

# Some Fixed Point Properties of Roughly Continuous Mappings

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## Abstract

Let  $r$  be a given non-negative real number.  $x$  is said to be  $r$ -convergent to  $y$  if the limes superior of the distance between  $x$  and  $y$  is less than or equal to  $r$ . A mapping  $T$  is said to be  $r$ -continuous if  $Tx$  is  $r$ -convergent to  $Ty$  whenever  $x$  converges to  $y$ . Obviously, the notions of  $r$ -convergence and  $r$ -continuity are more general than the ones of convergence and continuity, respectively. Moreover, due to perturbations or errors caused by calculation and measurement, the ideal original convergence and continuity may fail and only remain in the form of  $r$ -convergence and  $r$ -continuity, respectively. In our talk, we will present some fixed point properties of  $r$ -continuous mappings.