

# Hamiltonian systems (E. Hairer)

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Hamiltonian systems arise in a variety of important applications, ranging from problems in astronomy (where often high accuracy is demanded), over conservative mechanical systems, to simulations in molecular dynamics (where the qualitative aspect of numerical solutions is of interest).

The numerical treatment of such problems (development of new algorithms and the theoretical investigation of well-established integrators) is the main concern of the present minisymposium. It can be considered as part of ‘geometric numerical integration’, which has attracted many researchers during the last decade. In this minisymposium, topics such as Hamiltonian systems on manifolds, Poisson integrators, backward error analysis, applications of KAM theory to numerical integrators, symplectic and symmetric numerical schemes will be discussed.