1041-19-243 Erik Guentner* (erik@math.hawaii.edu), Department of Mathematics, University of Hawaii at Manoa, 2565 McCarthy Mall, Honolulu, HI 96822, and Romain Tessera and Guoliang Yu. Decomposing metric spaces and topological rigidity.

We introduce a notion of finite decomposition complexity for metric spaces. The notion is flexible in the sense that, when viewed as metric spaces, many discrete groups have finite decomposition complexity. Further, we use the methods of controlled topology to prove 'coarse' conjectures for spaces having finite decomposition complexity. (Received August 12, 2008)