Kugushev, E. I.; **Nikonov, V. I.**

An estimate for the number of relative equilibria in the motion of a plane rigid body and a material point under mutual attraction. (English. Russian original) Zbl 1371.70060

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Summary: The plane motion of a rigid body with a discrete mass distribution and a material point under mutual attraction is considered. The stationary configurations of this mechanical system are studied in the case when the mass of the material point can be ignored and the body rotates about its mass center at a nonzero angular velocity and in the general case of mutual interaction between the body and the material point. It is shown that in this mechanical system there always exist at least two different positions of relative equilibrium.

MSC:

70K42 Equilibria and periodic trajectories for nonlinear problems in mechanics
70F05 Two-body problems

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Full Text: DOI

References:

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