

Contact isotropic realizations of Jacobi manifolds

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Abstract

Jacobi manifolds, introduced by Lichnerowicz and Kirillov independently, are analogous (while at the same time generalising) Poisson manifolds, in the sense that the role of symplectic geometry in the latter is played by contact manifolds in the former. Recent work of Crainic and Salazar has provided a new geometric approach to studying Jacobi structures defined on any real line bundle, i.e. not necessarily trivial. Motivated by the theory of integrable Hamiltonian systems on contact manifolds, as well as by the idea of exploring ‘compactness’ in Jacobi manifolds (analogous to that which Crainic, Fernandes and Martínez-Torres introduced for their Poisson counterparts), this talk presents the classification of some special types of ‘desingularisations’ of Jacobi structures, which are analogous to those studied by Dazord and Delzant in the Poisson domain. This is joint work with D. Sepe.