

1079-20-63

Ronghui Ji* (ronji@math.iupui.edu), Department of Mathematical Sciences, IUPUI, 402 N. Blackford Street, Indianapolis, IN 46202, and **C. Ogle** and **B. Ramsey**. *Relative property A and relative amenability for countable groups*.

We define a relative property A for a countable group with respect to a finite family of subgroups. Many characterizations for relative property A are given. In particular a relative bounded cohomological characterization shows that if G has property A relative to a family of subgroups \mathcal{H} and if each $H \in \mathcal{H}$ has property A, then G has property A. This result leads to new classes of groups that have property A. In particular, groups are of property A if they act cocompactly on locally finite property A spaces of bounded geometry with stabilizers of property A. Specializing the definition of relative property A, an analogue definition of relative amenability for discrete groups are introduced and similar results are obtained. (Received December 13, 2011)