**Ramon Nunes.** The distribution of squarefree numbers in arithmetic progressions.

**Abstract.** We consider the variance associated to the distribution of square-free numbers  $\leq X$  in arithmetic progressions modulo q. We will show an asymptotic formula for this variance in a range where q is sufficiently large with respect to X, and if we are left with some time we shall discuss the problem of higher moments associated to this distribution.