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Pawel Grzegorzolka* (pgrzegrz@vols.utk.edu), 1403 Circle Drive, Ayres Hall, Knoxville, TN 37916, and **Jeremy Siegert**. *Coarse proximity and proximity at infinity*.

In this talk, we introduce coarse proximity structures, which are an analog of small-scale proximity structures in the large-scale context. We show that metric spaces naturally induce coarse proximity structures, and we construct a natural small-scale proximity structure, called the proximity at infinity, on the set of equivalence classes of unbounded subsets of an unbounded metric space given by the relation of having finite Hausdorff distance. We show that this construction is functorial. Consequently, we obtain a new nontrivial coarse invariant of unbounded metric spaces. (Received September 17, 2018)