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*Central Configurations in the four body problem with some equal masses*

A central configuration in the  $N$ -body problem is a particular position of the  $N$ -particles where the acceleration vector of each particle is proportional to the corresponding position vector, and the constant of proportionality is the same for the  $N$ -particles. In this talk we study the central configurations in the four body problem when three or two of the masses are equal. We prove that there is a unique convex central configurations when two equal masses are located at opposite vertices of a quadrilateral. If three of the masses are equal and the configuration possesses a symmetry line, we find the total number of central configurations.