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PRESERVERS OF THE c–NUMERICAL RADIUS OF OPERATOR JORDAN SEMI–TRIPLE PRODUCTS

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Abstract. Let $\mathscr{H}$ be a complex Hilbert space with $\dim \mathscr{H} \geqslant 3$, let $\mathfrak{B}(\mathscr{H})$ be the algebra of all bounded linear operators on $\mathscr{H}$ and let $\mathfrak{B}^s(\mathscr{H})$ be the real Jordan algebra of all self-adjoint operators in $\mathfrak{B}(\mathscr{H})$. Let $\mathfrak{A} = \mathfrak{B}(\mathscr{H})$ or $\mathfrak{B}^s(\mathscr{H})$. We characterize the surjective maps on $\mathfrak{A}$ preserving the c-numerical radius of Jordan semi-triple products of operators. Further, the maps on $\mathfrak{A}$ preserving the c-numerical range of Jordan semi-triple products are characterized according to different cases of c.

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