A Discussion on Relative Pure Flat R-Modul   ۹۵/۷/۲۹

فاطمه زارع خوش چهره

دانشگاه بوئین زهرا

_____ Abstract _____

Let R denote any commutative ring with identity. It is well-known that an R-module F is flat if and only if it is a direct limit of a direct system of finitely generated free R-modules. Let S be a class of R-modules. A short exact sequence $0 \to A \to B \to C \to 0$ of R-modules and R-homomorphisms is called S-pure exact if the induced R-homomorphism $Hom_R(U, B) \to Hom_R(U, C)$ is surjective for all $U \in S$. An R-module M is called S-pure projective (respectively S-pure injective; S-pure flat) if the functor $Hom_R(M, -)$ (respectively $Hom_R(-, M)$; $M \otimes_R -$) leaves any S-pure exact sequence exact. In this talk, our aim is to find an answer to the following question: When we can say that an R-module M is S-pure flat if and only if it is a direct limit of a direct system of finitely generated S-pure projective R-modules.

A Survey on Local Homology   ۹۵/۸/۱۳

کامران دیوانی آذر

پژوهشگاه دانشهای بنیادی و دانشگاه الزهرا

_____ Abstract _____

Let R denote a commutative noetherian ring with unity and $\mathfrak{a}$ be an ideal of R. Recall that for each non-negative integer i, the ith local homology functor $H_i^{\mathfrak{a}}(-)$ is the ith left derived functor of the $\mathfrak{a}$-adic completion functor $\Lambda^{\mathfrak{a}}(-)$. Unlike the theory of local cohomology, the theory of local homology has not been developed much. This theory was initiated by Matlis in 1974, and its study was continued by Simon. After the essential works of Greenlees and May in 1992, and Alonso Tarrío, Jeremías López and Lipman in 1997, a new era in the study of this theory has begun.

In this talk, we first recall some classical results on local homology modules. Then, we review some results on the subject that have been established in my collaboration with Faridian, Hatamkhani, Mohammadi and Tousi in the recent years.

Extension Closedness of Syzygies   ۹۵/۹/۱۸

مجید راهرو زرگر

دانشگاه محقق اردبیلی

_____ Abstract _____

In this talk, we review some recent results of S. Goto and R. Takahashi about the extension closedness of syzygies and local Gorensteinness of commutative rings. We also review the relationship between Serre's condition (R_n) and Auslander-Buchweitz's maximal Cohen-Macaulay approximations.

Numerical Semigroup algebras   ۹۵/۹/۲۵

راحله جعفری

پژوهشگاه دانشهای بنیادی و دانشگاه خوارزمی

_____ Abstract _____

Let $S' \subseteq S$ be two normalized numerical semigroups and k be a field. Then the inclusion $k[\![t^{S'}]\!] \subseteq k[\![t^S]\!]$ of associated numerical semigroup rings, provides a numerical semigroup algebra. In this talk, we are interested to investigate algebraic properties of these algebras.