On Hamiltonian submanifolds

Marcela Popescu and Paul Popescu*

Department of Applied Mathematics, University of Craiova 13 A. I. Cuza Str., Craiova, 1100, Romania

ABSTRACT

The aim of this paper is to investigate the possibility to induce hamiltonians on submanifolds. The problem is studied using affine bundles since it is the case of higher order hamiltonians. It is shown that using affine bundles one can consider a dual theory between lagrangians and hamiltonians, via Legendre transformation. A canonical way to induce a hamiltonian on an affine subbundle is also given.

^{*} The authors are partially supported by a grant MEN-CNCSIS.