

# Some remarks on non-degenerate characteristic directions

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Characteristic directions of a tangent to the identity biholomorphism  $F$  in  $\mathbb{C}^n$  are the only possible directions of tangency of an attracting orbit. Écalle and Hakim proved that every characteristic direction which satisfies a non-degeneracy assumption supports a parabolic curve, i.e. a 1-dimensional stable manifold for  $F$  with 0 in its boundary; these parabolic curves can be seen as analytic sectorial realizations of a formal invariant object, which can be either a power series or a Dulac series. We will see how one could generalize Hakim's construction to obtain parabolic curves attached to more general formal invariant objects. This is a (very early stage) work in progress in collaboration with José Cano and Sergio Carrillo.

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