

Algebra/Topology Seminar

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ASSEMBLY & CALCULUS — PART 1

Thursday, September 21, 2023

3:00 p.m. in BB-B012

ABSTRACT. Assembly maps are fundamental tools for studying the algebraic K -theory of group rings, and more generally group ring spectra. Motivated by their work on rigidity of manifolds, Tom Farrell and Lowell Jones conjectured that certain assembly maps are isomorphisms, and proved it in many important cases. I will first introduce assembly maps and the Farrell–Jones conjecture, and survey the current status and some of the far-reaching consequences in algebra and manifold topology of this conjecture. I will then talk about new joint work with Tom Goodwillie, in which we use functor calculus to study, in particular, the relation between the conjectures with spherical and integral coefficients.