

## ON THE JACOBSON RADICALS

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(Joint work with J. Matczuk)

ABSTRACT. The aim of this talk is to investigate the set  $(R) =: \{r \in R \mid r + U(R) \subseteq U(R)\}$  of a ring  $R$ . This set is a ring closely related to the Jacobson radical of  $R$ . It is shown that  $(R)$  is the largest Jacobson radical subring of  $R$  which is closed with respect to multiplication by units of  $R$ . The behavior of  $(R)$  under ring constructions is studied, some families of rings for which  $(R) = J(R)$  are presented. Methods of constructing rings with  $(R) \neq J(R)$  are also described.