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Abdalrazzaq Zalloum* (abdraz@buffalo.edu), 210 Montreal street, Kingston, Ontario k7k 3g4, Canada. *Hyperbolic boundaries of CAT(0) groups.*

To each hyperbolic space, one can associate a space at infinity called the Gromov's boundary. Gromov showed that a quasi-isometry between two hyperbolic spaces induces a homeomorphism on their boundaries. For a CAT(0) space, one can also assign a space at infinity called the visual boundary but that is no longer a quasi-isometry invariant. Several attempts have been made to circumvent the problem, most recent of which is work by Qing and Rafi. They introduce the notion of a "sublinear contracting boundary" of a CAT(0) space and they show it is a quasi-isometry invariant and metrizable. This talk will be about a work-in progress with Qing where we study the dynamics of a CAT(0) groups action on its sublinear boundary. For example, we show that the sublinear contracting boundary is a strong visibility space and that CAT(0) groups with non-empty sublinear contracting boundary must contain rank one isometries and are hence acylindrically hyperbolic. (Received August 19, 2019)