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THE CONSTRUCTION OF SIX-DIMENSIONAL SYMPLECTIC HAANTJES MANIFOLDS

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Ferapontov and Fordy considered the system of hydrodynamic type with the Hamiltonian, which is equipped with the pseudo Riemannian metric tensor, and the involutive function was defined on the phase space. This system is applied to the construction of 6-dimensional symplectic Haantjes manifolds and we construct some examples of the symplectic Haantjes structure, which contain the Haantjes chains.

MSC: 37J35, 53C43, 70H06

Keywords: Haantjes operator, Hamiltonian system, Lorentzian warped product, symplectic-Haantjes manifold

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