Topology Seminar

Chris Schommer-Pries

of MIT will be speaking on

On the Uniqueness of the Homotopy Theory of Higher Categories

on October 3 at 4:30 in
MIT Room 2-131

In this talk we report on joint work with Clark Barwick. We give a short list of axioms that a quasicategory should satisfy to be considered a reasonable homotopy theory of (∞, n)-categories. We show that the space of such quasicategories is homotopy equivalent to $\mathrm{B}(\mathbb{Z}/2)^n$, generalizing a theorem of Toën when $n = 1$, and verifying two conjectures of Simpson. In particular, any two such quasicategories are equivalent. We also provide a large class of examples satisfying our axioms, including those of Joyal, Kan, Lurie, Simpson, and Rezk.