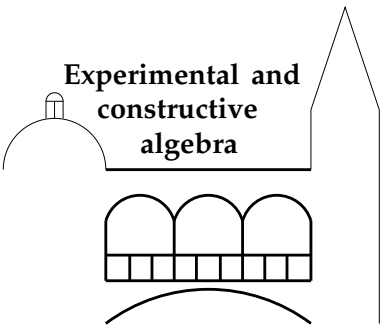
Graduiertenkolleg

Experimentelle und konstruktive Algebra



Kolloquiumsvortrag

Dienstag, 08. Mai 2018, 14:00 Uhr, Hörsaal V

Manuele Santoprete (Wilfrid Laurier University, Waterloo, Kanada):
Relative Equilibria in Celestial and Geometric Mechanics

The study of the planar n-body problem is a central part of Celestial Mechanics. The problem is non-integrable and only few solutions can be known explicitly. Arguably the most important periodic solutions are solutions where the bodies rotate rigidly about the center of mass with constant angular velocity. We call relative equilibria the points in the phase space giving an evolution which is described by such rigid motions. We will give several ways to describe relative equilibria, in particular we will describe it in terms of the amended and augmented potentials. We will also show how this ideas can be naturally generalized to general Hamiltonian system with symmetry. Time permitting we will also describe some results on the stability of relative equilibria in the n-body problem.

Wir laden alle Interessierten herzlich ein.