Journal of Lie Theory
Volume **6** (1996) 249–269

On invariants of a set of matrices

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Communicated by K. H. Hofmann

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 $X_1,\dots,X_p \in H$ $(p \geqslant 2)$ under simultaneous conjugations by matrices of $N(H)$ is the normalization of the algebra generated by the traces $\mathrm{tr}\, X_{i_1} \dots X_{i_k}$.

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Received October 23, 1995
and in final form October 4, 1996

ISSN 0949–5932 / $2.50