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*Calculus of fractions for quasicategories*

Calculus of fractions was introduced by P. Gabriel and M. Zisman in order to study localizations of (1-)categories. From a marked category satisfying calculus of left fractions, they construct a workable model for the localization whose morphisms are spans, rather than arbitrary zig-zags. Moreover, the localization functor preserves any finite colimits that exist in the original category.

In this talk, I will present a generalization (joint with C. Kapulkin and Z. Lindsey) of calculus of fractions to the setting of quasicategories, and show how a workable model for the localization can be constructed using a marked variant of Kan's Ex-functor. I will also discuss applications of these results to combinatorics in the form of discrete homotopy theory.