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Thick cubulated groups

A CAT(0) cube complex X admitting a geometric action by a group G has an associated simplicial complex, the simplicial boundary, that is very similar to the Tits boundary but is defined in terms of combinatorial features of X rather than in terms of the CAT(0) metric. Whether G is relatively hyperbolic, or thick, can be detected by checking simple conditions on the action of G on the simplicial boundary of X . In particular, we give conditions on the simplicial boundary under which the divergence function of G is linear, and conditions under which it is quadratic. (This talk concerns joint work with Jason Behrstock.)