

MR1679804 (2000b:32056) 32S55 (57M25)

Mond, David (4-WARW); **van Straten, Duco** (D-MNZ)

Knotted Milnor fibres. (English summary)

Topology **38** (1999), *no. 4*, 915–929.

The main theorem of the paper is that every knot-type may occur as the real Milnor fibre of an isolated space curve singularity. To some extent this brings us back to the origins of Milnor fibre theory, since Milnor was investigating knots when he wrote the seminal *Singular points of complex hypersurfaces* [Princeton Univ. Press, Princeton, NJ, 1968; [MR0239612 \(39 #969\)](#)].

Included in the paper are techniques called hidden scaffolding and helping curves which assist in the construction of the knot. In addition they show that no curve of multiplicity 3 can have a knotted real Milnor fibre. They also give evidence that, for knots, the Milnor number of the curve is relatively high; in fact they conjecture that knotting does not occur for curves with Milnor number less than 10.

Reviewed by [Kevin Houston](#)

References

1. Akbulut, S. and King, H., All knots are algebraic. *Commentari Mathematici Helvetici*, 1981, **56**, 339–351. [MR0639356 \(83m:57005\)](#)
2. Buchweitz, R.-O. and Greuel, G.-M., The Milnor number and deformations of complex curve singularities. *Inventiones Mathematicae*, 1980, **58**, 241–281. [MR0571575 \(81j:14007\)](#)
3. Greuel, G.-M., On deformations of maps and curve singularities (to appear).
4. Teissier, B., Résolution simultanée—I. Familles de courbes. In *Séminaire sur les Singularités des Surfaces*, eds M. Demazure, H. Pinkham and B. Tesser, Lecture Notes in Mathematics, Vol. **777**. Springer, Berlin, 1980. [MR0579026 \(82d:14021\)](#)
5. Vassiliev, N., Complements of discriminants of smooth maps: topology and applications. *Translations of Mathematical Monographs*, Vol. **98**, American Mathematical Society, Providence, RI, 1992. [MR1168473 \(94i:57020\)](#)

Note: This list reflects references listed in the original paper as accurately as possible with no attempt to correct errors.