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Uniform primeness of the Jordan algebra of symmetric operators. (English summary)

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Suppose H is a Hilbert space and \mathcal{A} is the set of all bounded selfadjoint operators on H . Define the Jordan product on \mathcal{A} by $A \circ B = \frac{1}{2}(AB + BA)$. Then \mathcal{A} with this product is a commutative nonassociative algebra such that $((A \circ A) \circ B) \circ A = (A \circ A) \circ (B \circ A)$. The authors study the operator $U_{A,B}: \mathcal{A} \rightarrow \mathcal{A}$ defined by $U_{A,B}(X) = AXB + BXA$ and prove that $\|U_{A,B}\| \geq \|A\|\|B\|$ ($A, B \in \mathcal{A}$). This is the best possible lower estimate for this operator on the selfadjoint portion of $B(H)$.

Reviewed by [A. Niknam](#)

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