سمینار هفتگی جبر جابه‌جایی

(پائیز ۱۳۹۴)

۹۴/۷/۱۶ *Rings with a chain of semidualizing modules*

انسیه امان زاده،
دانشگاه خوارزمی

Abstract

Let R be a commutative noetherian local ring. A finitely generated R–module C is called semidualizing if the natural homothety map $\chi_C^R : R \longrightarrow \mathrm{Hom}_R(C, C)$ is an isomorphism and $\mathrm{Ext}_R^{>0}(C, C) = 0$. The set of all isomorphism classes of semidualizing R–modules is denoted by $\mathfrak{G}_0(R)$. In this talk, we are going to investigate a Cohen-Macaulay ring R which admits a dualizing module and a certain chain in $\mathfrak{G}_0(R)$.

۹۴/۸/۷ *Monomial curves of homogeneous type*

راحله جعفری،
پژوهشگاه دانشهای بنیادی

Abstract

We describe the concept of being of homogeneous type for modules. Then in the case of monomial curves we introduce the concept of being homogeneous and study the analogy between these two notions.

۹۴/۸/۱۴ *Some new subcategories and homological dimensions related to semidualizing modules*

محمد رحمانی،
دانشگاه خوارزمی

Abstract

Let R be a Noetherian ring and let C be a semidualizing R-module. In this talk, by using the semidualizing modules, I define and study new classes of modules and homological dimensions and investigate the relations between them. In parallel, I obtain some necessary and sufficient condition for C to be dualizing.

۹۴/۸/۲۸ *On cohomology annihilator of commutative rings*

عبدالناصر بهلکه،
دانشگاه گنبد کاووس

Abstract

The notion of the cohomology annihilator was introduced and studied independently by Dieterich and Yoshino in connection with the Brauer-Thrall conjectures for maximal Cohen-Macaulay modules, where they proved that the cohomology annihilator of a d-dimensional Cohen-Macaulay complete local ring with perfect coefficient field is $\mathfrak{m}$-primary, provided that R is an isolated singularity. A nice theorem of Auslander states that the cohomology annihilator of every complete Cohen-Macaulay local ring $(R, \mathfrak{m})$ of finite Cohen-Macaulay representation type is $\mathfrak{m}$-primary. This result was extended by Leuschke and Wiegand to the case where the ring is excellent, and by Huneke and Leuschke to all Cohen-Macaulay local rings. In this talk, we study cohomology annihilators of commutative noetherian rings and investigate their connections with other well-studied notions such as derived dimension, singularity dimension and strong generators for module categories.

۹۴/۹/۲۶ *On the index of powers of edge ideals*

مینا بیگدلی،
دانشگاه تحصیلات تکمیلی علوم پایه زنجان

Abstract

Let I be a square-free monomial ideal generated in degree 2 in the polynomial ring S. One of the important questions regarding the monomial ideal I is that under which conditions the ideal I^k has a linear resolution over any field, for $k > 1$. It is well-known that if I has a linear resolution, then all powers of I have a linear resolution. As other partial results, more recently, there have been several interesting answers to this question. In this lecture we review some of these results and also give another answer to the above question in a different direction by considering the index of powers and square-free powers of I. All evidences show that the index as a function of the power of the ideal I is strictly increasing if I is linearly presented. However, examples show that this need not to be the case for monomial ideals generated in degree greater than two.
This is a joint work with J. Herzog and R. Zaare-Nahandi.

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مکان: میدان شهید باهنر، پژوهشگاه دانشهای بنیادی
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