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Ilya Gekhtman* (ilyagekh@gmail.com) and **Arie Levit** (arie.levit@gmail.com). *Critical exponents of invariant random subgroups in negative curvature.*

Invariant random subgroups (IRS) are conjugacy invariant probability measures on the space of subgroups in a given group G . They can be regarded as a generalization both of normal subgroups and of lattices lattices. As such, it is interesting to extend results from the theories of normal subgroups and of lattices to the IRS setting.

We prove such a result: the critical exponent of a hyperbolic group or an isometry group of a CAT(-1) space (such as a rank 1 symmetric space) is greater than half the dimension of the boundary. The proof uses some ergodic theorems for actions of hyperbolic groups. This is joint work with Arie Levit. (Received February 08, 2018)