

Title: The nonorientable genus of some Jacobson graphs and classification of the projective ones

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Let R be a finite commutative ring with nonzero identity and denote its Jacobson radical by $J(R)$. The Jacobson graph of R is the graph in which the vertex set is $R \setminus J(R)$, and two distinct vertices x and y are adjacent if and only if $1 - xy$ is not a unit in R . In this paper, the nonorientable genus of some Jacobson graphs is either computed or estimated by a lower bound. As an application, the rings R with projective Jacobson graphs are classified.

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