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# Symplectic Dirac Operator and its Generalization

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**Abstract.** At an infinitesimal level, we will give a classification of $1^{st}$ order invariant differential operators acting on fields defined over contact projective geometries and having values in higher symplectic spinors. These fields are symplectic analogues of ordinary spinor fields in Riemannian geometry (the orthogonal case). In particular, we shall present symplectic analogues of Dirac, twistor and Rarita-Schwinger operators and other higher spinor operators in the realm of parabolic geometries of contact projective type.

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**Keywords.** Kostant spinors, symplectic Clifford algebras, symplectic Dirac operator, invariant differential operators.

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