Extended stretched Artinian local rings

Leila Sharifan

Department of Mathematics,
Hakim Sabzevari University, Sabzevar, Iran
and
School of Mathematics, Institute for research in Fundamental Sciences (IPM)
leila-sharifan@aut.ac.ir

Abstract

Let $(R, \mathfrak{n})$ be a regular local ring and I be an ideal of R. Supposing that $(A, \mathfrak{m}) = (R/I, \mathfrak{n}/I)$ is an Artinian local ring, we say that A is an extended stretched Artinian local ring if $I \subseteq \mathfrak{n}^t$ and $\mu(\mathfrak{m}^t) = 1$ for $t \geq 2$.

In this talk, we study the minimal free resolution of A. In particular, we compute the Betti numbers of A when A is an extended stretched local ring. We also give a structure theorem for A in the case that A has the maximal Cohen-Macaulay type.