Nitu Kitchloo | Johns Hopkins University
Title: Homotopy types for link homologies

In my talks, I'll describe a filtered equivariant stable homotopy type that is an invariant of links in R^3. This homotopy type supports a derived local system and so one can compute its (twisted) equivariant cohomology. I'll describe how these computations recover most of the well-known link homology theories (eg. Khovanov homology, Khovanov-Rozansky homology and sl(n)-link homologies). Several well-known algebraic spectral sequences connecting these link homologies also become transparent from the topological framework. No background in low dimensional topology or quantum algebra is required.