**Mathematics > Representation Theory**

# A System of Third-Order Differential Operators Conformally Invariant under $\mathfrak{so}(8,\mathbb{C})$

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In earlier work, Barchini, Kable, and Zierau constructed a number of conformally invariant systems of differential operators associated to Heisenberg parabolic subalgebras in simple Lie algebras. The construction was systematic, but the existence of such a system was left open in several anomalous cases. Here, a conformally invariant system is shown to exist in the most interesting of these remaining cases. The construction may also be interpreted as giving an explicit homomorphism between generalized Verma modules for the Lie algebra of type $D_4$.

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## Submission history

*Which authors of this paper are endorsers?*

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