© 2011 Heldermann Verlag Journal of Lie Theory 21 (2011) 417–426

D. Kovačević

Faculty of Electrical Engineering and Computing, University of Zagreb, 10000 Zagreb, Croatia domagoj.kovacevic2@fer.hr

Real forms of dual pairs $\mathfrak{g}_2 \times \mathfrak{h}$ in \mathfrak{g} of type E_6, E_7 and E_8

Let \mathfrak{g} be a complex Lie algebra of type E_6 , E_7 or E_8 and let $\mathfrak{g}_2 \times \mathfrak{h}$ be a dual pair in \mathfrak{g} . In this paper, we look for possible real forms of $\mathfrak{g}_2 \times \mathfrak{h}$. It turns out that for each n and for all real forms, say $\mathfrak{a}_0 \times \mathfrak{h}_0$ of $\mathfrak{g}_2 \times \mathfrak{h}$, there exists a real form \mathfrak{g}_0 of \mathfrak{g} such that $\mathfrak{a}_0 \times \mathfrak{h}_0$ embedds into \mathfrak{g}_0 . The full description is given in Theorem 3.1.

Keywords: Dual pairs, real forms.

MSC: 17B05