

# ASYMPTOTIC STABILITY OF CERTAIN SETS OF ASSOCIATED PRIME IDEALS OF LOCAL COHOMOLOGY MODULES

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## TÓM TẮT:

Let  $(R, \mathfrak{m})$  be a Noetherian local ring,  $I, J$  two ideals of  $R$  and  $M$  a finitely generated  $R$ -module. Let  $k \geq -1$  and  $r_k = \text{depth } k(I, J^n M / J^{n+1} M)$  be the length of a maximal  $(J^n M / J^{n+1} M)$ -sequence in dimension  $> k$  in  $I$  defined by Brodmann and Nhan (2008). It is first shown that  $r_k$  becomes independent of  $n$  for large  $n$ . Then we prove in this article some sets of associated primes related to regular sequences and the number  $r_k$  in dimension  $> k$  for  $k = -1, 0, 1$  are stable for large  $n$ .