



# Depth and minimal number of generators of square free monomial ideals

Dorin Popescu

(Submitted on 13 Jul 2011 (v1), last revised 14 Oct 2011 (this version, v3))

Let  $I$  be an ideal of a polynomial algebra  $S$  over a field generated by square free monomials of degree  $\geq d$ . If  $I$  contains more monomials of degree  $d$  than  $(n-d)/(n-d+1)$  of the total number of square free monomials of  $S$  of degree  $d+1$  then  $\text{depth}_S I \leq d$ , in particular the Stanley's Conjecture holds in this case.

Subjects: **Commutative Algebra (math.AC)**; Combinatorics (math.CO)  
Cite as: **arXiv:1107.2621 [math.AC]**  
(or **arXiv:1107.2621v3 [math.AC]** for this version)

## Submission history

From: Dorin Popescu [[view email](#)]  
[v1] Wed, 13 Jul 2011 18:18:00 GMT (5kb)  
[v2] Tue, 26 Jul 2011 16:57:34 GMT (5kb)  
[v3] Fri, 14 Oct 2011 13:43:27 GMT (5kb)

*Which authors of this paper are endorsers?*

Link back to: [arXiv](#), [form interface](#), [contact](#).

## Download:

- [PDF](#)
- [PostScript](#)
- [Other formats](#)

Current browse context:

math.AC

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [1107](#)

Change to browse by:

[math](#)

[math.CO](#)

## References & Citations

- [NASA ADS](#)

Bookmark([what is this?](#))

