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Title:	N = 4 supersymmetric quantum mechanical model: Novel symmetries
Authors:	Krishna, S. (/jspui/browse?type=author&value=Krishna%2C+S.)
Keywords:	$\mathcal{N}=4$ SUSY QM algebra continuous and discrete symmetries Hodge theory
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Abstract:	We discuss a set of novel discrete symmetry transformations of the $\mathcal{N}=4$ supersymmetric quantum mechanical model of a charged particle moving on a sphere in the background of Dirac magnetic monopole. The usual five continuous symmetries (and their conserved Noether charges) and two discrete symmetries together provide the physical realizations of the de Rham cohomological operators of differential geometry. We have also exploited the supervariable approach to derive the nilpotent $\mathcal{N}=4$ SUSY transformations and provided the geometrical interpretation in the language of translational generators along the Grassmannian directions $\theta\alpha$ and $\theta\alpha$ onto (1,4)-dimensional supermanifold.
URI:	<a href="https://www.worldscientific.com/doi/10.1142/S0217751X17500555">https://www.worldscientific.com/doi/10.1142/S0217751X17500555</a> ( <a href="https://www.worldscientific.com/doi/10.1142/S0217751X17500555">https://www.worldscientific.com/doi/10.1142/S0217751X17500555</a> ) <a href="http://hdl.handle.net/123456789/2571">http://hdl.handle.net/123456789/2571</a> ( <a href="http://hdl.handle.net/123456789/2571">http://hdl.handle.net/123456789/2571</a> )
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