Topology Seminar

Mona Merling

of Johns Hopkins University will be speaking on

Equivariant algebraic K-theory

on December 8 at 4:30 in
MIT Room 2-131

The first definitions of equivariant algebraic K-theory were given in the early 1980's by Fiedorowicz, Hauschild and May, and by Dress and Kuku; however these early space-level definitions only allowed trivial action on the input ring or category. Equivariant infinite loop space theory allows us to define spectrum level generalizations of the early definitions: we can encode a G-action (not necessarily trivial) on the input as a genuine G-spectrum. I will discuss some of the subtleties involved in turning a ring or category with G-action into the right input for equivariant algebraic K-theory, and some of the properties of the resulting equivariant algebraic K-theory G-spectrum. I will also discuss recent developments in equivariant infinite loop space theory (e.g., multiplicative structures) that should have long-range applications to equivariant algebraic K-theory.