

arXiv.org > math > arXiv:1204.3027

Search or Article-id

All papers

(Help | Advanced search) Go! 6

Download:

- PDF
- PostScript
- Other formats

Current browse context: math.AG < prev | next >

new | recent | 1204

Change to browse by: math

References & Citations NASA ADS Bookmark(what is this?) 📃 🔄 X 🔂 🖬 🛅 🚽 😭 🗭 WISE

Mathematics > Algebraic Geometry

Interpolation of Ideals

Martin Avendano, Jorge Ortigas-Galindo

(Submitted on 13 Apr 2012)

Let K denote an algebraically closed field. We study the relation between an ideal I in K[x1,...,xn] and its cross sections I a=I+<x1-a>. In particular, we study under what conditions I can be recovered from the set I_S={(a,I_a):a in S} with S a subset of K. For instance, we show that an ideal I=cap_i Q_i, where Q_i is primary and Q_i cap K[x1]={0}, is uniquely determined by I_S when S is infinite. Moreover, there exists a function B(d,n) such that, if I is generated by polynomials of degree at most d, then I is uniquely determined by I_S when |S|>=B(d,n). If I is also known to be principal, the reconstruction can be done when |S|>=2d, and in this case, we prove that the bound is sharp.

Subjects: Algebraic Geometry (math.AG) MSC classes: 14015, 13P99 Cite as: arXiv:1204.3027v1 [math.AG]

Submission history

From: Martin Avendano [view email] [v1] Fri, 13 Apr 2012 15:23:12 GMT (11kb)

Which authors of this paper are endorsers?

Link back to: arXiv, form interface, contact.