Variations on Two Themes of Hamilton

Vasil Tsanov

University of Sofia "St. Kliment Ohridski", Bulgaria
tsanov@fmi.uni-sofia.bg

I shall discuss the interplay between quaternions and Hamiltonian mechanics. Both were invented by W. R. Hamilton (1805 - 1865). During the last two centuries both have developed intensively with applications in Algebra, Geometry, Number Theory, Theoretical (quantum) Physics. I shall review briefly some important recent results, which involve nontrivially both themes, and also report on some related research of mine.