

An “orthogonalized” symplectic Dirac operator and branching procedures

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In this talk, we will define an ‘orthogonalised’ version of the symplectic Dirac operator D by considering it as an endomorphism of the Weyl algebra in $3n$ variables. By this small change, we avoid the technicalities imposed by the Schwartz space and hope to get a better insight of the module $\ker(D)$ by using techniques inspired by the orthogonal framework. More specific, we work towards an orthogonal branching of symplectic monogenics by using the Howe dual pair and introducing a suitable transvector algebra based on $\mathfrak{sp}(6)$ and $\mathfrak{sl}(2)$ data.