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On bispectral duality for generalized Calogero-Moser systems

We introduce two series of difference operators which generalize Macdonald rational operators defined for any root system. We prove that the operators constructed are bispectrally dual to the generalized Calogero–Moser–Sutherland operators related to configurations $A_{n,2}(m)$, $C_{n+1}(m, l)$ appeared in [1], [2]. We give the formulas for the corresponding Baker–Akhiezer functions which satisfy both differential and difference equations. For another deformation $A_{n,1}(m)$ of the root system A_n such a bispectrality was established by Chalykh in [3].

References

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