1138-20-136 **Carolyn Abbott**, **Sahana H Balasubramanya*** (hbsahana@gmail.com) and **Denis Osin**. *$\mathcal{H}-$ and $\mathcal{AH}-$ accessibility.*

For every group G, we introduce the set of *hyperbolic structures* on G, denoted $\mathcal{H}(G)$, which consists of equivalence classes of (possibly infinite) generating sets of G such that the corresponding Cayley graph is hyperbolic; two generating sets of G are *equivalent* if the corresponding word metrics on G are bi-Lipschitz equivalent. We are especially interested in the subset $\mathcal{AH}(G) \subseteq \mathcal{H}(G)$ of *acylindrically hyperbolic structures* on G, i.e., hyperbolic structures corresponding to acylindrical actions.

One interesting notion developed in this work is that of *accessibility*. A group G is said to be $\mathcal{H}$-*accessible* (respectively $\mathcal{AH}$-*accessible*) if the poset $\mathcal{H}(G)$ (respectively $\mathcal{AH}(G)$) contains the largest element. I will discuss the relation between these notions, and give several examples of accessible and inaccessible groups. (Joint work with C. Abbott and D. Osin.) (Received February 07, 2018)