

Abstract:

The topic of the diploma thesis is symplectic spinor geometry. Its research was started by D. Shale, B. Kostant and K. Habermann. We focus our attention to one of the so called symplectic twistor operators introduced by S. Krýsl. We investigate the action of this operator on real even dimensional vector spaces considered as symplectic manifold, its invariance properties and regularity. We describe a part of the kernel of the symplectic twistor operator when acting on symplectic spinors on \mathbb{R}^2 . The kernel forms a representation of the so called metaplectic group (double cover of the symplectic group).