Title: Twisted generating functions for singular vectors in Verma modules for \textit{sl}(2)

Abstract:

We construct certain "twisted" generating functions incorporating the well-known classical singular vectors in the Verma modules for \textit{sl}(2), and we then characterize the singular vectors by deriving partial differential equations for the generating functions. We also construct certain differential equations for generating functions over singular vectors in suitably localized Verma modules for \textit{sl}(2). These ideas suggest generalizations to further cases. This is joint work with J. Lepowsky.