

Consider a germ of singular holomorphic vector field ∂ in $(\mathbb{C}^n, 0)$. Upon formal completion, there exists a uniquely defined Jordan decomposition $\partial = \partial_{\text{ss}} + \partial_{\text{nilp}}$, where the ∂_{ss} , ∂_{nilp} are commuting formal vector fields representing respectively the semi-simple and nilpotent components of ∂ . In general, these vector fields are not analytic. The Bruno ideal of ∂ is the formal ideal $B(\partial)$ defined the vanishing of $\partial_{\text{ss}} \wedge \partial_{\text{nilp}}$, i.e. by the collinearity locus of its semi-simple and nilpotent components. We will expose a self-contained proof of the following fact (stated by Bruno): If the spectra of ∂ satisfies the Bruno-arithmetical condition and ∂ is logarithmic then $B(\partial)$ is an analytic ideal invariant by ∂ and the restriction of ∂ to the variety $V(B(\partial))$ is analytically normalizable.