پژوهشگاه دانشهای بنیادی ـــــــــــــــــــــــــــ پژوهشکدهٔ ریاضیات

سمینار هفتگی جبر جابه‌جایی

(پائیز ۱۳۹۱)

۹۱/۷/۱۳ *Analytic methods in commutative algebra*

محسن اصغرزاده،
پژوهشگاه دانشهای بنیادی

Abstract

In this talk we review the theory of integration and introduce some of its applications to commutative algebra.

۹۱/۷/۲۰ *The derived category analogue of the Hartshorne-Lichtenbaum vanishing theorem*

مرضیه حاتم خانی،
دانشگاه الزهرا

Abstract

Let $\mathfrak{a}$ be an ideal of a local ring $(R, \mathfrak{m})$ and X a d-dimensional homologically bounded complex of R-modules whose all homology modules are finitely generated. We show that $H^d_{\mathfrak{a}}(X) = 0$ if and only if $\dim \widehat{R}/\mathfrak{a}\widehat{R} + \mathfrak{p} > 0$ for all prime ideals $\mathfrak{p}$ of $\hat{R}$ such that $\dim \hat{R}/\mathfrak{p} - \inf(X \otimes_R \hat{R})_{\mathfrak{p}} = d$.

۹۱/۸/۱۱ *Resolution of morphisms of algebraic varieties (Monomialization and toroidalization)*

راضیه احمدیان،
پژوهشگاه دانشهای بنیادی

Abstract

Suppose that $\phi : X \to Y$ is a morphism of k-varieties, where k is an algebraically closed field of characteristic zero. In general, the structure of ϕ may be extremely complicated. A natural question to ask is if it is possible to perform monoidal transforms (blow-ups with smooth centers) over X and Y to produce a morphism which has a relatively simple structure. In this talk, we want to introduce monomial and toroidal morphisms and we will provide an overview of the monomialization and toroidalization problems.

۹۱/۸/۲۵ *Expansions of multigraded modules*

شمیلا بیات،
دانشگاه صنعتی امیرکبیر

Abstract

We introduce an exact functor defined on multigraded modules, which we call the expansion functor, and study its homological properties.

۹۱/۹/۹ *Sequence of exact zero-divisors*

محسن غیبی،
دانشگاه خوارزمی و پژوهشگاه دانشهای بنیادی

Abstract

The concept of a sequence of exact zero-divisors on a Noetherian local ring is defined and studied. Some properties of sequences of exact zero-divisors are compared with regular sequences.

۹۱/۹/۲۳ *Koszul algebras*

رسول آهنگری ملکی،
دانشگاه خوارزمی

Abstract

The goal of this talk is to introduce a class of graded algebras called Koszul algebras. Let R be a standard graded algebra over a field K. R is said to be Koszul if K has a linear free resolution as an R-module. From certain point of views, Koszul algebras behave homologicaly as polynomial rings. For example all finitely generated graded modules over a Koszul algebra have finite regularity.

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مکان: میدان شهید باهنر، پژوهشگاه دانشهای بنیادی
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