

A Review of Structure-Preserving Numerical Integration of Constrained Hamiltonian Systems

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ABSTRACT

The aim of the Geometric integration (GNI) is to preserve qualitative properties of dynamical systems and mechanical systems. In this paper we will focus on the Hamiltonian systems (constrained Hamiltonian systems). This study seeks to promote the widespread application of structure-preserving geometric integration in dynamical systems by giving an overview of existing GNI methods and their proficiencies in a feasible manner.