

# **STABILIZED ORBITS AND CAPTURE IN THE THREE-BODY PROBLEM**

**ARSEN DZHANOEV**

MOSCOW STATE UNIVERSITY (RUSSIA)

ABSTRACT. More than a century ago Henri Poincaré suggested that highly complex behavior could occur in the three-body problem. Later, for the restricted three-body problem it was analytically verified that the complex behaviour is due to existence of transverse heteroclinic points. In my talk I will give a short review of the obtained results in this field and propose a new problem to solve and give new directions.