

Title: Stable Maps from a global viewpoint

Abstract: In this talk we analyze the global behaviour of stable maps between manifolds. Starting from a brief description of the local and multilocal phenomena, we shall introduce some invariants that codify the global topological informations of the singular and regular subsets of the considered maps. These are given by conveniently defined graphs (in the case of maps between manifolds of the same dimension) or more generally, cellular complexes (in other cases).

We describe with detail how to attach these graphs to stable maps from closed surfaces to the plane and study their generic properties. As a particular case, we consider Gauss maps on closed orientable surfaces and secant maps of closed spacial curves.

We end the talk with a brief introduction to the 3-dimensional case.