

# Formal rigidity in projective surfaces

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The main subject of this talk will be the formal principle for curves in surfaces. We say that a germ of surface  $S$  along a curve  $C$  satisfies the formal principle if every other surface  $S'$  formally biholomorphic to  $S$  is in fact biholomorphic to  $S$ . I will begin by reviewing some results concerning this problem, which mainly concern the cases of negative and positive self-intersection. If the normal bundle of  $C$  is trivial, I will explain how we can replace the hypotheses of negativity/positivity of the normal bundle by the hypothesis that  $S$  is projective to construct two foliations on  $S$ , and how to use them to obtain a formal principle for projective surfaces.

This is a joint work with J. V. Pereira.