

Perturbative connection formulas for Heun equations

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The connection problem for Heun equation seeks to relate bases of Frobenius solutions associated to different Fuchsian singularities. In a recent paper 2201.04491 [hep-th], Bonelli, Iossa, Lichtig and Tanzini have proposed a conjecture relating the relevant connection coefficients to classical conformal blocks of the Virasoro algebra. In practical terms, their conjecture allows to compute the connection coefficients in the form of a perturbative expansion in a suitable parameter. I will explain how to derive the corresponding perturbative formulas directly from Heun's equation.

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