

Introduction to Lie group integrators by Ergys Çokaj,

Abstract

Lie group integrators solve differential equations whose solutions evolve on a manifold. They are widely applied in many study and research areas such as multibody dynamics, shape analysis, data science, image registrations and biophysical simulations.

In this talk we give an overview of two main classes of Lie group integrators: commutator free and Runge-Kutta-Munthe-Kaas methods."