

Congruences Induced by Certain Relations on Ag^{**} -Groupoids

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Abstract : We introduce the concept of partially inverse AG^{**} -groupoids which is almost parallel to the concepts of E-inversive semigroups and E-inversive E-semigroups. Some characterization problems are provided on partially inverse AG^{**} -groupoids. We give necessary and sufficient conditions for a partially inverse AG^{**} -subgroupoid E to be a rectangular band. Furthermore, we determine the unitary congruence η on a partially inverse AG^{**} -groupoid and show that each partially inverse AG^{**} -groupoid possesses an idempotent separating congruence μ . We also study anti-separative commutative image of a locally associative AG^{**} -groupoid. Finally, we give the concept of completely N-inverse AG^{**} -groupoid and characterize a maximum idempotent separating congruence.

Keywords : AG^{**} -groupoids, congruences, inverses, rectangular band

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