





SEMINARIO Elvira Pérez Callejo

Universitat Jaume I

Rational first integrals of polynomial foliations and asymptotic approach to bounded negativity on rational surfaces

Abstract: In this talk, we present some advances to two open problems using techniques of algebraic geometry.

Firstly, we obtain several necessary conditions for algebraic integrability of a planar polynomial foliation. Moreover, we describe several algorithms to decide on algebraic integrability (under certain conditions) and to compute a rational first integral in the positive case. We use, as a main tool, the extension of the planar foliation to a foliation on the projective plane or a Hirzebruch surface.

Finally, we prove some results related to the Bounded Negativity conjecture on rational surfaces.

This is a joint work with Carlos Galindo and Francisco Monserrat.

Seminario IMUVA. Edificio LUCIA 20 de Octubre de 2023 (12:00)

Organiza: GIR SINGACOM

Web: http://www.imuva.uva.es Correo Electrónico: imuva@uva.es

