

The representations of the Brauer-Chen algebra associated to the exceptional complex reflection groups

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In 1937, Richard Brauer extended Schur–Weyl duality to the case of the orthogonal group of transformations of a complex vector space by introducing its corresponding dual algebra, a natural extension of the group algebra of the symmetric group. Since then, the Brauer algebra has found connections outside the context of Schur–Weyl duality and has widely been generalized to larger classes of complex reflection groups. In this talk we study the generalization by Chen for all complex reflection groups and describe how we used GAP programming to obtain explicit results for the cases of exceptional complex reflection groups.