**Robbiano, Lorenzo**; **Valla, Giuseppe**

**Free resolutions for special tangent cones.** (English) Zbl 0558.14008

Commutative algebra, Proc. Conf., Trento/Italy 1981, Lect. Notes Pure Appl. Math. 84, 253-274 (1983).

[For the entire collection see Zbl 0493.00004.]

In this paper the authors start with the notion of a standard base of an ideal in a local ring (in definition 1.6, $f_1^*, ..., f_r^*$ should be a minimal set of generators of $J^*$) and investigate various properties of a standard base, particularly in relation to the elements (resp. their initial forms) forming a regular sequence, and the Koszul complex corresponding to the initial forms. The paper concludes with some application and examples.

Reviewer: B.Singh

**MSC:**

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|---|---|---|
| 14E15 | Global theory and resolution of singularities (algebro-geometric aspects) | Cited in **10** Documents |
| 13E15 | Commutative rings and modules of finite generation or presentation; number of generators | |
| 14B05 | Singularities in algebraic geometry | |

**Keywords:**

tangent cone; minimal set of generators; standard base; Koszul complex