Goryunov, V. V.

The intersection form of a plane isolated line singularity. (English) Zbl 0745.32018

Singularity theory and its applications. Pt. I: Geometric aspects of singularities, Proc. Symp., Warwick/UK 1988-89, Lect. Notes Math. 1462, 172-184 (1991).

[For the entire collection see Zbl 0723.00028.]

For isolated critical points of a real analytic function $f : (\mathbb{R}^2, 0) \to (\mathbb{R}, 0)$, the intersection matrices of the vanishing cycles (for the complexification) are obtained by *A. M. Gabrielov* [Funct. Anal. Appl. 7(1973), 182-193 (1974); translation from Funkts. Anal. Prilozh. 7, No. 3, 18-32 (1973; Zbl 0288.32011)] and *S. M. Gusein-Zade* [Funct. Anal. Appl. 8, 10-13 (1974); translation from Funkts. Anal. Prilozh. 8, No. 1, 11-15 (1974; Zbl 0304.14009)]. In the paper under review, the case of isolated line singularities (in the sense of Siersma) is treated, extending the method of Gusein-Zade.

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MSC:

32S30	Deformations of complex singularities; vanishing cycles
14H20	Singularities of curves, local rings
32S05	Local complex singularities
14F25	Classical real and complex (co)homology in algebraic geometry
14C15	(Equivariant) Chow groups and rings; motives
57R70	Critical points and critical submanifolds in differential topology
57R45	Singularities of differentiable mappings in differential topology

Keywords:

isolated line singularity; vanishing cycles; intersection form