Algebra
Seminar

Categorifying quadratic zeta functions

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Abstract: Zeta functions show up everywhere in math these days. While some work in the past has brought homotopical methods into the theory of zeta functions, there is in fact a lesser-known zeta function that is native to homotopy theory. Namely, every suitably finite decomposition space (aka 2-Segal space) admits an abstract zeta function as an element of its incidence algebra. In this talk, I will show how many 'classical' zeta functions from number theory and algebraic geometry can be realized in this homotopical framework, and briefly advertise an upcoming preprint (joint with Jon Aycock) that categorifies the Dedekind zeta function of a quadratic number field.

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