

RIGIDITY OF PLANAR CENTRAL CONFIGURATIONS

Antonio Carlos Fernandes

Universidade Federal de Itajubá

Resumo/Abstract:

We study the rigidity of planar central configurations in the non-collinear n -body problem relative to the change of masses. More precisely, we study central configurations for which is possible to change the values of k masses keeping fixed all the positions and the values of the masses of the other $n - k$ bodies and still have central configurations. Here we consider the cases $k = 1$ and $k = 2$. The central configurations that have such properties are closely related with the so called stacked central configurations and super central configurations.