

**Author: A. HARO**

University of Barcelona (Spain)

**Title:** *“A posteriori KAM theorems for systems with first integrals in involution”*

**Abstract.** Some relevant Hamiltonian systems in Celestial Mechanics have first integrals in involution. A classic technique to study such systems, known as symplectic reduction, is based in reducing the number of degrees of freedom by using the first integrals. In this talk we present two a posteriori KAM theorems for Hamiltonian systems with first integrals in involution, including the isoenergetic case, without using symplectic reduction. The approach leads to efficient numerical methods and validating techniques.

This is a joint work with Alejandro Luque.