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Lagrangian subalgebras of basic classical Lie superalgebras

Lagrangian subalgebras of semisimple Lie algebras have been studied extensively in connection with different problems arising in Physics and Geometry. These subalgebras play a central role in the celebrated classification by Belavin and Drinfeld of quasitriangular Lie bialgebra structures on simple Lie algebras. More recently Evans and Lu showed that the variety of Lagrangian subalgebras is closely related to the wonderful compactification. It is a natural problem to extend the above results to simple Lie superalgebras. In this talk I will present the classification of Lagrangian subalgebras of basic classical Lie superalgebras, paying special attention to the new phenomena that arise in the superalgebra case compared to the classical one.

This is joint work with Milen Yakimov from LSU.