1047-20-238   **Mark Sapir*** (`markvs@gmail.com`), SC1522, Department of Mathematics, Vanderbilt University, Nashville, TN 37221. *Geometry of groups, random walks, and polynomial maps over finite fields.*

I will show how to prove that most 1-related groups are residually finite. Although the result is purely algebraic, the proof employs methods from very diverse areas of mathematics: from analysis (Brownian motion) to algebraic geometry (properties of quasi-fixed points of polynomial maps over finite fields and p-adics, related to a Deligne conjecture). (Received January 29, 2009)