

Neighborhoods of curves in complex surfaces

Frank Loray (Universit  de Rennes I)

Resumo/Abstract:

Given a smooth compact complex curve C (or Riemann surface) embedded in a smooth complex surface S , one would like to understand the neighborhood of C in S . Here, by "the neighborhood" we mean one (or any) sufficiently small neighborhood. For instance, when there is a neighborhood of C which is biholomorphic to some neighborhood of the zero section in the normal bundle of C in S , we just say that the neighborhood of C is linearizable. The neighborhood of a conic in the complex projective plane is not linearizable, while the neighborhood of a line is. More generally, the aim of the talk is to describe several invariants that makes it possible to distinguish non biholomorphic neighborhoods. We will survey on old and more recent results.