

1098-90-104 **Amitabh Basu*** (basu.amitabh@jhu.edu), 100 Whitehead Hall, 3400 N. Charles St., Baltimore, MD 21218. *Recent Progress in Gomory and Johnson's Infinite Group Problem.*

Ralph Gomory and Ellis Johnson introduced the so-called infinite group problem in the 70s as an elegant infinite dimensional abstraction of general mixed-integer optimization problems. Since then it has played a very important role in polyhedral combinatorics - a key tool for solving general mixed-integer optimization problems. In recent years powerful tools from analysis, convex geometry, and combinatorics have come together to make significant breakthroughs in this problem. We review recent results for the infinite group problem, and discuss the many challenging open problems that still remain. (Received January 16, 2014)