

Multisymplectic analysis of the Short Pulse Equation and its numerical implementation

Dr Monika Pietrzyk, University of St. Andrews, Scotland, UK

Abstract

The multisymplectic Hamiltonian formalism of the Short Pulse Equation (SPE) is used to describe the propagation of ultra-short optical pulses when the standard nonlinear Schrödinger equation cannot be applied. In my talk I will present a robust and effective multisymplectic geometric integrator for SPE.