Criteria for singularities for mappings from two–manifold to the plane. The number and signs of cusps. (joint work with I. Krzyżanowska)

ABSTRACT. Let $M \subset \mathbf{R}^{n+2}$ be a two–dimensional complete intersection. We show how to check whether a mapping $f \colon M \longrightarrow \mathbf{R}^2$ is 1–generic with only folds and cusps as singularities. In this case we give an effective method to count the number of positive and negative cusps of a polynomial f, using the signatures of some quadratic forms.