

Fomenko invariants for the system: Chaplygin ball with a rotor

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We consider the problem of a rolling balanced dynamically nonsymmetric ball with a rotor on a rough horizontal plane. Earlier A.Y. Moskvina constructed bifurcation diagrams of the momentum mapping and bifurcation complexes in order to study the dynamics of the system and find the singular solutions. A natural continuation of this research is the fine Liouville analysis of the system. In this talk we present one of the steps in this direction, namely, we construct Fomenko invariants for this system and make rough topological analysis of the system.
