

Action of the Loop Group on the Self Dual Yang–Mills Equation

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Abstract. Recently Kac-Moody symmetry has played an important role in mathematical physics. Dolan and Chau, Ge and Wu discovered an infinitesimal action of the Kac-Moody Lie algebra on the space of solutions of SDYM. We have discovered an action of the loop group on the space of generalized solutions of SDYM, which exponentiates the Kac-Moody action. The group acts by adding a special type of source onto the solution. The action is a geometric construction using the twistor picture.

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