

Meeting: 1005, Newark, Delaware, LUBOTZKY, Invited Address

1005-20-3 **Alex Lubotzky***, Hebrew University of Jerusalem, Institute of Mathematics, Jerusalem 91904
Israel. *Counting primes, groups, and manifolds.*

Let D be a finitely generated group, G a semisimple Lie group, K a maximal compact subgroup and $Y = G/K$ the associated symmetric space. Let x be a positive real number (going to infinity). We will discuss questions of the following type:

How many primes are there which are smaller than x ?

How many subgroups of index at most x does D have ?

How many quotient manifolds Y has, of volume at most x ?

We will show that these seemingly unrelated questions are actually connected in several different ways. (Received May 13, 2004)