Topology Seminar

Mirai Ikebuchi

of Kyoto University will be speaking on

Quillen cohomology of small cartesian closed categories

on March 3 at 4:30 in
MIT Room 2-131

Cohomology of Lawvere theories — small categories with finite products, also called algebraic theories — is studied by Jibladze and Pirashvili. They considered three types of definitions, Quillen, Baues-Wirsching, and Ext cohomologies, and showed that their equivalences. In this talk, we extend their work to small cartesian closed categories. Also, we will briefly see its application to logic and theoretical computer science. As Lawvere theories are categorical formulation of universal algebra, there is a famous correspondence between cartesian closed categories and equational theories on simply typed lambda calculus. So, cohomology of cartesian closed categories is an invariant of such equational theories.

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