ON THE MATRICES THAT PRESERVE THE VALUE OF THE IMMANANT OF THE UPPER TRIANGULAR MATRICES

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Abstract. Let $\chi$ be an irreducible character of the symmetric group of degree $n$, let $M_n(F)$ be the linear space of $n$-square matrices with elements in the field $F$ of characteristic zero, let $T_n^U(F)$ be the subset of $M_n(F)$ of the upper triangular matrices and let $d_\chi$ be the immanant associated with $\chi$. We denote by $\mathcal{T}(S_n,\chi)$ the set of all $A \in M_n(F)$, such

$$d_\chi(AX) = d_\chi(X),$$

for all $X \in T_n^U(F)$. The purpose of this paper is to present, in some cases, a complete description of the matrices in the set $\mathcal{T}(S_n,\chi)$.


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REFERENCES