

Algebraic Geometry - Mariusz Koras in memoriam

Warsaw, 28.05.2018 - 01.06.2018



POLYNOMIALS IN TWO VARIABLES AND THEIR TREE AT INFINITY

PIERRETTE CASSOU-NOGUÈS

IMB, Université de Bordeaux

ABSTRACT. Let $f: \mathbb{C}^2 \rightarrow \mathbb{C}$ be a polynomial map. Let $\mathbb{C}^2 \subset X$ be a compactification of \mathbb{C}^2 , where X is a smooth rational compact surface such that there exists a holomorphic map $\phi: X \rightarrow \mathbb{P}^1 = \mathbb{C} \cup \{\infty\}$ which extends f . Put $\mathcal{D} = X \setminus \mathbb{C}^2$. \mathcal{D} is a curve whose irreducible components are smooth rational compact curves and all singularities are ordinary double points. The dual graph of \mathcal{D} is a tree. In this talk we will show that the genus of the generic curve is an increasing function of the complexity of the tree using combinatorial methods.

This is a joint work with Daniel Daigle.