

**Korchagin, A. B.**

**Construction of new  $M$ -curves of 9-th degree.** (English) Zbl 0785.14033

Real algebraic geometry, Proc. Conf., Rennes/Fr. 1991, Lect. Notes Math. 1524, 296-307 (1992).

[For the entire collection see [Zbl 0756.00007](#).]

The subject is related to Hilbert's 16th problem. Namely, the oval arrangements of real plane nonsingular curves of degree 9 are studied. By means of the Viro method of glueing real polynomials the author constructs 396 different oval arrangements, most of them are new. A short survey of this kind is presented, and several conjectures on the topology of curves of odd degrees are formulated, analogous to the known results and conjectures concerning curves of even degrees. It should be noted that one such conjecture, analogous to the Ragsdale conjecture, has been disproved by *Itenberg* [C. R. Acad. Sci. Paris, Ser. I 317, No. 3, 277-282 (1993)].

Reviewer: [E.I.Shustin \(Tel Aviv\)](#)

**MSC:**

[14P25](#) Topology of real algebraic varieties

[14H45](#) Special algebraic curves and curves of low genus

Cited in **2** Documents

**Keywords:**

$M$ -curves; Newton polygon; smoothing of singular points; Hilbert's 16th problem; oval arrangements of real plane nonsingular curves of degree 9