Publ. Math. Debrecen In-print:: Ref. no.: 10002 (2025), 1–1

On *r*-invertible matrices over antirings

By AIFA WANG (Chongqing), CHONGHUA CHENG (Chongqing) and LILI WANG (Chongqing)

Abstract. In this paper, the r-invertible matrix over commutative antirings are studied and a series of equivalent characterizations of r-invertible matrices over commutative antirings are given.

AIFA WANG SCHOOL OF SCIENCE CHONGQING UNIVERSITY OF TECHNOLOGY CHONGQING, 400054 P. R. CHINA

CHONGHUA CHENG SCHOOL OF SCIENCE CHONGQING UNIVERSITY OF TECHNOLOGY CHONGQING, 400054 P. R. CHINA

LILI WANG SCHOOL OF SCIENCE CHONGQING UNIVERSITY OF TECHNOLOGY CHONGQING, 400054 P. R. CHINA

 $Mathematics\ Subject\ Classification:\ 16Y60,\ 15A09.$

Key words and phrases: antiring, r-invertible matrix, orthogonal decomposition.