**JORGE GUILLERMO HOUNIE**, Department of Mathematics, Federal University of São Carlos
*A Hopf lemma for holomorphic functions in Hardy spaces and applications to CR mappings*

Let $\Delta^+ = \{z \in \mathbb{C} : |z| < 1, \operatorname{Im} z > 0\}$ be the half-disc and $E = \{x : -1 < x < 1\}$ its diameter. Let $f$ be a holomorphic function on $\Delta^+$ and assume that $f(z) = o(z^n)$ for all positive integers $n$. Alexander's theorem [A] states that that if $f$ is continuous up to $E$, and the image $f(E)$ is "non-spiraling", then $f \equiv 0$ on $\Delta^+$. This generalizes previous results due to several authors, namely, S. Alignac, M. S. Baouendi, P. Ebenfelt, X.J. Huang, S.G. Krantz, M. Lakner, D. Ma, Y. Pan and L. Rothschild.

In this talk we will discuss extensions of Alexander's result to the case in which $f$ is not necessarily continuous up to $E$ but belongs to a Hardy class. We will present applications to unique continuation of CR mappings between hypersurfaces.

This is joint work with S. Berhanu.

# References

[A] H. Alexander, *A weak Hopf lemma for holomorphic mappings,* Indag. Math. **6**, (1995), 1–5.

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