1078-20-330 **Michael Hull*** (`michael.b.hull@vanderbilt.edu`), Department of Mathematics, Vanderbilt University, Nashville, TN 37240. *Quasimorphisms and bounded cohomology of groups with hyperbolically embedded subgroups.*

Quasimorphisms have been used by Brooks, Bestvina, Fujwara, and others to show the infinite dimensionality of the second bounded cohomology of many groups acting on hyperbolic spaces. Building on their methods, we will show that if a subgroup H is hyperbolically embedded in G (which is a generalized version of relative hyperbolicity), then any quasimorphism of H can be extended to a quasimorphism of G which will, in most cases, induce a nontrivial element in $H_b^2(G, \mathbb{R})$. (Received December 12, 2011)