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Cubulating groups quasi-isometric to right-angled Artin groups

This is a joint work with B. Kleiner. We are motivated by understanding the quasi-isometry rigidity of right-angled Artin groups, which falls into the broader scheme of Gromov's program for quasi-isometry classification of groups and spaces. Suppose G is a right-angled Artin group with finite outer-automophism group. We show that if H is a finitely generated group quasi-isometric to G, then H acts geometrically on a $CAT(0)$ cube complex X, whose combinatorial structure is closely related to the right-angled building and the Salvetti complex associated with G. If times allows, I will talk about how does our cubulation lead to some quasi-isometry rigidity results.