

Newton polyhedra and Whitney equisingularity for isolated determinantal singularities

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Abstract: Using elementary equivalence of matrices, we extend Esterov's formulas [2] to compute the multiplicity of a determinantal singularity, the Euler characteristic of the Milnor fiber of a function $f : (X, 0) \rightarrow (\mathbb{C}, 0)$ defined on an Isolated Determinantal Singularity $(X, 0)$ and the local Euler obstruction of $(X, 0)$ in terms of Newton polyhedra. Also using Newton polyhedra, we present a condition that guarantees the Whitney equisingularity of a family of Isolated Determinantal Singularities $\{(X_t, 0)\}$.

Joint work with: Luiz Hartmann and Thaís M. Dalbelo

References

- [1] T. M. Dalbelo, L. Hartmann, M. Varella, Newton polyhedra and Whitney equisingularity for Isolated Determinantal Singularities, *preprint*.
- [2] A. Esterov, Determinantal singularities and Newton polyhedra, *Tr. Mat. Inst. Steklova* 259 (2007), No. Anal. i Osob. Ch 2., p. 20-38.