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## PROBLEM OF THE MONTH

**Term:** November 2008

An integer sequence  $\{a_1, a_2, \dots\}$  is said to be *white*, if for all  $n > 2008$ ,  $a_n$  is equal to the total number of those indices  $i$ ,  $1 \leq i \leq n - 1$  for which  $a_i + i \geq n$ . An integer  $L$  is an *important* element of the sequence  $\{a_1, a_2, \dots\}$ , if  $a_j = L$  for infinitely many different indices  $j$ . What is the maximal possible number of *important* elements of a *white* sequence?