Turkish Journal of Physics

Infinite-Hamiltonian Structures of the Riemann Equation

Refik TURHAN
Department of Engineering Physics, Ankara University, 06500 Ankara-TURKEY
e-mail: turhan@eng.ankara.edu.tr

Abstract: We give two distinct infinite-Hamiltonian representations for the Riemann equation. One with first order Hamiltonian operators and another with third order-first order Hamiltonian operators. Both representations contain an arbitrary function of the dynamical variable. We prove that all the Hamiltonian operators of the Riemann equation are mutually compatible.

Key Words: Integrability, multi-Hamiltonian structures, Riemann equation.

Scientific Journals Home Page