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Continuation of periodic orbits in reversible Hamiltonian systems

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Abstract

We discuss two possible approaches to the continuation problem for families of periodic orbits in reversible Hamiltonian systems. The first approach is valid in general Hamiltonian systems while the second approach uses explicitly the reversibility properties. For both cases we describe the set-up which allows to use pseudo-arclength continuation, for example with AUTO. We show several examples from celestial mechanics.

The talk is based on *joint work with Eusebius Doedel, Jorge Galan, Emilio Freire and Francisco Javier Munoz Almaraz.*