

On the dynamics in the neighborhood of the collinear points in the CR3BP

It is well known that the Circular Restricted Three-Body Problem (CR3BP) studies the behavior of a massless particle, moving under the gravitational influence of two primaries and that, in a suitable reference system, the model admits five equilibrium points. In this talk we will focus on the dynamical behavior associated with the ones which lie on the axis joining the primaries. We will show what kind of invariant objects exist in their neighborhood and some numerical methods that can be implemented for their computation. Then, some astrodynamical and astronomical applications will be introduced.