The topology of real suspension singularities of type $f\bar{g} + z^n$

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In this talk we present some results on the topology of the family of real analytic germs $F\colon (\mathbb{C}^3, 0) \to (\mathbb{C}, 0)$ with isolated critical point at 0, given by $F(x, y, z) = f(x, y)\overline{g(x, y)} + z^r$, where f and g are holomorphic, $r \in \mathbb{Z}^+$ and $r \geq 2$. We describe the link L_F as a graph manifold using its natural open book decomposition, related to the Milnor fibration of the map-germ $f\bar{g}$ and the description of its monodromy as a quasi-periodic diffeomorphism through its Nielsen invariants. Furthermore, such a germ F gives rise to a Milnor fibration $\frac{F}{|F|}\colon \mathbb{S}^5 \setminus L_F \to \mathbb{S}^1$. We present a join theorem, which allows us to describe the homotopy type of the Milnor fibre of F and we show some cases where the open book decomposition of $\mathbb{S}^5$ given by the Milnor fibration of F cannot come from the Milnor fibration of a complex singularity in $\mathbb{C}^3$.