

CCSU
DEPARTMENT OF MATHEMATICAL SCIENCES
COLLOQUIUM

Friday, October 28

3:00 – 4:00 PM

Maria Sanford, Room 101

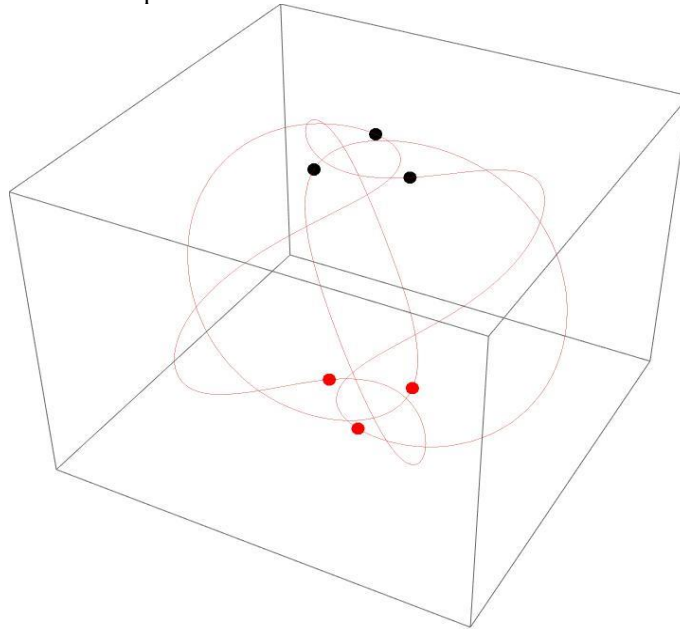
**THE N-BODY PROBLEM: SOME OLD AND
SOME NEW PERIODIC SOLUTIONS**
OSCAR PERDOMO

CENTRAL CONNECTICUT STATE UNIVERSITY

Abstract: We will start this talk explaining the notion of velocity and acceleration vector of a curve, then we will move to explain Newton's second law and then we will explain the gravitational law and the n-body problem.

We will show how, imposing some symmetries to the system leads to some interesting solutions. For example, we will prove in detail the possibility of a system of six planets, all with the same mass of the Earth's mass moving along a center with no sun and taking 365 days to go around this center.

We will also present some new periodic solutions recently found in collaboration with Nelson Castaneda, Andres Rivera and Alexander Arredondo. The picture below shows one of these new solutions.



To join us online use the following link: <https://ccsu.webex.com/meet/gotchev>

For further information: gotchevi@ccsu.edu; 860-832-2839; <https://web.ccsu.edu/colloquium/>