

**ID 241**

**Tipo de Comunicación:** Oral

**Sesión Científica:** Galaxias y cosmología

**Título:** Connecting interacting galaxies with manifolds

**Nombre (Autor que presenta):** Merce

**Apellidos (Autor que presenta):** Romero-Gomez

**Apellidos y nombre de los autores:** Romero-Gomez, m.; Athanassoula, E.

**Resumen:**

It is well known that two interacting galaxies generate tidal spiral arms. In this talk, we address the question of the formation of the tidal arms from a dynamical point of view. We model the two interacting galaxies as two point masses and we study the motion of the stars using the Restricted Three Body Problem, i.e. the two mass points are bound and circle around their center of mass. Even though it may seem a simple approximation, it has been shown in the literature to give an adequate description of the formation and early evolution of bridges and tails in interacting galaxies. We model the bridges and tails observed in interacting galaxies using the invariant manifolds associated to the Lyapunov orbits of the Lagrangian points of the galactic system.