

A homological approach to representation theory of FI

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Representation theory of the category of finite sets and injections is used to investigate asymptotic behavior of (co)homology groups of quite many topological spaces. In this talk I will describe a homological approach to study FI-modules, focusing on the homology theory and local cohomology theory. As applications, we can obtain upper bounds of many homological invariants, as well as some qualitative and quantitative results in representation stability theory.