

1030-37-292

Nikos Frantzikinakis*, The University of Memphis, Department of Mathematics, Memphis, TN 38152. *New examples of sets of multiple recurrence.*

A classical result of Szemerédi states that every subset of the integers with positive density contains configurations of the form $x, x+n, x+2n, \dots, x+kn$. Several refinements of this result have been proved using ergodic theory and seek to restrict the scope of n . We will discuss some new related results and also mention some intriguing open problems. (Received August 06, 2007)