

# Abstract

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“On Submanifold Dirac Operators and Generalized  
Weierstrass Relations”

Schrödinger equations defined on submanifolds embedded in Euclidean space were studied mainly 1980-2000's in the framework of theoretical physics in order to evaluate the shape effect in quantum mechanical regime. In this talk, after giving the rigorous construction of the submanifold Schrödinger operator, I show that we obtain the submanifold Dirac operator by applying the method to Dirac operator in Euclidean space. I also show that the submanifold Dirac operator completely provides the data of the smooth surface immersed in Euclidean space; it implies a generalization of the Weierstrass relation for a minimal surface.