

**Gwozdziwicz, Janusz; Kurdyka, Krzysztof; Parusinski, Adam**

**On the number of solutions of an algebraic equation on the curve  $y = e^x + \sin x, x > 0$ , and a consequence for o-minimal structures.** (English) Zbl 0916.03026

Proc. Am. Math. Soc. 127, No. 4, 1057-1064 (1999).

It is proved that every polynomial  $P(x, y)$  of degree  $d$  has at most  $2(d + 2)^{12}$  zeros on the curve  $y = e^x + \sin(x), x > 0$ .

As a consequence the authors obtain that the existence of a uniform bound for the number of zeros of polynomials of a fixed degree on an analytic curve does not imply that this curve belongs to an o-minimal structure.

Reviewer: [Viorel Vâjăitu \(București\)](#)

**MSC:**

[03C50](#) Models with special properties (saturated, rigid, etc.)

[14P15](#) Real-analytic and semi-analytic sets

[26E05](#) Real-analytic functions

Cited in **2** Documents

**Keywords:**

[algebraic equation](#); [fewnomial](#); [Khovansky theory](#); [o-minimal structure](#); [analytic curve](#)

**Full Text:** [DOI](#)