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On invariants of a set of matrices

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Abstract. For any connected reductive linear group $H \subset SL_n(k)$ it is proved that the algebra of invariants of a set of matrices $X_1,\ldots,X_p \in H$ $(p \geqslant 2)$ under simultaneous conjugations by matrices of $N(H)$ is the normalization of the algebra generated by the traces $\operatorname{tr} X_{i_1} \ldots X_{i_k}$.

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