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Karina H Batistelli*, kbatistelli@gmail.com, and **Carina Boyallian**. *QHWM of the “orthogonal” and “symplectic” types Lie subalgebras of the matrix quantum pseudodifferential operators.*

In this talk we will characterize the irreducible quasifinite highest weight modules of some subalgebras of the Lie algebra of matrix quantum pseudodifferential operators $N \times N$.

In order to do this, we will first give a complete description of the anti-involutions that preserve the principal gradation of the algebra of $N \times N$ matrix quantum pseudodifferential operators and we will describe the Lie subalgebras of its minus fixed points. We will obtain, up to conjugation, two families of anti-involutions that show quite different results when $n = N$ and $n < N$. We will then focus on the study of the “orthogonal” and “symplectic” type subalgebras found for case $n = N$, specifically the classification and realization of the quasifinite highest weight modules. (Received August 28, 2017)