

The inverse along an element in semigroups and rings

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The concept of the inverse along an element was introduced by X. Mary in 2011. Later H.H.Zhu etc. introduced the one-sided inverse along an element. In this talk, we first give a new existence criterion for the one-sided inverse along a product and characterize the existence of Moore-Penrose inverse by means of one-sided invertibility of certain element in a ring. Then we get some characterizations where a^*a (or aa^*) is invertible along a . Finally, we consider the conditions when a is invertible along aa^* (or a^*a).
