

## **Ann Lemahieu (Paris)**

### **The monodromy conjecture for nondegenerate surface singularities.**

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The monodromy conjecture predicts a relation between the geometry and the topology of a singularity. In particular, it says that a pole  $s_0$  of the local topological zeta function in 0 induces an eigenvalue of monodromy  $e^{2i\pi s_0}$  at a point in the neighbourhood of 0. When the singularity is given by a polynomial that is nondegenerate with respect to its Newton polyhedron, then one can express the local topological zeta function and the zeta function of monodromy in terms of the Newton polyhedron. We analyze these formulas for surface singularities: we provide a set of monodromy eigenvalues and a set of false candidate poles. In this way we obtain a proof for the monodromy conjecture for nondegenerate surface singularities.

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