Mathematics > Logic

A note on computational complexities of polynomial type

Hong Van Le

(Submitted on 12 Nov 2010)

We introduce a notion of a polynomial type complexity of a multivariate polynomial. We provide examples of polynomial type complexities, including the determinantal complexity. We present two algorithms (not very efficient) to construct test functions for lower bounds (or explicit obstructions) of a polynomial type complexity, one of them is based on Gr\"obner bases, the other uses the resultant of polynomials in many variables. If the ground field is $\C$ we show an algorithm to compute a polynomial type complexity. We discuss several questions related with these ideas

Comments:	12 pages
Subjects:	**Logic (math.LO)**; Computational Complexity (cs.CC)
MSC classes:	03D15, 68Q17, 13P25
Cite as:	**arXiv:1011.2887v1 [math.LO]**

Submission history

From: HongVan Le [view email]

[v1] Fri, 12 Nov 2010 11:44:54 GMT (16kb)

Which authors of this paper are endorsers?

Link back to: arXiv, form interface, contact.

Download:

- PDF
- PostScript
- Other formats

Current browse context:

math.LO

< prev | next >

new | recent | 1011

Change to browse by:

cs
    cs.CC
math

References & Citations

- NASA ADS

Bookmark(what is this?)