Topology Seminar

Julie Bergner

of University of Virginia will be speaking on

The Waldhausen S-construction as an equivalence of homotopy theories

on December 11 at 4:30 in
MIT Room 2-131

The notion of unital 2-Segal space was defined independently by Dyckerhoff-Kapranov and Galvez-Carrillo-Kock-Tonks as a generalization of a category up to homotopy. The notion of unital 2-Segal space was defined independently by Dyckerhoff-Kapranov and Galvez-Carrillo-Kock-Tonks as a generalization of a category up to homotopy. A key example of both sets of authors is that the output of applying Waldhausen's S-construction to an exact category is a unital 2-Segal space. In joint work with Osorno, Ozornova, Rovelli, and Scheimbauer, we expand the input of this construction to augmented stable double Segal spaces and prove that it induces an equivalence on the level of homotopy theories. Furthermore, we prove that exact categories and their homotopical counterparts can be recovered as special cases of augmented stable double Segal spaces.