is a symmetric monoidal 2-category. We explain how to use this symmetric monoidal structure to produce a Γ-(2-category), which gives an infinite loop space structure on $K(R)$. We show that the equivalence mentioned above is an equivalence of infinite loop spaces.