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Carolyn Abbott* (cra2112@columbia.edu). *Ordering actions on hyperbolic spaces.*

Every group admits at least one action by isometries on a hyperbolic metric space, that is, a metric space in which all triangles are uniformly thin. Moreover, certain classes of groups admit many different actions on different hyperbolic metric spaces (in fact, often uncountably many). One such class of groups is the class of so-called acylindrically hyperbolic groups, which contains many interesting groups, such as mapping class groups, $\text{Out}(F_n)$, and right-angled Artin and Coxeter groups, among many others. In this talk, I will describe how to put a partial order on the set of actions of a given group on hyperbolic spaces which, in some sense, measures how much information about the group the action provides. This partial order defines a “poset of actions” of the given group. I will then describe the class of acylindrically hyperbolic groups and give some structural properties of the resulting poset of actions for such groups. (Received September 14, 2019)