

# Hopf Bifurcation at infinity for planar vector fields

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## Abstract

We discuss, from a new point of view, families of  $C^1$  planar vector fields, without singularities,  $\{X_\mu : \mathbb{R}^2 \rightarrow \mathbb{R}^2; -\varepsilon < \mu < \varepsilon\}$  such that the point  $\infty$  of the Riemann sphere  $\mathbb{R}^2 \cup \{\infty\}$  changes from repeller to attractor, or vice-versa, when  $\mu = 0$ . A sort of local stability, around  $\infty$ , of some  $C^1$  planar vector fields is also considered.