

Seminari de Geometria Algebraica 2016-2017

Divendres 18 de novembre a les 15:00, aula T2 FMI-UB

<http://www.ub.edu/sga/>

Towards a (twisted) bicanonical system
with base point
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In this seminar I will talk about a work in collaboration with Roberto Pignatelli about the construction of a family of minimal surfaces of general type with $p_g = q = 0$ and $K^2 = 3$, whose general member S is birational to a surfaces Σ of degree 10. The motivation for studying this type of surfaces comes from some geometric properties that are really interesting. First of all the order of $\pi_1(S)$ is the (conjectured) maximum order for the fundamental group of such surfaces. Moreover, the birational map from S to Σ is not a morphism and it is given by a twisted bicanonical system. For both these properties, these surfaces are the only known example and answer to some open questions related to the study of surfaces of general type. In the first part of the talk I will recall some results and conjectures related to these topics whereas in the second part I will describe the construction of these surfaces as well as some geometric properties of their twisted bicanonical model.